

Islamization and Trade in the Arabian Gulf in the Age of Mohammad and Charlemagne Jose C. Carvajal López

### Introduction

Since Richard Hodges and David Whitehouse' ground-breaking *Mohammed*, *Charlemagne and the Origins of Europe* (1983), and to a large extent because of it, the landscape of late antique and early medieval archaeology has changed substantially in the areas that the book linked: the Mediterranean, Europe, the North Sea and, obviously, the Arabian-Persian Gulf (which will be called 'the Gulf' in this paper). The aim of the present study is to review the historical and particularly the archaeological evidence in relation to the transformation of society in the Gulf in the centuries that saw the emergence and spread of Islam. The period considered runs from the 5th to the 13th centuries.<sup>1</sup> The lines of thought around which I will thread the evidence are trade on both a regional (i.e. Gulf) and long-distance scale (i.e. Indian Ocean up to China), and Islamization.

Trade in the Gulf has been the object of great scholarly interest, particularly for the connections it established between the Middle East and Mediterranean and exchange networks in the Indian Ocean (Agius 2008; Chaudhuri 1985; Hodges and Whitehouse 1983; Hourani 1979 [1951]; Rougelle 1996; Tomber 2008; Whitehouse and Williamson 1973). My interest in trade in this paper, however, lies not so much in this particular

<sup>&</sup>lt;sup>1</sup> All dates in the text are CE

issue, as in the way in which it stimulated, or was stimulated by, issues of increasing or decreasing connectivity within the Gulf itself, and therefore in its potential to influence or to reflect social and cultural change (other examples of a more regional approach to trade in the same period are Kennet 2004 and Priestman 2013 for the Gulf, and Power 2012 for the Red Sea). As for Islamization, the concern of this paper will be not merely the spread of the early Islamic polity or even of the Islamic religion, but rather the social and cultural transformations that accompanied these phenomena. In previous work, I have argued that Islamization was facilitated by, among other things, an increase in the connectivity of social groups with the *ummā*,<sup>2</sup> the wider Islamic community (Carvajal López 2013). Under the terms stated above, therefore, this paper will make the argument that Islamization triggered an increase in connectivity and socio-cultural change that in turn stimulated the expansion of long-distance trade.

The discussion in this paper will be articulated around three themes. The first of these is the chronological coincidence between the dates of Islamic expansion in the Gulf and the peak of connectivity in the Indian Ocean in pre-modern times. The other two themes are the study of settlement patterns and the analysis of ceramic distribution around the Gulf between the 5<sup>th</sup> and the 13<sup>th</sup> centuries under the perspective of archaeological evidence. The first one of these is based on Kennet's (2012) study of the development of settlement patterns in the northern UAE between the 5th and the 20th century, but with critical references to the regional situation in the Gulf. The last theme,

<sup>&</sup>lt;sup>2</sup> Arabic words and names are transcribed following the system of the *New Cambridge History of Islam*. Chinese names are presented as in Leslie *et al.* 2006, in the simplified *pinyin* system of transliteration.

indirectly based on Kennet's research, emerges from Priestman's recent work, based on the careful study of a number of assemblages from the Gulf dating to between c. 400 and c. 1275. on the development of ceramic production in the late Sasanian and early Islamic Gulf (2013).

Written sources	Dates (CE)	Kennet (2012)	Priestman (2013)
<ul> <li>492-493: Composition of Sung Shu</li> <li>551-554: Composition of Wei Shu</li> <li>636: Completion of Sui Shu</li> <li>c. 634-644: Emergence and spread of Islamic state over Iraq and the Gulf.</li> <li>c.610-650: First overland contacts of between Islam and China, according to Chinese Muslim late literature</li> </ul>	400- 650	Period A	Ceramic Period 1 (Kush, UAE; Bushehr, Iran)
<b>651</b> : Yijing's travel. <b>689</b> : Qatarī ibn al-Fujā'a becomes Azraqī Caliph in Kirman. <b>c.650-700</b> : First historically attested contacts between China and Islam, overland.	650- 700		
<ul> <li>727: Huichao's mention of Persian ships arriving in China</li> <li>748: Persian colony in Hainan</li> <li>c.700-750: Possible dates of foundations of oldest mosques in Chang'an.</li> <li>c.700-800: Growing state bureaucracy to deal with trade in Chinese ports.</li> </ul>	700- 750	Period B	Ceramic Period 2 (Kush, UAE; Şīr Banī Yās, UAE; Şohār, Oman)
<ul> <li>758: Looting of Guangzhou by Muslim group.</li> <li>760: Massacre of Arabs and Persians in Yangzhou</li> <li>762: Foundation of Baghdad</li> <li>785-805: Compilation of Jia Dan's itinerary</li> </ul>	750- 800		Ceramic Period 3 (Kush, UAE; Sīrāf, Iran; Şohār, Oman; Bilād al-Qadīm, Bahrain)
<b>c. 800:</b> Foundation of congregational mosque of Sīrāf	800- 825		
<ul> <li>c. 850 Sulaymān al-Tājir, Ibn Khurradādhbih</li> <li>878: Massacre of merchant community at Guangzhou.</li> <li>869-883: Zanj revolt.</li> <li>c. 900. Beginning of decadence of Iraqi agriculture</li> </ul>	825- 900	Period C	Ceramic Period 4 (Kush, UAE; Sīrāf, Iran; Ṣohār, Oman; Bilād al-Qadīm, Bahrain)

<ul> <li>900-1000: Qarmațians in the Gulf</li> <li>900-950: Al-Mas'ūdī reports that merchants do not reach China.</li> <li>976/977: Earthquake in Sīrāf. Decadence of Sīrāf starts</li> <li>c. 950-1000: Al-Rāmhurmuzī</li> </ul>	900- 1025		Ceramic Period 5 (Kush, UAE; Sīrāf, Iran; Bilād al- Qadīm, Bahrain)
	1025- 1275	Period D	Ceramic Period 6 (Kush, UAE; Sīrāf, Iran; Bilād al- Qadīm, Bahrain)
	1275- 1350		
	1350- 1550	Period E	
	1550- 1950	Period F	

Table 1: Chronological development of the three sequences of event considered in this work

Islamic expansion in the Gulf and rise of connectivity in the Indian Ocean

# The chronology of the Islamic expansion

According to the written sources, the expansion of Islam in the area of the Gulf seems to have been very rapid. Although chronologies of early Islamic history must be treated with a degree of scepticism (Donner 1998), it seems safe to assume that Islamic groups gained control of the Gulf, in particular the Iraqi and Iranian coasts, between the 630s and 650s. The first groups of Gulf Arabs to join Islam were in Eastern Arabia, where they seem to have accepted submission to Muhammad before his death in 632 (King 1997: 83-84; Serjeant 1978: 149-51). During the *Riddah* [Ar. 'Apostasy'] wars (632-634), triggered by the rejection of Islam by several factions in various parts of Arabia, most of these groups remained faithful to the Islamic community, in spite of some revolts in the two provinces of Bahrain (including the island itself and the coast of Eastern Arabia) and Oman (including all the peninsula of the same name) (Donner 1981: 82-90; King

1997: 84-85). In 637 many Muslims in Eastern Arabia took part in the invasion by sea of the Iranian coast (King 1997: 85-86; cf. *Balā dhurī II* 1924: 127), and in c.648-50 they joined forces with the Islamic armies that had come overland from Iraq into Fars (Whitcomb 1986: 221; cf. *Balā dhurī //* 1924: 130; *A/-Ṭabarī* XIV 1994: 68-69). Donner has suggested that the expansion of Muslims across Syria and Iraq should be seen in the light of their desire to control the Arab nomads who had spread over those regions (Donner 1981: 51-90). The same reasoning can be applied to the conquest of southern Iran. There is evidence for the presence of Arab groups on the Iranian coast before the arrival of Islam (Whitcomb 2009: 78; cf. Al-Istakhrī 1927: 141), and this is not surprising, given the known mobility and influence of Arab and Persian groups across the different areas of the Gulf (e.g. for modern times: Al-Dailami 2014; Holes 2011; Potter 2008: 127-129; Slot 1993: 1-51). A relevant example from the period in guestion is the case of Qatarī ibn al-Fujā'a, born in Eastern Arabia, who, as the leader of the Azraqī Kharijīs of the area of Kirman, in Southern Iran, became one of the anti-Caliphs in 689 (E/IV, 1997: 752-753). While the increased interaction between the shores of the Gulf in this period is not surprising, there are reasons to think that the subsequent emergence of connectivity across the Indian Ocean is something quite exceptional in history.

### Connectivity between early Islam and China between the 7th and the 10th centuries

A wide range of evidence for trade in the Indian Ocean has been used by scholars in their different interpretations of the importance of the Gulf in connectivity between the Indian Ocean and the Middle East and the Mediterranean. A summary of currently accepted models can be found in Priestman's recent work (2013: 25-27). Because the focus of this paper is on the internal connectivity in the Gulf, we do not need to examine this debate in any great detail. However, a brief review of the changing patterns of connectivity in long-distance trade is necessary to understand how it relates to intraregional networking in the Gulf. This review will focus on the rise of connectivity between the Gulf and the South China Sea between the 7<sup>th</sup> and the 10<sup>th</sup> centuries. Although the debate on this topic has been reviewed recently elsewhere (*e.g.* George 2015; Schottenhammer 2016; Stargardt 2014), for the purposes of this paper a further analysis of the evidence for a sustained and direct connection between the two areas will be presented. Both written sources and archaeological remains will be adduced to show that, unlike in previous periods, vessels were travelling directly between the Gulf and China and that this trade was conducted by Arab and Persian merchants. This had a necessary consequence: sizeable communities of people from the Gulf were established in East and South East Asia. This evidence corresponds to the highest degree of connectivity documented in the Indian Ocean in the pre-industrial period, and can be seen as a reflection of significant changes in the organization of longdistance trade. It is important to note that this approach overlooks contacts with South Asia (from the Iranian coast to the Malayan peninsula) and Eastern Africa; however, these will be considered with the archaeological evidence below.

#### Written sources

The history of contact between the Middle East and East Asia is long, but it is not clear that direct sea routes with China existed before Islam. Hourani convincingly dismisses the written evidence used to argue for the Chinese sailing directly to the Gulf at this stage (Hourani 1979 [1951]: 47-49). However, he believes in the possibility of Sasanian navigation directly to China before Islam. For this he quotes two sources: the first is the account of the Chinese Buddhist pilgrim Yijing, who seems to have used a Persian ship to navigate from Guangzhou (formerly known as Canton) to Sumatra in 651 (Yijing 1896: xxviii). Hourani argues that this suggests that Persian ships were frequenting Chinese ports by that date, and that therefore contacts should be considered to have started in the Sasanian period (1979 [1951]: 46-47). His second source is the tradition quoted both by Balādhurī and al-Ṭabarī, that by the time of the Islamic conquest of al-Ubullah (a port near Basra, taken c. 637) there were ships engaged in trade with China (Hourani 1979 [1951]: 47; cf. *Balādhurī* II 1924: 53; *Al-Ţabarī* XII 1992: 168).

In his work, Hourani used Hirth and Rockhill's (1911) assessment of Chinese sources. They were the first to question the thesis that Chinese sailors reached the Gulf before Islam (1911: 1-6), suggesting instead that Sasanian ships had reached China, on the basis that all the products of the West Indian Ocean referred to in Chinese chronicles compiled in the 6th and 7th centuries CE were identified as Persian (Hirth and Rockhill 1911 7-8.<sup>3</sup>]. However, there are reasons to be sceptical about this: Yijing's reference to

<sup>&</sup>lt;sup>3</sup> The chronicles are the *Song Shu* [*History of the Southern Dynasties*, composed in 492-493], the *Wei Shu* [*History of the Northern Dynasties*, written between 551-554], and the *Sui Shu* [*History of the Sui Dynasty*, completed in 636].

Persian ships can be read in a different way (see below) and the tradition mentioned by Balādhurī and al-Ṭabarī was collected and possibly reinterpreted in a period when trade with China had become regular practice<sup>4</sup>. Further, the Persian provenance of goods is not necessarily a sign that Persian ships actually reached East Asia. In fact, W. Chungwu considers that, given the political history of China in the period under consideration, it is more likely that most contacts between Iran and China before the 7<sup>th</sup> century were via land routes (1958: 124-27).

The first solid evidence of direct contact between China and the Gulf is a statement of Huichao, a Korean Buddhist pilgrim to India, in 727: 'They [the Persians] [...] sail in big craft to the land of Han [China] and directly to Guangzhou, where they get various kinds of silks. The country produces fine textiles' (Leslie 1986:11, quoted in George 2015: 594)<sup>5</sup>. At the beginning of the 9<sup>th</sup> century (c. 800-801), an itinerary connecting Guangzhou with the Gulf was compiled by Jia Dan.<sup>6</sup> This indicates that by then a sustained connection between the two places had been established. From this point of view, Yijing's Persian ships of 651 may indicate the beginning of this connection, rather than the continuation of Sasanian trade. At any rate, a number of references in the Chinese sources seem to show that Arab and Persian sailors were frequent in the ports of China by the mid-8th century - a Persian colony is mentioned on the island of Hainan, in the Sea of China, in 748 (Hasan 1928: 98; Hourani 1979 [1951]: 62),

<sup>&</sup>lt;sup>4</sup> Donner 1998 explains how historical information became collected and reinterpreted in early Islamic historical works during the first three centuries of Islam.

<sup>&</sup>lt;sup>5</sup> An earlier and more confused translation of this text can be found in Hirth 1913: 205, and was reproduced by Hourani 1979 [1951]: 62.

<sup>&</sup>lt;sup>6</sup> Collected in the *Xin Tang Shu*, the *New History of the Tang Dynasty*, a chronicle written in 1044-60; see translations in Gungwu 1958: 104-5; Haw 2017: 70-71; Hirth and Rockhill 1911: 9-14

Guangzhou was looted by a Muslim and Persian force, which then escaped by sea, in 758 (Dabry de Thiersant 1878: 70-71; 76; Gungwu 1958: 104; Hasan 1928: 98-99; Hirth and Rockhill 1916: 14-15; Hourani 1979 [1951]: 63), and finally, in 760, thousands of Arabs and Persians were plundered and killed in a rebellion in Yangzhou, where another merchant colony existed (Gungwu 1958: 104). Another interesting piece of evidence observed in the Chinese literature is the growing involvement of the government in trade, with the creation of new officers in charge of the inspection and management of ports (Gungwu 1958: 99-103; Hirth and Rockhill 1916: 9; Pickens 1942: 199-200; Schottenhammer 2016: 153-68). The implication is that trade was growing to such an extent that it had become a state priority.

Another category of Chinese source that deserve to be looked at are the Muslim Chinese traditions, recorded in later works (18th century onwards) and in a number of inscriptions at tombs and mosques (Devéria 1895; Broomhall 1910: 5-177), all of which were collected in Chinese official narratives (e.g. Pickens 1942: 200). These sources establish that there were early mosques in Guangzhou, in Chang'an and in Xi'an (both historical capitals of China) after the first arrival of Muslims in embassies and missions during the 7th and 8th centuries (Leslie 1981-1983: 293-94). The problem is that the earliest of these dates are factually impossible, because they predate the Hijra. This has led many scholars to dismiss Chinese Muslim sources, and even the official histories based on them, as mere legends (El 1997, IX: 618). Indeed, the earliest dates that can be securely established for the building of mosques in China are in the 11th and 12th

centuries (Shatzman Steirnhart 2015: 34-91). Other scholars, however, have proposed applying a correction to the dates of the Chinese Muslim traditions that appear in official histories and monuments. This is necessary because of the transition from a lunar calendar to a solar year by the Chinese chroniclers when adapting dates of the Hijra to the Chinese calendar (systems proposed by G. Devéria and I. Mason: see Pickens 1942: 204-6). Dates corrected in this way not only become perfectly possible, but also match with dates or relevant events documented in other sources. Two examples can be given here. The first is the date of erection of the Great Western Mosque of Xi'an, dated in 705 on a plaque in the building. When corrected, this date becomes 726, coinciding with the date of the arrival of a Muslim embassy, recorded in the Xin Tang-Shu. The second example concerns the Great Eastern Mosque of Xi'an, which was built in 742 according to Chinese Muslim sources. The corrected date would be 761, which is an ideal date for the construction of a mosque for the Muslim troops that had been enlisted in China to assist in the suppression of the revolt of An Lushan (755-763) (Leslie 1981-1983: 293-94; Pickens 1942: 204-6).<sup>7</sup> These two mosques at Xi'an are not directly related to sea trade; they seem to have been funded by Muslim communities who had travelled overland to China. However, they do justify a greater confidence in the reliability of Chinese sources in the documentation of Muslim communities and the erection of early mosques in China during the Tang period.

<sup>&</sup>lt;sup>7</sup> Incidentally, one account connects this Muslim army with the sack of Guangzhou in 758 (Broomhall 1910: 27; Dabry de Thiersant 1878: 70-71)

The Arab sources have been traditionally considered more reliable as indicators of trade, but they give slightly later dates. By the 9th century, Arab writers started to mention long-distance trade in the Gulf, and it is clear that at least during this century there was direct trade between ports in the Persian Gulf and China: a description of the seas between the two countries had already been written in 851 by a certain Sulaymān al-Tājir (*Relation* 1845, I; *Voyage* 1922), who, interestingly, made the first historical reference to Chinese ships in Sīrāf (Agius 2008: 77; cf. *Relation* 1845, I: 13-14; *Voyage* 1922: 39). This is confirmed by other authors (see Agius 2008: 77, note 69).<sup>8</sup> The route between the Gulf and China is described by Ibn Khurradādhbih, who is thought to have written his book of routes c. 851 (Agius 2008: 77; Hourani 1979 [1951]: 67; cf. *Ibn Khurrad*ā dhbih 1865: 281-296).

Sulaymān al-Tājir mentions that the person responsible for solving conflicts in the Islamic community in Guangzhou was a Muslim officer appointed by the Tang Emperor. This officer was also in charge of leading prayers and delivering the *khuţba* [Ar. Friday sermon] (*Relations* 1845, I: 13; Voyage 1922: 38-39). This indicates that Muslims constituted a significant community in the city at the time of al-Tājir's travel.

Some changes in long-distance trade seem to have occurred in the 10th century. Sometime between 900 and 950, al-Mas'ūdī (d. 956/7) wrote that while, in former times, Chinese vessels reached the Gulf, just as Arabian and Persian traders travelled to

<sup>&</sup>lt;sup>8</sup> As Hourani remarks for other cases (1979 [1951]: 47-8), caution must be taken with the expression 'Chinese ships', because while this could refer to ships from China, it might also mean non-Chinese ships transporting goods to and from China.

China, now merchants from both sides met at the middle point of Kalah Bar, in Malacca (Hourani 1979 [1951]: 77-79; cf. *Al-Masʿū d*i 1861-7, I: 307-308). The reason for this change, according to al-Masʿūdī, were the poor conditions in China for the conduct of trade, particularly after the revolt of Huang Ch'ao in 878 that had led to the massacre of Guangzhou. This revolt was the start of a period of instability that discouraged traders from making the direct run to China (*Al-Masʿū d*i 1861-7, I: 302-324). More reports about the massacre are found in comments of Abu Zayd Hasan al-Sīrāfī on the account of al-Tājir (collected in the same work): the slaughtered merchant community comprised 120,000 people, including 'Muslims, Jews, Christians and Magi [pagans or Zoroastrians]' (Hourani 1979 [1951]: 76-77; cf. *Relation* 1845: 63-65; *Voyage* 1922: 75-77). This massacre seems to have initiated a troublesome period that led to the end of the Tang dynasty and to a state of unrest which persisted until the establishment of the Song dynasty in 960 (Hourani 1979 [1951]: 77-78).

The lack of stability in China in the later 9th and 10th centuries seems to be mirrored to some extent in the Iraqi part of the Gulf. The period of agricultural expansion that had characterized the area of Basra since the beginning of the Islamic period (637) and that of Baghdad since its foundation at the start of the Abbasid dynasty (762) came to an end by the late 9th century, due to inherent weaknesses in the irrigation system and the absence of the political and fiscal order needed to maintain it (Kennedy 2014). It is also the period of the major Zanj revolt between 869 and 883 (Kennedy 2014: 188), during which Basra and al-Ubullah were sacked (Hourani 1979 [1951]: 78). Furthermore, the

10th century saw the rise in the Gulf of the Qarmaţians, who imposed heavy taxes on customs and pilgrims (Agius 2008: 72; cf. *Ibn Hawqā*/1992: 33). It is also in the 10th century that the progressive abandonment of Sīrāf began, due to the political preference of the Buyids (the dynasty in control of the area at this time) for Oman. Sīrāf never recovered from a terrible earthquake in 976-7 and its role on the Persian coast was taken over by Kish (Agius 2008: 79; Whitcomb 2009: 78; cf. *Al-Muqaddasī* 2001: 347-8). These factors have encouraged scholars to argue that the main focus of Indian Ocean trade, from the 10<sup>th</sup> century onwards, moved away from the Persian Gulf and became orientated on the Red Sea, where Fāţimid Egypt was a rising market (Hourani 1979 [1951]: 78-79). However, we do have to remember that there is also evidence suggesting that direct contacts between the Gulf and China were still alive in the later 10th century (Agius 2008:77; Hourani 1979 [1951]: 68; cf. *Al-Rāmhurmuzī* 1883-1886).

# Archaeological evidence

Archaeological evidence relating to connections between Tang China and the early Islamic Gulf has grown exponentially in recent decades, but its significance for the examination of the issue of direct connections between the two sidesof the Indian Ocean is a different matter. People and artefacts could travel between the two countries by land routes or indirectly by sea, changing ships and ports, rather than by direct passage. It is only rarely that the evidence makes it possible to distinguish between the different possibilities. For this reason, the emphasis here will be on

archaeological evidence that can be directly related to the concern of this paper, that is, direct connection between the Middle East and the Sea of China and the establishment of permanent Islamic communities in Chinese ports. The first kind of evidence would be mosques and tombs, the clearest marks of the establishment of a Muslim community. However, the problems inherent in the dating of these elements have been described above and there is no point in repeating the issues here.

Another type of archaeological evidence that deserves consideration is a particular kind of ceramic which travelled from the Gulf to China: Turquoise-Blue Glazed jars (particularly those of type JR5), dating from between the 8th and the 10th centuries (Priestman 2013: 94-95, 555-56; 2016: 2-9). A significant quantity of fragments of these jars, 80 sherds, has been documented in Japan, at exclusive locations linked to highstatus institutions that were allowed to have contact with the outside world (Priestman 2016: 22-24). In China its distribution is somewhat wider, in locations close to important Arab or Persian communities: in Yangzhou up to 300 sherds have been recovered (Priestman 2016: 25), and another group of around 50 in the areas of Guilin and Rongxian, in the Guangxi Zhuang autonomous region, reachable by river from Guangzhou (Lombard-Salmon 2004: 38). Complete jars have been found in Buddhist monasteries in the same region, and three were found in an elite burial in Fuzhou, in Fujian province, in the coast between Guangzhou and Yangzhou (Priestman 2016: 25).

The presence of these jars in East Asia deserves some comment. Their numbers are not large, but they have a relative significance, as they are far more highly represented than

any other ceramic from the Gulf. In their place of origin, Southern Iraq, they did not seem to have be valued for themselves but as containers<sup>9</sup> (more about this will be discussed below). Therefore, their arrival in East Asia has to be interpreted as indexing a desire for a particular product. This might have been something that could be exchanged with success in the East Asian markets or, alternatively, a product that was in demand in Arab and Persian diaspora communities.<sup>10</sup> In the last case, the Turquoise-Blue Glazed jars would not necessarily be a clear evidence of direct contacts with the Gulf (as they could have come through indirect contacts), but they would attest to the importance and size of the Arab and Persian diaspora communities in China.

Shipwrecks are the final category of archaeological evidence that is going to be examined in this section. A number of important wrecks from the period under analysis have been recovered in the Indian Ocean in recent decades. However, one ship found at Belitung island (Indonesia) is thought to have been on a direct run between China and the West Indian Ocean.<sup>11</sup> This wreck was discovered in 1998, the remains of a vessel of Arab or Indian origin with a cargo mainly of Chinese ceramics (an estimated 70,000 pieces) and small quantities of metallic and stone items, ballast and a partially conserved shipment of organic materials. This cargo, particularly the ceramics, could only come from a Chinese port, probably Yangzhou. Because of its size, it has been suggested that its destination would have been one of the large distribution centres in

<sup>&</sup>lt;sup>9</sup> The association between these jars and Buddhist sites and tombs, also observed in Japan, has led Priestman to suggest that the jars may have had a second life in East Asia, with a particular religious connotation (2016: 24-25).

<sup>&</sup>lt;sup>10</sup> Wine for Nestorian communities has been suggested (Lombard-Salmon 2004: 38)

<sup>&</sup>lt;sup>11</sup> Other ships found include the wrecks of *Intan*, *Cirabon* and *Karawang*, all of which seem to have been used for communication between China and South East Asia (Hall 2010: 19-23; see Liebner 2014 for the Cirabon shipwreck)

the Middle East (Flecker 2011). The dating of the wreck has been established from a combination of radiocarbon dates of organic elements and from inscriptions on ceramics and coins, which give a *post quem* date of 826 (Wilson and Flecker 2011). Stylistic analysis of the Green Wares of South China corroborates the ceramic and coin evidence; a date in the middle of the 9th century (roughly 829 to 879) has been suggested (Krahl 2011a; 2011b). There are still two unclear points in the thesis that the Belitung wreck was travelling directly from China to the Gulf: the first one is its itinerary, not an obvious route to the Malacca Strait (cf. Haw 2017, who suggests that the Sunda Strait between Sumatra and Java was a more likely destination for the ship); the second issue is that the ship could have been heading for a port in India or Sri Lanka, rather than for the Gulf (noted by Flecker himself, although he discounts this possibility because of the size of the cargo: 2011: 118-19). In spite of these questions, most scholars seem to have accepted the hypothesis that the Belitung wreck reflects a major expansion of direct travel across the Indian Ocean (e.g. George 2015; Hall 2010; Schottenhammer 2016; Stargardt 2014; contra Haw 2017, who argues that the ship could have been made in South-East Asia and that there is no evidence that the ship was en route between China and the Middle East).

The evidence presented up to this point shows that there is a chronological continuity between the dates of Islamic expansion in the Gulf (first half of the 7th century CE) and the rise in direct contacts between China and the Middle East (starting in the late 7th or early 8th century and becoming consolidated in the second half of the 8th century and

through the 9th century). It is now time to turn to the archaeological evidence in the Gulf itself, which offers more detailed information on the process of intraregional development and connectivity.

Changing settlement patterns across the Gulf.

The data-set to be considered here is the archaeological evidence for settlement around the Gulf, taken mainly from Kennet's survey (2012) and from a number of subsequent studies. Here, Kennet's reclassification of Sasanian- and Islamic-period pottery, increasingly accepted by scholars (e.g. Carter 2008; 2013; Carvajal López et al. 2016; Carvajal López et al. in press; McPhillips et al 2015; Priestman 2013) is critical, because it provides a basis for reassessing the dating of a series of archaeological phases across the Gulf (Kennet 2002; 2004). For our present purposes Kennet's account of the development of settlement patterns between Periods A to D (2012) (see Table 1 for general dating) will be the focus of attention.

The sequence starts in the fifth century with Period A (5th to 7th centuries), which is marked by low levels of occupation across Eastern Arabia (Kennet 2012: 192). This picture is very much a product of Kennet's reappraisal of the relevant archaeological evidence (2007). While a certain richness of written sources mentioning Sasanian involvement in Eastern Arabia has encouraged many scholars to identify, without clear chronological criteria, abundant Sasanian-period material in Eastern Arabia, Kennet

argues that the archaeological evidence that can be securely dated to the period between the 5th and the 7th centuries is actually quite meagre, and only a handful of settlements can be assigned to this period. However, this does not appear to be true of the Iranian coast of the Gulf, where we have evidence for substantial occupation around the Busherh peninsula (Carter et al 2006; Priestman 2005). In addition, the Iraqi area of the Gulf may have seen strong agricultural development by this time (c.f. Adams 1965: 69-83; Kennedy 2014).

Period B (Kennet 2012: 192-93) covers the 8th century, and saw a slow recovery of population in some areas of the Gulf. The most remarkable event in this period is the foundation of **\$**ohār (Kennet 2007: 97-100), intimately linked to the long-distance trade routes, but the emergence of new sites has also been detected in the northern UAE. The same phenomenon can be seen in Kuwait (Kennet et al. 2014), Bahrain (Carter and Naranjo Santana 2011) and Qatar (Carvajal López et al. 2016; Carvajal López et al. in press; McPhillips et al. 2015). This is also the period in which we see an interesting upsurge in Christian monasteries in the Gulf, seemingly corresponding to an expansion of Christianity which lasted until the 9th-10th centuries (Carter 2008; 2013; Kennet 2007: 89-94).

The pottery of the Samarra Horizon, defined by a group of easily identifiable luxury tablewares of the Abbasid era, is used to characterise Period C (9th to early 11th centuries) (Kennet 2012: 193-96). Kennet notes the development of a number of possibly seasonal sites, from this phase, on the coast of the northern UAE, which

feature Samarra Horizon ceramics. This would seem to indicate their participation in exchange during this period. The same possibly applies to the Bātinah coast of Oman (Kennet et al. 2016). There is also evidence of copper smelting in the interior of the Oman peninsula (Whitcomb 1975: 126, n. 12). The relationship between the emergence of Sohār, the coastal sites and this copper smelting is in need of assessment. Kennet has made the interesting suggestion that they might all be an indication of the inclusion of nomadic groups in the regional networks of the Gulf (2012: 194). Although in general this can be termed a period of increasing occupation and expanding connectivity, with Sohār and Sīrāf reaching their heyday (Priestman 2013 offers a good review of the evidence from these sites), in the Gulf region there are different trends. It has been noted that Irag suffered contraction from the late 9th century (Adams 1965: 97-102; Kennedy 2014). In the north-west of Qatar the evidence for settlement expansion does not seem to continue beyond the early 10th century (Carvajal López et al. 2016; Carvajal López et al. in press; Guerin and Al Naimi 2009; 2010; McPhillips et al. 2015), and the same is true in Kuwait (Kennet et al. 2014). Although Bahrain's connectivity and settlement patterns expanded in the 9th century, the 10th to early 11th centuries seem to mark a low ebb in settlement (Carter 2005: 113-34; Frifelt 2001: 13-34; Insoll 2005: 13-18). On the Iranian coast, settlement patterns around Bushehr contract but overall settlement across the area seems to remain constant or even to expand slightly - in spite of the rise of Sīrāf (Carter et al. 2006; Priestman 2005). Sites of this period also have been identified in surveys in Eastern Arabia (Potts et al. 1978; Whitcomb 1978: 98-101, pl. 76), a fact that fits with the picture of overall expansion of settlement in the Gulf.

The last period on which this study focusses, Period D, covers the 11th to the mid-14th century (Kennet 2012: 196-97) and is marked in the archaeological record by the presence of Hatched Sgraffiato wares. This period is in general characterised by a falloff in occupation. Both Sohār and Sīrāf go into decline (cf. Priestman 2013). In the northern UAE, most of the seasonal and copper smelting sites of the former period disappear (Kennet 2012: 196; Kennet et al 2014), although some sites like Kush and Jumeirah persist. In the Gulf region, another area where settlement has been noted is the Bāținah Coast (Whitcomb 1975: 126-28). There is no clear evidence of occupation from northern Qatar (although this cannot yet be discounted, see Carvajal López et al., in press). A pattern of contraction of settlement and connectivity has been proposed for the Eastern Province of Saudi Arabia (Potts et al. 1978: 14; Whitcomb 1978: 101-102). Bahrain seems to have its own pattern of expansion between the 11th and the 13th century and stability afterwards (Carter 2005: 134-157; Frifelt 2001: 35-61). Iraq continued to stagnate in this period (Adams 1965: 106-111), whereas on the Iranian coast settlement patterns expand in the areas around Kish and Hormuz (Priestman 2005). The archaeological evidence also points to the persistence of long-distance trade in the Gulf, although the volume of the goods involved is still a matter of discussion (Kennet 2004: 72-74; Rougelle 1996: 167-176).

# Ceramic exchange

The final data-set considered in this paper is based on Priestman's (2013) study of the ceramics from a number of sites, dated to between 400 and 1275, in the Western Indian Ocean region, using a system of ceramic chronology divided into Ceramic Periods (CP onwards; cf. Table 1 for dating) and very much inspired by Kennet's work (2004). Here I will focus only on the six sites located within the Gulf, and in particular on the implications of Priestman's functional classification for the study of social transformation (and in particular of connectivity) within the Gulf.

The six sites under consideration here - Kush (UAE, CP1-6), Busherh (Iran, CP1), Sīrāf (Iran, CP3-6), **Ş**ohār (Oman, CP2-4), **Ş**īr Banī Yās (UAE, CP2) and Bilād al-Qadīm (Bahrain, CP3-6) - and the chronology of their ceramic assemblages as suggested by Priestman have been plotted on Table 1. Priestman's work includes an assessment of the historical and archaeological evidence related to each site and of the circumstances of the recovery of the ceramic assemblages (2013: Chapter 4 and Chapter 5 respectively). His painstaking work in selecting the samples studied guarantees the reliability and representativeness of the assemblages presented (see his Chapter 5).

Priestman's work reveals several important aspects of the assemblages that are relevant to our study. Considering the diversification of pottery types that can be detected between CP1 and CP4 (400-900), he suggests that, in line with other evidence discussed, the general volume of trade seems to undergo a spectacular increase across this time-period. Within this context, it is important to highlight the fact that longdistance trade seems to account for only a small proportion of the ceramic

assemblages and that regional trade accounted for most of the movement of goods between different sites in the Gulf (Priestman 2013: 399-400).

Site	Source	Function	CP1		CP2		CP3		CP4		CP5		CP6	
			No	%	No	%	No	%	No	%	No	%	No	%
К	Е	С	0	0	0	0	0	0	0	0	0	0	1	(
		TW	1	0	1	0.1	28	0.4	1	0.5	4	0.1	28	0.
		U	31	1	6	0.5	37	0.6	2	1.1	10	0.2	13	0.
	R	С	10	0.3	7	0.6	48	0.8	2	1.1	19	0.4	24	0.
		TW	460	14.4	105	8.8	313	4.9	17	9.3	1274	26.2	991	19.
		U	53	1.7	17	1.4	56	0.9	2	1.1	65	1.3	23	0.
	L	С	0	0	0	0	0	0	0	0	0	0	0	
		TW	42	1.3	6	0.5	8	0.1	1	0.5	22	0.5	50	
		U	2591	81.3	1054	88.1	5843	92.3	158	86.3	3465	71.3	3930	77.
	ALL		3188	100	1196	100	6333	100	183	100	4859	100	5060	10
В	Е	С	0	0										
		TW	30	2.4										
		U	79	6.4										
	R	С	120	9.7										
		TW	325	26.3										
		U	7	0.6										
	L	С	75	6.1										
		TW	25	2										
		U	576	46.6										
	ALL		1237	100										
SIR	Е	С												
							8	0.7	44	0.4	52	1.5	66	1.
		TW					8	0.7	44	0.4	52 25	1.5 0.7	66	
		TW U												1.
	R						6	0.5	105	1	25	0.7	45	1.
	R	U					6 60	0.5 5.1	105 448	1 4.4	25 165	0.7	45 84	1.
	R	U C					6 60 226	0.5 5.1 19.2	105 448 366	1 4.4 3.6	25 165 46	0.7 4.8 1.3	45 84 78	1. 1. 28.
	R	U C TW					6 60 226 406	0.5 5.1 19.2 34.5	105 448 366 3761	1 4.4 3.6 37.3	25 165 46 1036	0.7 4.8 1.3 30.1	45 84 78 1159	1. 1. 28.
		U C TW U					6 60 226 406 0	0.5 5.1 19.2 34.5 0	105 448 366 3761 0	1 4.4 3.6 37.3 0	25 165 46 1036 0	0.7 4.8 1.3 30.1 0	45 84 78 1159 0	1.
		U C TW U C					6 60 226 406 0 14	0.5 5.1 19.2 34.5 0 1.2	105 448 366 3761 0 20	1 4.4 3.6 37.3 0 0.2	25 165 46 1036 0 30	0.7 4.8 1.3 30.1 0 0.9	45 84 78 1159 0 0	1. 1. 28.
		U C TW U C TW					6 60 226 406 0 14 2	0.5 5.1 19.2 34.5 0 1.2 0.2	105 448 366 3761 0 20 45	1 4.4 3.6 37.3 0 0.2 0.4	25 165 46 1036 0 30 35	0.7 4.8 1.3 30.1 0 0.9 1	45 84 78 1159 0 0 29	1. 1. 28. 0.
SOH	L	U C TW U C TW			9	3.7	6 60 226 406 0 14 2 454	0.5 5.1 19.2 34.5 0 1.2 0.2 38.6	105           448           366           3761           0           20           45           5298	1 4.4 3.6 37.3 0 0.2 0.2 0.4 52.5	25 165 46 1036 0 30 35 2051	0.7 4.8 1.3 30.1 0 0.9 1 59.6	45 84 78 1159 0 0 29 2641	1. 1. 28. 0. 64.
SOH	L	U C TW U C TW U			9 23	3.7	6 60 226 406 0 14 2 454 1176	0.5 5.1 19.2 34.5 0 1.2 0.2 38.6 100 2.8	105 448 366 3761 0 20 45 5298 10087	1 4.4 3.6 37.3 0 0.2 0.2 0.4 52.5 100	25 165 46 1036 0 30 35 2051	0.7 4.8 1.3 30.1 0 0.9 1 59.6	45 84 78 1159 0 0 29 2641	1. 1. 28. 0. 64.
SOH	L	U C TW U C TW U U C					6 60 226 406 0 14 2 454 1176 10	0.5 5.1 19.2 34.5 0 1.2 0.2 38.6 100	105           448           366           3761           0           20           45           5298           10087           13	1 4.4 3.6 37.3 0 0.2 0.2 0.4 52.5 100 3.7	25 165 46 1036 0 30 35 2051	0.7 4.8 1.3 30.1 0 0.9 1 59.6	45 84 78 1159 0 0 29 2641	1. 1. 28. 0. 64.

		TW	34	13.8	97	27.5	161	45.7				
		U	4	1.6	7	2	7	2				
	L	С	0	0	0	0	0	0				
		TW	1	0.4	2	0.6	8	2.3				
		U	109	44.3	150	42.5	70	19.9				
	ALL		246	100	353	100	352	100				
SBY	Е	С	0	0								
		TW	0	0								
		U	8	0.7								
	R	С	272	22.8								
		TW	75	6.3								
		U	444	37.2								
	L	С	0	0								
		TW	0	0								
		U	395	33.1								
	ALL		1194	100								
BAQ	Е	С			0	0	0	0	*	0	0	0
		TW			1	0.1	0	0	*	0	8	0
		U			0	0	2	0.2	*	0.2	6	0
	R	С			7	0.8	20	1.7	*	1.7	15	0.1
		TW			160	18.1	291	25.2	*	25.2	1008	4.4
		U			222	25.1	240	20.8	*	20.8	632	2.7
	L	С					0	0	*	0	0	0
		TW			40	4.5	81	7	*	7	1990	8.6
		U			455	51.4	522	45.2	*	45.2	19434	84.2
	ALL				855	100	1156	100	*	100	23093	100

Table 2: Sherd count and percentages of the different categories of pottery considered by Priestman 2013 (pp. 388-390, Tables 7.18 to 7.29). CP = Ceramic Period; K = Kush; B = Bushehr; SIR = Sīrāf; SOH = Ṣohār; SBY = Ṣīr Banī Yās; BAQ = Bilād al-Qadīm; E = Exotic; R = Regional; L = Local; C = Containers; TW = Table wares; U = Utility wares

For the purposes of this paper, the most interesting aspect of Priestman's analysis is his functional distinction between containers, tablewares and utility wares (mainly for cooking and food preparation) (2013: 369-93), as this provides further insight into changes in connectivity and culture in the Gulf. Priestman provides precise numbers (sherd counts) for each of these categories from the different sites and periods under study, recording whether they derived from long-distance trade (exotic), from trade within the Gulf (regional), or were produced in the areas within and immediately around the site (local, but not necessarily implying local production) (Priestman 2013: 388-390, Tables 7.18 to 7.29). It is important to clarify at this point that, contrary to the perspective offered in the first section of this paper, a significant proportion of the exotic wares considered here come from areas other than China - especially South Asia and East Africa - this will be relevant for the discussion below.<sup>12</sup>

<sup>&</sup>lt;sup>12</sup> The numbers and percentages have been taken from Priestman's work (2013: Tables 7.18 to 7.19) and are set out in Table 2. Figures 1 to 3 serve to compare the relative importance of each category of wares within their respective assemblages. Caution must be exercised when analysing the figures, since the numeric scale of percentages is adapted to the size of the bars and an uncritical reading might lead to spurious comparisons. In general, differences of less than 5% in the categories analysed should be disregarded.

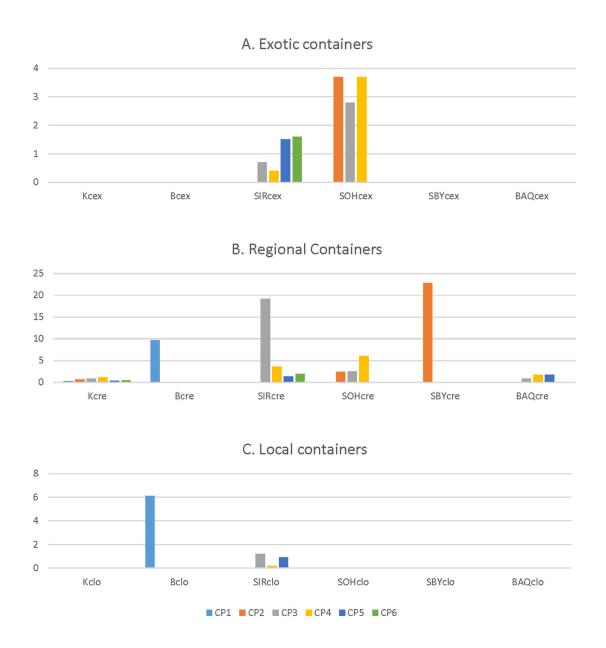


Figure 1: Comparison of the percentages of containers shown in Table 2. K = Kush; B = Bushehr; SIR = Sīrāf; SOH = Ṣohār; SBY = Ṣīr Banī Yās; BAQ = Bilād al-Qadīm; cex = Exotic containers; cre = regional containers; clo = local containers.

*Containers.* This type of ceramic vessel can be considered a by-product of exchanges of non-ceramic products. In most period and sites containers (from all sources) account for only between 0 and 6% of the assemblage. The main exceptions are containers

coming from regional trade in Busherh in CP1 (400-650), **Ş**īr Banī Yās in CP2 (650-750) and in Sīrāf in CP3 (750-825), although for probably different reasons in each case. The accumulation of regional containers in Busherh and Sīrāf seems to be due to the centrality of these ports in the Gulf trade (an element that is absent in Sohār). It is interesting to note that from CP4 (825-900) onwards, when its decline as a trade centre had started, Sīrāf received a relatively standard share of regional containers. In contrast to Busherh and Sīrāf, the accumulation of regional wares at Sīr Banī Yās indicates the desire of the community of this otherwise isolated island to acquire certain products (cf. Priestman 2013: 384, who sees a chronological pattern in the high frequency of containers in CP1-2). It is also important to note that exotic containers are only documented in Sīrāf and Sohār, a fact that highlights their role in long-distance trade. Local containers appear only in Bushehr and Sīrāf. I believe that this is again related to the centrality of trade at these two sites. I assume that these ports were not only consumption centres, but also places of production, where local containers may have been manufactured for the distribution of certain goods to other ports in the Gulf (where they would be identified as regional containers). In sum, the combination of the reception of exotic and regional containers and the production of local ones implies that these ports were hubs of connection between distant and local trade.

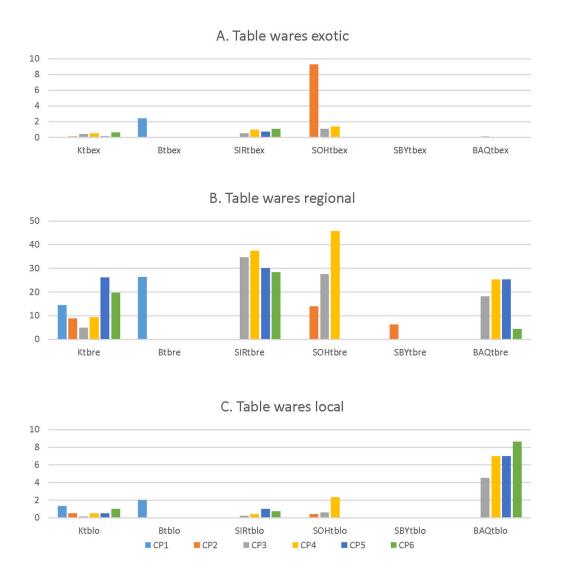


Figure 2: Comparison of the percentages of table wares shown in Table 2. K = Kush; B = Bushehr; SIR = Sīrāf; SOH = Ṣohār; SBY = Ṣīr Banī Yās; BAQ = Bilād al-Qadīm; tbex = Exotic containers; tbre = regional containers; tblo = local containers.

*Tablewares.* This type of vessel refers mainly to the mode of consumption. Tablewares of exotic origin are concentrated largely at the principal trade centres of our sample, Bushehr, Sīrāf and Şohār, and usually in a percentage of less of 2.5% - the only exception is Şohār in CP2, which has almost 10% (I will explain this exception below).

Apart from these main ports, the only site at which these exotic tablewares are present, and only in small quantities (and only in CP3-4 and CP6, 1025-1275) is Kush, a fact that may be due to its particular location and development.

The distribution of the regional tablewares is very revealing (cf. Priestman 2013: 384-86, who also highlights this issue). Most of these tablewares come from Iraq, implying that they have the same category of provenance (i.e. regional) in all the sites, so that their numbers can be easily compared). They are one of the most abundant pottery categories on all sites, usually accounting for between 10 and 50% of all the assemblages. They seem to be less common in assemblages of CP2, and relatively lower with respect to other periods in CP6. The suggestion is that regional tablewares, mostly from Iraq, were widely distributed in the Gulf in CP1, then enter a trough in CP2, enjoy a spectacular recovery in CP3-5 and then fall into another trough in CP6.

In comparison with their regional counterparts, tablewares of local origin have little relevance: with the exception of Bilād al-Qadīm, where they can reach up to 8.6%, their numbers in most sites account for less than 5% of the assemblages. The only exception is **Ş**īr Banī Yās (33.1%), and this is probably due to its relative isolation from the rest of the Gulf.

In general, the trends analysed above suggest that the tablewares used in the sites under study came, more often than not, from distant places, and therefore were associated with some form of conspicuous consumption.

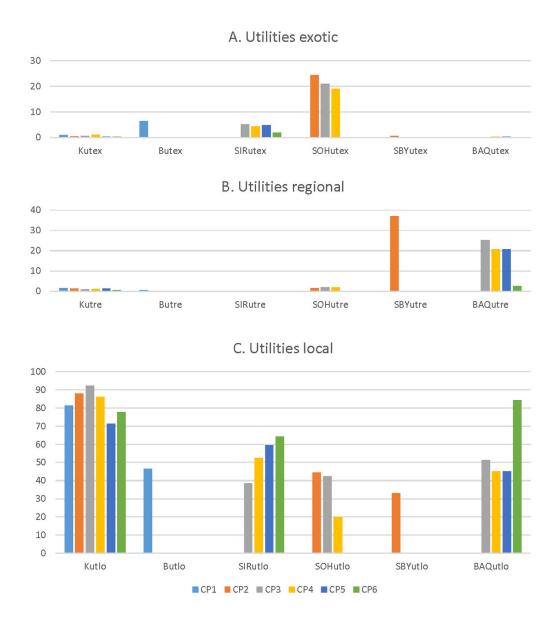


Figure 3: Comparison of the percentages of utility wares shown in Table 2. K = Kush; B =
Bushehr; SIR = Sīrāf; SOH = Ṣohār; SBY = Ṣīr Banī Yās; BAQ = Bilād al-Qadīm; utex =
Exotic containers; utre = regional containers; utlo = local containers.

*Utility wares.* This type of vessel is particularly linked to the inconspicuous daily practices of cooking and food-preparation. For this reason utility wares of local origin make up between 19.9 and 92.3% of every single assemblage studied by Priestman.

This makes the presence of *non-local* utility wares on a site particularly significant. This presence can be explained in one of two ways –

- a) the presence of foreign communities on the site, on either a permanent or seasonal basis;
- b) the particularly strong influence of a foreign community on the cultural practices of the native population of the site, implying frequent contact.

Either explanation (or a combination of both) can be used to account for the strong presence of regional utility wares at \$\overline{r}r Ban\overline{Y}\overline{s} and Bil\overline{a} al-Qad\overline{r}m (ranging between 20.8 and 37.2% in CP2-5). The high quantities of exotic utility ware at \$\overline{s}\overline{a} r (between 19 and 24.4% in CP2-4) and its low frequency (around 5%) at Bushehr and S\overline{r}\overline{f} in CP1 and CP3-5 is perhaps more likely to be due to the first explanation, as frequent contacts are not so likely in long-distance operations. This is particularly true of \$\overline{s}\overline{a} r, where the presence of large quantities of exotic tablewares adds to the evidence for the presence there of some kind of foreign community. On sites where non-local utility wares represent between 0 and 2% of the assemblage, we should probably think in terms of sporadic contacts.

Discussion

Connectivity and trade

One revealing fact raised by the archaeological evidence is the intense degree of interconnectivity across the Gulf. This has been noted already with regards to centres of regional trade in different periods, like Bushehr, Sīrāf and Ṣohār. However, a consideration of the distribution of utility wares (Figures 7-9) brings new facts to light. As noted above, all sites contain a large percentage of locally-produced utility wares. Interestingly, all also feature both regional or exotic utility wares (the only exceptions being Sīrāf, which does not have regional utility wares, and Bilād al-Qadīm, which does not have exotic ones). In cases of low percentages of regional utility wares, this would seem to mark existing (if possibly spasmodic) contacts between groups in different areas of the Gulf. Where the percentages are higher the presence of seasonal or permanent foreign communities can be entertained. The exceptions of Sīrāf and Bilād al-Qadīm do not necessarily challenge this proposal. In fact, Sīrāf ceases to be an exception when one considers that the vast majority of utility wares distributed at regional level in the Gulf have their origin in Southern Iran (thus they belong to the local range of Sīrāf), and that there are small numbers of utility wares from Iraq (Buff Wares) and Eastern Arabia (Julfar) in several phases at Sīrāf (Priestman 2013: 344-49, Tables 7.4 to 7. 7). This implies that rather than being an exception, Sīrāf participated in the regional trade of utility wares; however, this is not easily perceived because of the constraints of our definitions of 'local' and 'regional' in this particular case. The lack of exotic utility wares at Bilad al-Qadim remains exceptional, but does not in itself challenge this overall picture of the Gulf, as its connection to the regional networks is clearly attested by other categories of pottery and other finds (Insoll 2005: 341-57).

Archaeological evidence also reveals that this interconnectivity had its highs and lows. In different periods Gulf networks were more extensive, more inclusive and imply higher volumes of exchange – or vice-versa. The combined evidence presented above suggests that at least the area of the northern UAE and the northern Iranian coast were connected, roughly between the 5th and the mid- to late-7th centuries, and that Bushehr, at least, was playing the role of a regional trade centre (Period A and CP1). The next phase, the mid-7th to early 11th century (Periods B-D, CP2-5) involves a period of sustained growth of interconnectivity, a high peak and a slow contraction. To be more specific, increasing interconnectivity in the Gulf seems to have been the rule between the late 7th and 9th centuries (Periods B and first half of Period C, CP2-4), the period that saw the rise of Sohār and Sīrāf as connected trade centres and of a number of different types of settlements all over the Gulf. The 10th century is the period in which political disorder in Iraq and the northern part of the Gulf begin to take their toll on Gulf-interconnectivity – which goes into decline (second half of Period C, CP5) (cf. Period 3 of Bilad al-Qadim in Carter 2005: 129-35, where this decline is particularly evident). This tendency becomes more acute in the next phase, 11th to 13th centuries (Period D, CP6), which saw the final decline of Sīrāf and Sohār as regional centres and the contraction of settlement all over the Gulf. In terms of Priestman's ceramic study, the distribution of the assemblages of regional tablewares (Fig 2B) illustrates this sequence perfectly.

The pattern of long-distance trade contacts with China described in the first section of this paper seems to match to a large extent the patterns described above. It is possible to postulate a rise in long-distance connectivity from at least the late 7th or early 8th century, although it was not until the 9th century that this becomes evident in the Arabic written sources. This is clearly in line with the increased levels of intraregional connectivity described above. Direct connections between the Gulf and China seem to have decreased, although they did not entirely disappear, from the 10th century onwards, once again matching the sequence of intraregional connectivity in the Gulf. However, as suggestive as this match is, there is still not sufficient evidence to determine whether or not China and interregional trade patterns are causally connected. The reason is that the archaeological evidence reviewed by Priestman contains a much richer sample of exotic wares than just those coming directly from China. In fact, the only identified wares from exotic locations in CP1-2 are from South Asia, and in CP3-6 East Asian (i.e. Chinese) wares share the field of exotics with South Asian and East African wares (2013: 340-56, Tables 7.2 to 7.13). Regardless of direct or indirect contacts with China, a very significant proportion of the exotic wares found in the Gulf comes from South Asia, a less distant region. Most notably, the relatively high percentages of exotic tablewares and exotic utility wares located in Sohār are mostly of South Indian origin (Priestman 2013: 272-280, Table 5.26).

More work needs to be done, therefore, to integrate patterns of China-linked and regional trade into a historical narrative for the Gulf. However, the role of long-distance

trade (not necessarily bound for China) in the reorganization of connectivity networks in the Gulf between the 7th and the 9th centuries seems beyond question. The evidence from Sīrāf and Şohār, in comparison with the rest of the sites studied, makes it clear that these two towns served as centres in the regional network and hubs for longdistance trade from the 7th century onwards. However, the question of how this came to be is still in need of an answer.

### Connectivity and sociocultural change: the materialization of Islamization

Changing patterns of regional connectivity shed light on two interesting features that suggest that there were socio-cultural transformations as well. The first element is the distribution of regional tablewares across the period of study (Fig 2B). As noted above, the incidence of this type of ware bottoms out in CP2 (CP3 in Kush only) and grows again from CP3 to CP5. CP2 not only represents the nadir for regional tablewares, but it is also characterised by the decline of tableware forms of the Sasanian Turquoise Alkaline-Blue Glazed Ware tradition (Priestman 2013: 93-94). In CP3, Turquoise Alkaline-Blue Glazed Ware consists mainly of large jars, and tablewares include entirely new products in Eggshell Ware and White Ware (Priestman 2013: 94-96). An even greater change would come in CP4, with the introduction of Samarra Horizon wares, exhibiting an innovative array of techniques, decorations and colours in tablewares (Priestman 2013: 96-101). In terms of forms, technical details and decoration, the patterns inaugurated by the Samarra Horizon wares do not differ much from any other

later types of the same category, even if there are highs and lows in the volume of their distribution/consumption. Tablewares continued to change after this, but acquired some stability in terms of design and technical background after the 9th century.

These changing patterns in the distribution and characteristics of regional tablewares indicate that changes in social identity were taking place at a fast pace in the Gulf, particularly between the mid-7th and 9th centuries. The speed of change is due to the high connectivity of the Gulf, which made the transmission of materials and ideas easier and faster. At the same time, once the social identity of some groups depended on the availability of certain tablewares that were not produced locally, the maintenance and perhaps even the enhancement of levels of connectivity would be demanded, producing a mutual feedback between connectivity and social identity. It is only reasonable to suppose that alongside changes in social identity associated with tablewares, interconnectivity facilitated the transmission of other cultural elements as well.

It is my suggestion that this situation, in which sociocultural change and increasing regional connectivity occur at the same time and feed each other, is directly correlated to the expansion of Islam in the Gulf. As the sources show, one of the effects of the Islamic conquest was an increase in the mobility, and probably migration, of numerous Arab groups on both shores of the Gulf. This undoubtedly generated new interactions and new patterns of competition and collaboration between different groups. The first outcome of this phenomenon had to be the generation of a large number of micro-

scale processes of social and cultural adaptation (and change) to the new circumstances. In them, different strategies of negotiation between different groups would be essayed and alliances across different categories of social identity (ethnicities, tribes, religions, geographical areas) would be created. All this was in principle chaotic and could generate exceptional social phenomena or situations (cf. the communal tombs of Sīrāf used during the Islamic period, in the 9th and 10th centuries: Whitehouse 1974: 23-30). In the end, however, the whole process would eventually be channelled in the preferred direction of the side that accumulated greater political power, that is, Islam. Of course, that is not to suggest that all Muslims had the same interests and perceptions, but political competition between different groups of Muslims would eventually be embedded within the framework of the history of the Caliphate. Therefore, I think it is fair to use the concept of Islamization to define this historicallysituated process of mutually-fed expansion of connectivity and socio-cultural change in the Gulf between (at least) the 7th and 9th centuries.

Islamization may seem a controversial concept here, because it usually concerns only the idea of the political or religious expansion of Islam, without any further connotations of social transformation. However, in my conceptualization here, Islamization is a social and cultural phenomenon, because it is a process deeply embedded in a historical context and it brings about fundamental changes not only to those who embrace Islam, but also to those who, although not becoming Muslims, nevertheless live in societies where Islam exerted an important influence. Therefore, the

application of the term of Islamization to the period under study in this paper is a way of characterising the historical context and at the same time of defining the specific mechanisms which led to the formation of the Islamic society of the Gulf. I have already adopted a similar approach to the study of the region of the Vega of Granada, in south east Spain (Carvajal López 2013; Carvajal López and Day 2013).

#### Islamization and Trade

The implication of all this is that Islamization, which is marked by socio-cultural change and increased connectivity, must have had an influence on the expansion of trade during the early Islamic period. Could this Islam-stimulated expansion of trade be the reason for the development of direct contacts with China in the 7th and 8th centuries?

Seland has already highlighted a relationship between religion and trade, with particular reference to Christian communities in the Western Indian Ocean region between late Antiquity and the early Islamic period (2013: 384-88). His argument, perfectly applicable to Islam (as he himself suggests), is that 'portable religions' (i.e. those in which worship can be practiced anywhere with co-religionists with whom no other social ties exist) can facilitate the establishment of solid trade links between different groups. To this argument I would add that trade partners interested in securing links with a particularly successful religious group may be tempted to adopt the faith in question, and therefore the possibilities of conversion increase. In this way, a

situation of mutually-supporting expansion of trade and religion can be created. The evidence shows that Muslims were a very active community from the early decades of Islamic history, bringing under the same political dominion a large expanse of land and, at least in the Gulf, triggering relatively fast socio-cultural change and increases in regional connectivity. By the early 8th century (if not before) they had become a very attractive religious community with which profitable trade links could be developed in different parts of the world.

This same reasoning could be applied to several religious groups, and indeed we have seen that the sources mention that the merchant colony of Guangzhou was inhabited by 'Muslims, Jews, Christians and Magi' as late as 878 CE (Relation 1845: 64; Hourani 1979 [1951]: 76; Voyage 1922: 76). Jews and Christians (and perhaps Zoroastrians) formed particularly successful diaspora trading communities in the Late Antique period (Christians in particular were very active in the Gulf until the 9th-10th centuries, as explained above), and it is even possible that these different groups would have collaborated with each other and with the Muslims in the expansion of long-distance trade in the 7th and 8th centuries. However, given the particular success of the Muslim community and its intense activity in these centuries, I would like to suggest that Muslims were in a particularly good position to initiate and profit from the extension of trade routes. Ultimately this may have been the decisive factor that led to the establishment of direct trade between China and the Gulf, and eventually to the emergence and growth of Muslim communities in South Asia and China.

This dimension of Islamization forces us to reconsider the role of long-distance trade in the Gulf. If direct contacts with China can be dated back to the 7th or early 8th century, the role of Baghdad and Sīrāf, important trade centres founded between the second half of the 8th and the early 9th century, needs to be revisited. Hodges and Whitehouse suggested, following Hourani, that the foundation of Baghdad and of Sīrāf were intended to tap the flow of trade from China (Hodges and Whitehouse 1983: 127; Hourani 1979 [1951]: 62). This idea remains valid and indeed the foundation of these cities does seem to mark a turning point in the history of the Islamization of the Gulf. What needs to be reviewed, however, is their implicit assumption that the long-distance trade had a long history. This is not entirely wrong, as long-distance trade with South Asia did indeed exist before Islam. However, trade with China, the prize that the Abbasid Caliph al-Mansur was seeking with the foundation of Baghdad, had a shorter history. Indeed, it is possible that, like the Abbasid caliphate, it was ultimately a consequence of the rise of Islam in the 7th century.

### Conclusion

K.N. Chaudhuri speculated, in his *Trade and Civilization in the Indian Ocean,* that direct maritime trade between the Gulf and China owed its existence to the rise and expansion of Islam (1985: 51). This speculation flowed from his belief that trade followed the growth of demand caused by the appearance of large urban centres in the Islamic world. However, he was aware of the lack of evidence linking this urban explosion

directly with Islam (1985: 36 and n. 2). In the present work I have suggested that Islamization, a process involving increasing connectivity and fast sociocultural change, was ultimately the trigger of the direct connection.

In the paragraphs above I have examined three different themes - one related to longdistance trade between China and the Gulf, and two others to the internal connectivity of the Gulf. Significant matching patterns of growth and contraction have been found in the two phenomena. There is, however, a need for more evidence to establish a clearer link between them. It has also been found that the start of the expansion of the two phenomena predates by at least a century the emergence of the large urban trade centres of Baghdad and Sīrāf in the Gulf. Finally, the analysis of archaeological sources has demonstrated the existence of a swift process of sociocultural change in the Gulf paralleling the growth of its intraregional connectivity.

Two suggestions follow from these observations. The first is that the link between socio-cultural change and increased connectivity can be considered the materialization of the process of Islamization. The second is that, ultimately, this same process of Islamization can be considered the trigger for the expansion of trade networks, both local and long-distance, prior to the establishment of direct contacts between China and the Gulf.

In conclusion, Islamization seems to have produced in a short period of time a stunning transformation of the social and cultural coordinates of the Gulf and of connectivity between distant places, within the Gulf and beyond. This process has left abundant

traces in the archaeological evidence and written sources that still today, more than fifty years after the beginnings of Gulf archaeology and more than one hundred years after the beginnings of Islamic archaeology, we are learning to recognize. If we are to understand this process more fully and more clearly, it is essential that we both continue our basic research and introduce (where appropriate) new approaches and perspectives developed in other fields of archaeology. And in that regard, we should note Richard Hodges' reference, in the conclusion of his memorable audit of his own *Dark Age Economics* (2012: 136), to 'the post-processual emphasis upon agency, practice and ideology, as well as the recognition that material culture is a mediating force in framing identities'.

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## References

# Primary sources

*Balā dhurī II* 1924: Al-imām abu-l-'Abbās Aḥmad Ibn Jābir al-Balādhurī (1924): *The Origins of the Islamic State*, Vol II., trans. Francis Clark Murgotten. New York: Columbia University.

*Ibn Hawqā*/1992: Ibn Hawqāl abu-l-Qāsim Ibn Hawqāl al-Nişibī (1992): *Kitāb Sūrat al-Ar*d. Beyrut: Dār Maktabat al-Ḥayah.

*Ibn Khurradā dhbih* 1865: Abu I-Qāsim Ubayd Allāh Ibn 'Abd Allāh Ibn Khurradādhbih 1865: 'Le Livre des Routes et des Provinces', trans by C. Barbier de Meynard. *Journal Asiatique* V: 227-97.

*Al-Rāmhurmuzī* 1883-1886: Buzurg Ibn Shahriyār al-Rāmhurmuzī (1833-1886): *Livre des Merveilles de l'Inde*, trans. L. Marcel Devic. Leiden: Brill.

*Al-Istakhr*ī 1927: Abu Ishāk al-Fārsī al-Istakhrī 1927: *Kitāb al-Masālik wa-I-Mamālik.* Ed. M.J. De Goeje. Leiden: Brill.

*I-T'ing* 1896: I-T'ing (1896), *A Record of the Buddhist Religion as Practised in India and the Malay Archipelago (AD 671-695)* trans. J. Takasuku. Oxford: Clarendon Press.

*Al-Masʿūdī* l 1861: Abu-l-Ḥasan 'Alī ibn al-Ḥusayn ibn 'Alī al-Masʿūdī (1861): *Les Prairies d'Or*, trans. C. Barbier de Meillart; A. Pavet de Courteille. Paris: L'Imprimerie Impériale.

*Al-Muqaddas*ī 2001: Muḥammad Ibn Aḥmad al-Muqaddasī (2001): *The best divisions for knowledge of the regions*, trans. B. Collins. Reading: Garnet.

*Relation* 1845: Anonymous (1895), *Relation des Voyages Faites per les Arabes et les Persans dans l'Inde et à la Chine dans le IXéme siècle de l'Ère Chrétienne*, trans. M Reinaud. Paris: L'Imprimerie Royale.

*Al-Ţabar*ī XII, 1992: 168 Abū Jaʿfar Muḥammad ibn Jarīr al-Ṭabarī: *The Battle of al-Qā disiyya and the conquest of Syria and Palestine AD 635-637 / AH 14-15*, trans. Yohanan Friedmann, Vol XII. Albany: State University of New York Press.

*Al-Ţabar*ī XIV, 1994: Abū Jaʿfar Muḥammad ibn Jarīr al-Ṭabarī (1994): *The Conquest of Iran*, trans. G. Rex Smith, Vol XIV. Albany: State University of New York Press.

*Voyage* 1922: Anonymous (1922), *Voyage du Marchand Arabe Sulaymān en Inde et en Chine Rédigé in 851 Suivi de Remarkes par Abu Zayd* Hasan (vers 916), trans. Gabriel Ferrand. Paris: Éditions Bossard.

## Secondary sources

Adams, R. 1965. The Land Behind Baghdad. Chicago, The University of Chicago Press.

Agius, D.A. 2008. *Classic Ships of Islam: From Mesopotamia to the Indian Ocean*. Leiden, Brill.

Broomhall, M. 1910. *Islam in China: A Neglected Problem*. London: Morgan and Scott Ltd.

Carter, R. 2005. Chapter 4 - The Pottery. In T. Insoll (ed.), *The Land of Enki in the Islamic Era. Pearls, Palms and Religious Identity in Bahrain*: 107-92. London, Kegan Paul.

Carter, R. 2008. Christianity in the Gulf during the first centuries of Islam. *Arabian Archaeology and Epigraphy* 19: 71-108.

Carter, R. 2013. Christianity in the Gulf after the coming of Islam: re-dating the churches and monasteries of Bet Qatraye. In C.J. Robin and J. Schiettecatte (eds.), *Les Préludes de l'Islam*. 311-30. Paris, De Boccard.

Carter, R., Challis, K., Priestman, S. and Tofighian, H. 2006. The Bushehr hinterland: results of the first season of the Iranian-British Archaeological Survey of Bushehr Province, November-December 2004. *Iran* 44: 63-103.

Carter, R. and Naranjo Santana, J. 2011. *Muharraq Excavations 2010*. Bahrain, Ministry of Culture and Information.

Carvajal López, J.C. 2013. Islamicization or Islamicizations? Expansion of Islam and social practice in the Vega of Granada (south-east Spain). *World Archaeology* 45: 56-70.

Carvajal López, J.C. and Day, P.M. 2013. Cooking pots and Islamicization in the early medieval Vega of Granada (Al-Andalus, 6th to 12th centuries). *Oxford Journal of Archaeology* 32: 433-51.

Carvajal López, J.C., Morabito, L., Carter, R., Fletcher, R. and Al Naimi, F. A. 2016. The crowded desert: a multi-phase archaeological survey in the North West of Qatar. *Proceedings of the Seminar of Arabian Studies* 46: 45-62.

Carvajal López J.C., Roberts, K., Rees, G., Stremke, F., Marsh, A., Morabito, L., Bevan, A., Altaweel, M., Harrison, R., Arroyo-Kalin, M., Carter, R., Fletcher, R. and Al Naimi, F.A. In press. A crowded desert: early results from survey and excavation of nomadic sites in northwest Qatar. *Proceedings of the Seminar of Arabian Studies* 47.

Chaudhuri, K.N. 1985. *Trade and Civilisation in the Indian Ocean: An Economic History from the Rise of Islam to 1750*. Cambridge, Cambridge University Press.

Dabry de Thiersant, P. 1878. *Le Mahométisme en Chine et dans le Turkestan Oriental*, 2 vols. Paris, Ernest Leroux.

Al-Dailami, A. 2014. 'Purity and confusion': the Hawala between Persians and Arabs in the contemporary Gulf. In L. Potter (ed.), *The Persian Gulf in Modern Times. People, Ports and History*. 299-326. New York, Palgrave Macmillan.

Devéria, M.G. 1895. Origine de l'Islamisme en Chine. In *Centenaire de l'Ecole des Langues Orientales Vivantes, 1795-1895. Recueil de mémoires publié par les professeurs de l'Ecole. (15 oct. 1895)*: 305-55. Paris: Imprimerie Nationale. (

Donner, F. 1981. The Early Islamic Conquests. Princetown, Princetown University Press.

Donner, F. 1998. *Narratives of Islamic Origins. The Beginnings of Islamic Historical Writing*. Princeton, The Darwin Press.

*El* 1997: Donzel, E., Lewis, B. and Pellat, C. (eds.) 1997. *The Encyclopaedia of Islam. New Edition.* Leiden, Brill.

Flecker, M. 2011. A ninth-century Arab shipwreck in Indonesia. The first archaeological evidence of direct trade with China. In R. Krahl, J. Guy, J. K. Wilson and J. Raby (eds.), *Shipwrecked. Tang Treasures and Monsoon Winds*. 101-19. Singapore: Smithsonian Institution - National Heritage Board, Singapore - Singapore Tourism Board.

Frifelt, K. 2001. Islamic Remains in Bahrain. Møesgård, Jutland Archaeological Society.

George, A. 2015. Direct sea trade between early Islamic Iraq and Tang China: from the exchange of goods to the transmission of Ideas. *Journal of the Royal Asiatic Society* 25: 579-624.

Guérin, A. and Al Naimi, F.A. 2009. Territory and settlement patterns during the Abbasid period (9th century AD): the village of Murwab (Qatar). *Proceedings of the Seminar for Arabian Studies* 39: 181-96.

Guérin, A. and Al Naimi, F.A. 2010. Preliminary pottery study: Murwab horizon in progress, 9th century AD, Qatar. *Proceedings of the Seminar for Arabian Studies* 40: 17-34.

Gungwu, W. 1958. The Nanhai trade: a study of the early history of Chinese trade in the South China Sea. *Journal of the Malayan Branch of the Royal Asiatic Society* 31 (2 [182]): 1-135.

Hall, K.R. 2010. Indonesia's evolving international relationships in the ninth to early eleventh centuries: evidence from contemporary shipwrecks and epigraphy. *Indonesia* 90: 15-45.

Haşan, H. 1928. A History of Persian Navigation. London, Methuen and Co.

Haw, S.G. 2017. The maritime routes between China and the Indian Ocean during the second to ninth centuries CE. *Journal of the Royal Asiatic Society of Great Britain & Ireland* 27 (1): 53-81.

Hirth, F. 1913. The mystery of Fu-lin. *Journal of the American Oriental Society* 33: 193-208.

Hirth, F. and Rockhill, W.W. 1911. Introduction. In F. Hirth and W.W. Rockhill (eds.), *Chau Ju-Kua: On the Chinese and Arab Trade in the 12th and 13th Centuries*. 1-39. Saint Petersburg, Imperial Academy of Sciences.

Hodges, R. 2012. Dark Age Economics. A New Audit. London, Duckworth.

Hodges, R. and Whitehouse, D. 1983. *Mohammed, Charlemagne and the Origins of Europe: Archaeology and the Pirenne Thesis.* London, Duckworth.

Holes, C.D. 2011. Language and identity in the Arabian Gulf. *Journal of Arabian Studies* 1: 129-45.

Hourani, G. 1979 [1951]. Arab Seafaring. New Jersey, Princeton University Press.

Insoll, T. (ed.) 2005. *The Land of Enki in the Islamic Era: Pearls, Palms, and Religious Identity in Bahrain*. London, Kegan Paul.

Kennedy, H. 2014. The feeding of the five hundred thousand: cities and agriculture in early Islamic Mesopotamia. *Iraq* 73: 177-99.

Kennet, D. 2002. Sasanian pottery in southern Iran and eastern Arabia. Iran 40: 153-62.

Kennet, D. 2004. *Sasanian and Islamic Pottery from Ra's al-Khaimah: Classification, Chronology and Analysis of Trade in the Western Indian Ocean*. Oxford, Archaeopress.

Kennet, D. 2007. The decline of Eastern Arabia in the Sasanian period. *Arab Archaeology and Epigraphy* 18: 86-122.

Kennet, D. 2012. Archaeological history of the Northern Emirates in the Islamic period: an outline. In P. Hellyer and D. Potts (eds.), *Fifty Years of Emirates Archaeology*. 189-201. Abu Dhabi, Motivate Publishing.

Kennet, D., Deadman, W.M. and Al-Jahwair, N.S. 2016. The Rustaq-Bāținah archaeological survey. *Proceedings of the Seminar for Arabian Studies* 46: 155-68.

Kennet, D., Ulrich, B. and Le Maguer, S. 2014. *Kadhima: Kuwait in the Early Centuries of Islam*. Kuwait, National Council for Culture, Arts and Letters.

King, G. 1997. The history of UAE: the eve of Islam and the Islamic Period. In E. Ghareeb and I. Al Abed (eds.), *Perspectives on the United Arab Emirates*. 74-94. London, Trident Press.

Krahl, R. 2011a. Chinese ceramics in the late Tang Dynasty. In R. Krahl, J. Guy, J. K. Wilson and J. Raby (eds.), *Shipwrecked. Tang Treasures and Monsoon Winds*. 45-53. Singapore: Smithsonian Institution - National Heritage Board, Singapore - Singapore Tourism Board.

Krahl, R. 2011b. Green wares of southern China. In R. Krahl, J. Guy, J. K. Wilson and J. Raby (eds.), *Shipwrecked. Tang Treasures and Monsoon Winds*. 185-99. Singapore: Smithsonian Institution - National Heritage Board, Singapore - Singapore Tourism Board.

Leslie, D.D. 1981-1983. Persian Temples in T'ang China. Monumenta Serica 35: 275-303.

Leslie, D.D. 1986. *Islam in Traditional China: A Short History to 1800*. Canberra: Canberra College of Advanced Education.

Leslie, D.D., Daye, Y. and Yousef, A. 2006. *Islam in Traditional China: A Bibliographical Guide*. Sankt Augustin: Monumenta Serica Institute.

Lombard-Salmon, C. 2004. Les Persans à l'extrémité orientale de la route maritime (lle A.E. -XVIIe siècle). *Archipel* 68: 23-58.

McPhillips, S., Rosendahl, S. and Morgan, V. 2015. Abbasid rural settlement in northern Qatar: seasonal tribal exploitation of an arid environment? *Proceedings of the Seminar for Arabian Studies* 45: 185-98.

Potter, L. 2008. The consolidation of Iran's frontier on the Persian Gulf in the 19th century. In R. Farmanfarmaian (ed.), *War and Peace in Qajar Persia. Implications Past and Present*. 125-48. London, Routledge.

Potts, D., Mughannum, A.S., Frye, J. and Sanders, D. 1978. Preliminary report on the second phase of the Eastern Province Survey. *Atlal* 2: 7-27.

Power, T. 2012. *The Red Sea from Byzantium to the Caliphate: AD 500-1000*. Cairo, American University in Cairo Press.

Priestman, S. 2005. *Settlement and Ceramics in Southern Iran: An Analysis of the Sasanian and Islamic periods in the Williamson Collection*. Unpublished MA Thesis, University of Durham.

Priestman, S. 2013. *A Quantitative Archaeological Analysis of Ceramic Exchange in the Persian Gulf and Western Indian Ocean, AD c.400 – 1275*. Unpublished PhD Thesis, University of Southampton.

Priestman, S. 2016. The Silk Road or the Sea? Sasanian and Islamic exports to Japan. *Journal of Islamic Archaeology* 3 (1): 1-36

Rougelle, A. 1996. Medieval trade networks in the western Indian Ocean (8th-14th centuries). Some reflections from the distribution patterns of Chinese imports in the Islamic world. In H.P. Ray and J.F. Salles (eds.), *Tradition and Archaeology. Early Maritime Contacts in the Indian Ocean*: 159-80. New Delhi, Manohar.

Schottenhammer, A. 2016. China's gate to the Indian Ocean: Iranian and Arab longdistance traders. *Harvard Journal of Asiatic Studies* 76 (1-2): 135-79.

Seland, E.H. 2013. Networks and social cohesion in ancient Indian Ocean trade: geography, ethnicity, religion. *Journal of Global History* 8: 373-90.

Serjeant, R.B. 1978. Historical sketch of the Gulf in the Islamic Era from the 7th to the 18th century AD. In B. De Cardi (ed.), *Qatar Archaeological Report. Excavations 1973*: 147-63. Oxford, Oxford University Press and Qatar National Museum.

Shatzman Steinhardt, N. 2015. *China's Early Mosques*. Edinburgh: Edinburgh University Press.

Slot, B.J. 1993. The Arabs of the Gulf 1602-1784. Leidschendam, B.J. Slot.

Stardgardt, J. 2014. Indian Ocean trade in the ninth and tenth centuries: Demand, distance, and profit. *South Asian Studies* 30 (1): 35-55.

Tomber, R. 2008. Indo-Roman Trade: From Pots to Pepper. London, Bloomsbury.

Whitcomb, D. 1975. The archaeology of Oman: a preliminary discussion of the Islamic periods. *The Journal of Oman Studies* 1: 123-57.

Whitcomb, D. 1978. The archaeology of al-Hasā' oasis in the Islamic period. *Atlal* 2: 95-113.

Whitcomb, D. 1986. *Before the Roses and Nightingales. Excavations at Qasr-i Abu Nasr, Old Shiraz*. New York, The Metropolitan Museum of Art.

Whitcomb, D. 2009. The Gulf in the early Islamic period: the contribution of archaeology to regional history. In L. Potter (ed.), *The Persian Gulf in History*. 71-87. New York, Palgrave Macmillan.

Whitehouse, D. 1974. Excavations at Sīrāf: 6th interim report. Iran 12: 1-30.

Whitehouse, D. and Williamson, A. 1973. Sasanian maritime trade. Iran 11: 2.

Wilson, J.K. and Flecker, M. 2011. Dating the Belitung shipwreck. In R. Krahl, J. Guy, J. K. Wilson and J. Raby (eds.), *Shipwrecked. Tang Treasures and Monsoon Winds*. 35-37.

Singapore: Smithsonian Institution - National Heritage Board, Singapore - Singapore Tourism Board.