

What's in a World?

The “Indian Ocean World” as a Research Framework

MARIA GAJEWSKA

Institute for the Study of the Ancient World, New York University

Abstract

The Indian Ocean World is a popular topic of cross-disciplinary academic research. However, the framework of this very large and diverse macro-region as a “world” is rarely questioned or defined. This article attempts to offer a working definition of the “Indian Ocean world” that would make it useful as a research framework for historical disciplines, particularly those focused on material culture. It then turns to the western Indian Ocean between the eighth and fifteenth centuries, especially as visible through the lens of archaeological evidence, to question whether the macro-region fits this definition. It concludes that there are substantial differences in how different regions engaged with, and were influenced by, other parts of the oceanic littoral and by maritime connections. A significant part of these differences can be linked to environmental conditions, specifically to how local topography and climate facilitated or obstructed connections to the maritime littoral and to other (economic, political, cultural) networks, and how it shaped receptivity to maritime imports and influences. While each region was unique, environmental conditions allow the definition of two broad spheres of transoceanic influence: a relatively closely integrated shared world, and an associated sphere whose connections to the littoral world were more tenuous.

Introduction

Scholarship on the Indian Ocean world is booming. There are Indian Ocean conferences, Indian Ocean research groups, Indian Ocean seminars, Indian Ocean books; there is a dedicated Indian Ocean journal and an Indian Ocean research center. In today's academic landscape, something about the Indian Ocean world clearly resonates.¹

At the same time, the concept of the “Indian Ocean world” is relatively rarely discussed. Most studies in Indian Ocean history do not engage with it directly, instead focusing on specific connections (economic, religious, technological, cultural, political, linguistic) spanning the oceanic littoral. The articles presented in this issue are a good example. Ha interrogates two very different types of connectivity: the forced movement of slave trade,

1. See, e.g., the [Indian Ocean World Centre](#) at McGill University, which publishes the *Journal of Indian Ocean World Studies*; the [Indian Ocean Research Group](#), and their *Journal of the Indian Ocean Region*; the [Indian Ocean World Archaeology Conference](#); the [Indian Ocean World project of the Crossroads Research Centre](#); and the [RIO Research Centre](#) in Oman. Books and other publications are referenced throughout.

© 2025 Maria Gajewska. This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License, which allows users to copy and distribute the material in any medium or format in unadapted form only, for noncommercial purposes only, and only so long as attribution is given to the original authors and source.

and the ability of objects to acquire new meanings as they crossed the ocean, becoming widely intelligible literary metaphors. In Banister's paper, religious connections between Egypt and India provide a basis for political connectivity and for shared symbolism of power. Baig shows two very different scales of transoceanic connectivity in his discussion of a specific person's transoceanic travel (the Indian jurist Sirāj al-Dīn al-Hindī's) and of the shared intellectual (legal) sphere it exemplified. All present nuanced and original treatments of specific facets of transoceanic connectivity, and none considers what these facets mean for other connections or the broader Indian Ocean economic, cultural, social, legal, or religious spheres.

This privileging of various forms of connectivity is rooted in the assumption that such connectivity is enough to speak of a shared sphere that can be studied as such. However, the implications of such a shared sphere—a “world”—beyond the form of connectivity studied are rarely articulated; neither is the relationship between such connectivity in one domain (economic, legal, religious) to others. In *The Indian Ocean*, Michael Pearson pointed out that while the presence of connections across the ocean is not disputed, the significance of these connections, the presence of layers of “unity” and, ultimately, of a “world” bound by commonalities, is not clear, and that the subject had not been theorized much to date.² His book came out in 2003; over twenty years on, theorizing remains scarce.

In a recent overview, Edward Alpers traced the study of the Indian Ocean, especially history, to the 1930s, while noting a qualitative difference between earlier works and what he termed the “New Indian Ocean historiography” of the 1970s and 1980s.³ The latter has provided much of the intellectual scaffolding on which contemporary Indian Ocean historiography rests. A key figure here is Kritik N. Chaudhuri, whose *Trade and Civilisation in the Indian Ocean* is still a touchstone reference for historians and archaeologists working on the region. In taking the ocean as an organizing principle of his historical study, Chaudhuri was explicitly inspired by Ferdinand Braudel's work on the Mediterranean—he mentions Braudel in the first sentence.⁴ Since then, other contributions to the discipline have focused on the environmental aspect of the Indian Ocean influencing history and on *longue durée* developments, also echoing Braudel.⁵ However, Chaudhuri was careful to point out a key distinction between the Mediterranean and the Indian Ocean, arguing that the latter did not exhibit the cultural unity of the former, with culture, social systems, and religion providing the “dividing lines” to economic, migratory, and climatic connections.⁶ Today, this caveat is rarely cited; rather, the term “Indian Ocean world” is often invoked without precise definition or discussion, bringing with it an implicit Braudelian connotation.

2. Michael Pearson, *The Indian Ocean* (Oxford: Oxford University Press, 2003), 19–25.

3. Edward A. Alpers, “Indian Ocean Studies: How Did We Get Here and Where Are We Going? A Historian's Perspective,” *Journal of Indian Ocean World Studies* 5, no. 2 (2022): 314–36.

4. Kirit Narayan Chaudhuri, *Trade and Civilisation in the Indian Ocean* (Cambridge: Cambridge University Press, 1985), 1.

5. Alpers, “Indian Ocean Studies.”

6. Chaudhuri, *Trade and Civilisation*, 3.

This creates confusion and invites the question of why “Indian Ocean world” is a useful framework at all. To answer it, it is necessary to go beyond a specific facet of connectivity and focus on the holistic influence and impact of transoceanic connections. For Braudel, the importance of a “world” framework lay precisely in how far-reaching, in diverse domains (economy and climate, but also culture and society), the impact of these connections on life across the Mediterranean was, and in how this impact was stronger than that of other (inland) connections. Chaudhuri’s caveat therefore makes his Indian Ocean world fundamentally different to Braudel’s Mediterranean—an expression of geographical reality perhaps, but not of the kind of convergence that was fundamental to Braudel’s framing. In contemporary historical and archaeological research, “Indian Ocean world” provides a conceptual scaffolding, highlighting an emphasis on maritime connections and their impact. However, if its only function is to signal the focus of research, then its role or utility as a framework is not clear; one can research long-distance connections without the framework of a “world.” For instance, no one working on the medieval trade between the Middle East and Scandinavia talks of the “Arabo-Viking world”—there is no need to do so, and such framing would add little to the research. Yet the “Indian Ocean world” persists. Why?

Perhaps this is so because domain-specific connections across the Indian Ocean were numerous and diverse enough to have a holistic impact on living environment and practice, in a way that was not the case for the “Arabo-Viking” example above but was across the Mediterranean—even if the Mediterranean model cannot be directly transplanted to the Indian Ocean. Interrogating whether the material conditions and similarities of praxis existed to argue for such a holistic impact is the first aim of this article. This also leads to exploring the extent to which an Indian Ocean world of such holistic convergence extended across all the geographical Indian Ocean littoral—effectively, defining the geographical boundaries of the Indian Ocean world. To some extent, this is inspired by Pearson’s concept of a littoral society, with similarities of praxis engendered by the environmental conditions of a littoral. However, here the focus is less on general “littoral” characteristics and more on their specifically Indian Ocean aspects.⁷

Fundamentally, this article tries to answer the question of what the Indian Ocean world is and whether—and if so, how—it is a useful framework for historical and archaeological scholarship, in the context of the medieval (ca. eighth–fifteenth centuries) western Indian Ocean littoral. It begins by defining the term “Indian Ocean world” in a way that makes it an analytically useful research framework, rather than exclusively a signpost for maritime connections or an expression of spatial reality. It then considers whether thus defined, the term can be applied to the western Indian Ocean in the period discussed. This chronological framing begins with the first written evidence for direct voyages between the western and eastern poles of the Indian Ocean and ends with the entry of European colonial powers into Indian Ocean trade (first the Portuguese, later the Dutch, British, and French), which ultimately led to its integration with global trade networks. These two

7. Michael Pearson, “Littoral Society: The Concept and the Problems,” *Journal of World History* 17, no. 4 (2006): 353–73.

developments provide logical starting and end points. The period is divided into the early (pre-tenth century), middle (eleventh–thirteenth centuries), and late (fourteenth–fifteenth centuries), with the tenth century providing a transitional stage, as explained below. The spatial framing could—should—be expanded and enriched by incorporating the eastern side of the ocean. However, this would require both more space than this article affords, and archaeological and linguistic expertise to analyze the evidence that the author does not have. A cut-off point at the western coast of India is grounded in the reality of sailing across the ocean with the monsoon—according to Ibn Mājid, for anyone trying to cross from one side of the ocean to another a stopover of at least six months around the tip of India/Sri Lanka was necessary.⁸ The assessment of the “world” of the western Indian Ocean is still informative, providing a blueprint for how analogous analysis could be applied in the eastern Indian Ocean littoral, or across the entire region.

Defining the “Indian Ocean World”

Gwyn Campbell is one of the few contemporary historians to explicitly engage with the term “Indian Ocean world.” Drawing on Braudel, Campbell considers an environmental feature—the monsoon—a key determinant of the Indian Ocean world’s historical trajectory, arguing that it enabled both a specific pattern of exchange and two agricultural systems, one rooted in a shared calendar of wet and dry seasons characteristic of the monsoon climate, the other not, providing a differentiation of crops conducive to exchange. Campbell then argues that these twin poles of trade and agriculture in turn gave rise to convergent forms of political organization: small, autonomous, or semiautonomous polities, spatially focused on the oceanic littoral and drawing much of their revenue from maritime activities, including trade. There is climatic, economic, and political convergence, which creates the Indian Ocean world.⁹

There is much value in this description and, as will be shown below, the type of polity described by Campbell could be found across the medieval Indian Ocean littoral in the medieval period. However, if one were to seriously take the argument that this is what defines the “Indian Ocean world,” many regions routinely assumed to belong to it: the Red Sea, for example, or coastal Gujarat, should not be considered so. Their political development diverges substantially from Campbell’s pattern. Furthermore, although he accounts for agricultural differences between regions affected and unaffected by the monsoon, and while it is logical to consider the former integrated into a shared sphere of what one may term “monsoon agriculture,” it is not clear why agricultural practices in regions unaffected by the monsoon should be considered part of a shared oceanic world.

One response is to point out that no one in contemporary scholarship argues for one “Indian Ocean world”; rather, there are many “worlds,” each defined differently depending on the geographical, chronological, and thematic scope of a given research project. Campbell’s “world” of small, littoral polities farming and trading according to the monsoon

8. Ibn Mājid, cited in Chaudhuri, *Trade and Civilisation*, 123–33.

9. Gwyn Campbell, “Slavery in the Indian Ocean World,” in *The Routledge History of Slavery*, ed. Gad Heuman and Trevor Burnard (London: Routledge, 2010), 52–63.

calendar is only one of them. However, if such diversity were always assumed, this would require defining the specific “Indian Ocean world” one is talking about clearly in every study that applies the term to avoid confusion. This is rarely the case. Instead, usually the Indian Ocean is adopted as a geographic framing, with the occasional use of the phrase “Indian Ocean world(s)” coming up here and there, without much discussion or explicit definition. Its utility as a framework remains unclear.

For Campbell, this utility lies in focusing on something shared across the Indian Ocean littoral and not beyond—the monsoon wind—as a key determinant of economic, environmental, and political development. This seems key to defining a “world”—identifying a factor, or factors, shared across it, bounded within it, and crucial to its historical development. This allows not only the study of trans-regional connections or similarities but also explains why they should be the starting point of a historical study, since they are consequential, exerting a significant influence on political, economic, social, or cultural development within the region.

Nile Green has also placed identifying such factors at the core of his definition of maritime worlds. Rather than drawing a distinction between Chaudhuri’s common factors and dividing lines, Green argues that a maritime world can be politically, economically, culturally, or socially similar or divergent—one or the other is not a determinant of whether a “maritime world” is a useful framework. Rather, what matters is that in a “world,” the connections shared across a maritime region ground development across it. These developments may exhibit an “underlying unity”—a “hard world,” like Braudel’s Mediterranean—or may diverge in a way that is ultimately rooted in maritime connections—a “soft world.”¹⁰ Green’s framing is important because it answers the question of why an “Indian Ocean world” can be a useful framework where an “Arabo-Viking world” is not: the difference is not how similar the regions within a “world” were, but the relative importance of interaction within the “world” to regional developments.

Consequently, this article takes Green’s work as a starting point, defining an “Indian Ocean world” as a section of the Indian Ocean littoral that formed a bounded sphere of interaction, where transoceanic connections were a major determinant of political, economic, and cultural development. No such sphere is ever completely bounded, so the relative importance of intra-world connections vis-à-vis other links and influences becomes crucial to this definition. The strength of this influence in the context of the western Indian Ocean between the eighth and fifteenth centuries is interrogated in the following paragraphs, beginning with politics, then economy, and finally culture and society. The aim is twofold: to assess the influence of transoceanic connections across the oceanic littoral, and to investigate to what extent this influence varied between regions. In the process, the vision of at least two “Indian Ocean worlds” emerges, where the environmental diversity across the littoral has a profound impact on how integrated different regions have historically been with the littoral, and to what extent this integration was a crucial enough influence to consider them part of a shared “world.”

10. Nile Green, “Maritime Worlds and Global History: Comparing the Mediterranean and Indian Ocean through Barcelona and Bombay,” *History Compass* 11, no. 7 (2013): 513–23, at 514.

Politics of the Indian Ocean World

Politics was a key area where trans-regional similarities manifested across the Indian Ocean world for Campbell. In “Slavery in the Indian Ocean World,” he argued that a specific form of political organization was prevalent across Indian Ocean littoral before European actors began to dominate the economy: “littoral mercantile communities that retained a large degree of political and juridical independence from the centralized land-based polities in the hinterland” (though often working in symbiosis with the latter, up to and including state protection of trade routes). This political landscape was interrupted and fundamentally changed when the Portuguese and then the Dutch, British, and French entered the Indian Ocean world.¹¹

While some parts of the western Indian Ocean littoral conformed to this pattern, others did not. Furthermore, the appearance of European powers was not quite as much a watershed moment as Campbell (and others) have assumed.¹² The alliance between state and merchant, and the close integration between maritime trade routes and state boundaries, characteristic of European expansion into the Indian Ocean in the modern period, were to some extent prefigured by earlier, “indigenous” developments, as will be shown below.

Several strands of evidence converge to demonstrate that by the ninth century, a maritime network existed reaching from the Persian Gulf all the way to China. There are written references to merchants sailing from Basra to China and to Arab/Persian communities in Guangdong. Abbasid and Chinese ceramics have been found on archaeological sites across the oceanic littoral.¹³ A ninth-century, sewn-plank dhow, probably Arabian—the Belitung shipwreck—was excavated off the coast of Indonesia.¹⁴ When this system began to unravel, following several disruptive events at both ends of the network (the Zanj revolts in Basra, Huang Chao’s rebellion in Tang China, especially the massacre in Guangdong), trade continued, but how it was carried out changed substantially. In Iraq, great Abbasid merchants moved out of Baghdad and Basra to ports across the western Indian Ocean littoral in Oman, southern Arabia, western India, and the Hejaz (at the same time, others moved overland to Syria).¹⁵ The mercantile foreign population of Guangdong had been

11. Campbell, “Slavery in the Indian Ocean World,” 53.

12. See, e.g., Engseng Ho, *The Graves of Tarim: Genealogy and Mobility across the Indian Ocean* (Berkeley: University of California Press, 2006), xxi.

13. Alain George, “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* 3, no. 25 (2015): 579–624; Axelle Rougeulle, “Medieval Trade Networks in the Western Indian Ocean (8th–14th Centuries): Some Reflections from the Distribution Pattern of Chinese Imports in the Islamic World,” in *Tradition and Archaeology: Early Maritime Contacts in the Indian Ocean*, ed. Himanshu Prabha Ray and Jean François Salles, 159–80 (New Delhi: Manohar Publishers, 1996).

14. Alan Chong and Stephen A. Murphy, eds., *The Tang Shipwreck: Art and Exchange in the 9th Century* (Singapore: Asian Civilisations Museum, 2017). The retrieval of this shipwreck was marred by controversy, from unscientific excavation carried out by a salvage company to incomplete documentation and publication, which complicate its use as archaeological evidence. See, e.g., Meg Lambert, “Belitung Shipwreck,” *Trafficking Culture*, August 8, 2012.

15. Abū al-Ḥasan ‘Alī b. al-Ḥusayn b. ‘Alī al-Mas‘ūdī, *Murūj al-dīn wa-ma‘ādīn al-jawhar* (*The Meadows*

decimated; subsequently, at least some of the commercial traffic appears to have shifted to Zaiton.¹⁶ Commercial opportunities were no longer concentrated in the Abbasid and Tang heartlands, and no longer tied to the two waning empires. The old commercial system was unravelling.

In the western Indian Ocean, two political forces—the Fatimids and the Buyids—initially tried to capitalize on this unravelling, positioning themselves as successors of the Abbasids and extending their commercial interests across the ocean. In the Persian Gulf, Siraf—one of the key regional ports under the Abbasids—became the main port of the Buyid capital, Shiraz. Archaeological evidence suggests that commercial activity continued as usual in Siraf, with no clear break in the ceramic record apparent in the tenth century.¹⁷ There are also references to an embassy of the “a-mei lo A-mei lan,” almost certainly a transcription of the Buyid title “Amīr-i Amīrān,” in the *Sungshi* (compiled in the fourteenth century but dealing with the tenth- to thirteenth-century Sung dynasty), arriving in China.¹⁸ This demonstrates that the Buyids maintained political links to China alongside commercial ties, continuing trade according to the familiar Abbasid model.

An alternative center of political and economic gravity in the western Indian Ocean emerged with the Fatimid conquest of Egypt. The extent of Fatimid involvement in transoceanic trade has been debated, with views ranging from a concerted Fatimid trade policy to the primacy of private initiative, only later followed by state involvement.¹⁹ Either way, the Fatimids concerned themselves with extending their influence across the ocean, not through hard power—military conquest—but by financing missionaries, selling and making objects resembling those from the Fatimid center of power, and ensuring their caliph was invoked in the Friday sermons beyond the Fatimid state. At least sometimes, the Buyids did the same—of the two largest cities in Sind, the second, Multan, used Fatimid

of Gold), trans. Charles Barbier de Meynard and Pavet de Courteille (Paris: L’Imprimerie Impériale, 1864), 85; Yasuhiro Yokkaichi, “Az Siraf bi Kish: Tijarat Oqeanos-i Hind o Kish dar ‘asr maghoul,” in *Proceedings of the International Congress of Sirāf Port*, 125–36 (Bushehr, 2005), 125–26; Jaius Banaji, “‘Regions That Look Seaward’: Changing Fortunes, Submerged Histories, and the Slow Capitalism of the Sea,” in *Across the Ocean: Nine Essays on the Indo-Mediterranean Trade*, ed. Federico De Romanis and Marco Maiuro, 114–93 (Leiden: Brill, 2015), 121; Philippe Beaujard, *The Worlds of the Indian Ocean*, 2 vols. (Cambridge: Cambridge University Press, 2019), 2:283; Éric Vallet, *L’Arabie marchande: État et commerce sous les sultans rasūlides du Yémen (626–858/1229–1454)* (Paris: Éditions de la Sorbonne, 2010), 472.

16. George, “Sea Trade,” 599.

17. Seth Priestman, “A Quantitative Archaeological Analysis of Ceramic Exchange in the Persian Gulf and Western Indian Ocean, AD c.400–1275” (PhD diss., University of Southampton, 2013), 245.

18. Philippe Beaujard, “The Progressive Integration of Eastern Africa into an Afro-Eurasian World-System, First–Fifteenth Centuries CE,” in *The Swahili World*, ed. Stephanie Wynne-Jones and Adria LaViolette, 365–77 (London: Routledge, 2018), 371.

19. Bernard Lewis, “The Fatimids and the Route to India,” *Revue de la Faculté des sciences économiques de l’Université d’Istanbul* 1, no. 4 (1948–49): 50–54; Shlomo Dov Goitein and Akiva Mordechai Friedman, *India Traders of the Middle Ages: Documents from the Cairo Geniza: “India Book”* (Leiden: Brill, 2008), 22; David Bramoullé, “The Fatimids and the Red Sea (969–1171),” in *Navigated Spaces, Connected Places: Proceedings of the Red Sea Project V Held at the University of Exeter, 16–19 September 2010*, ed. Dionisius A. Agius, John P. Cooper, Athena Trakadas, and Chiara Zazzaro, 127–36 (Oxford: Archaeopress, 2012).

coinage, and the name of the Fatimid caliph was invoked in the mosque during the khutba. Meanwhile, in the regional capital, Mansura, the Friday sermon was said in the name of the Buyid amir, and the architecture had been explicitly compared to Siraf, the main Buyid port.²⁰

These are traces of two distinct political networks operating in parallel—one aligned with the Fatimids, one with the Buyids—emerging in the tenth century. It seems highly likely that they had an economic dimension. There is no evidence for merchants' associations that traversed state boundaries in the western Indian Ocean in this period, and both dynasties taxed merchants, standing to gain from their profits. Interestingly in Sind, al-Muqaddasī noted a discrepancy between the prices in Multan and elsewhere, reinforcing the impression of such an economic dimension.²¹ This seems quite different to the Abbasid-Tang-dominated commercial system of the eighth to early tenth centuries, where no such rivalries existed. However, these two networks were still anchored within two large, land-based, dynastic polities. There is little evidence for autonomous mercantile communities not only dominating western Indian Ocean commerce before the eleventh century but even being particularly important players.

However, by the eleventh century, this transitional two-power rivalry apparently gave way to a more open landscape, which in some respects did resemble Campbell's vision of a littoral society of small, semiautonomous, coastal trading polities. Evidence from several regions suggests that between the eleventh and thirteenth centuries, a wider variety of actors became involved in transoceanic trade, and that polities emerged whose economic base was tied directly to transoceanic commerce—not, as would have been the case for the Abbasids, Buyids, and Fatimids, predicated primarily on agriculture, with transoceanic trade complementing it.

In the Persian Gulf, the ports of Kish and Hormuz, while loosely affiliated with the governors of Fars and Kerman, had much autonomy, conducting their own diplomacy and building trans-regional dynastic power.²² For example, in the thirteenth century, the governor of Kish monopolized the horse trade between the Persian Gulf and the Ma'bar Coast (eastern India), and had his brother installed as a high official in Ma'bar, complete with a marriage to a local princess.²³ Neither of these ports had particularly good natural resources. Khodadad Rezakhani has argued that Kish's economy was based primarily on providing services to merchants and that the island produced nothing on its own.²⁴ Hormuz

20. Shams al-Dīn Abū 'Abd Allāh Muḥammad b. Aḥmad b. Abī Bakr al-Muqaddasī, *Aḥsan al-taqāsīm fī ma'rifat al-aqālīm*, ed. Michael Jan de Goeje (Leiden: Brill, 1906), 485.

21. *Ibid.*, 480, 484.

22. Thomas Allsen, *The Steppe and the Sea: Pearls in the Mongol Empire* (Philadelphia: University of Pennsylvania Press, 2019), 157; Ralph Kauz, "The Maritime Trade of Kish during the Mongol Period," in *Beyond the Legacy of Genghis Khan*, ed. Linda Komaroff, 51–67 (Leiden: Brill, 2006), 55; Ralph Kauz and Roderich Ptak, "Hormuz in Yuan and Ming Sources," *Bulletin de l'École française d'Extrême-Orient* 88, no. 36 (2001): 27–75, at 31–36.

23. Elizabeth Lambourn, "Towards a Connected History of Equine Cultures in South Asia: Bahri (Sea) Horses and 'Horsemanship' in Thirteenth-Century South India," *The Medieval Globe* 2, no. 1 (2016): 57–100, at 85.

24. Khodadad Rezakhani, "Floating Kingdoms: Economy and Politics in Post-Sasanian Persian Gulf and the

could draw on the fertile Minab plain, but, according to written sources, the primary source of its wealth was trade—and the apogee of Hormuzi power fell after the location of the city had been shifted from the coast of the Minab plain to the small, nearly barren Jarun Island. For these two states, maritime trade was a crucial source of economic revenue and political power.

At the same time, the Dahlak Islands in the Red Sea were ruled by a self-proclaimed “sultan,” whose primary source of revenue appears to have been both services provided to passing merchants (ship repairs, freshwater provisioning) and piracy.²⁵ In Yemen, the short-lived (only about 150 years) port of Sharma was built up very quickly and seems to have been primarily a merchants’ entrepôt, which existed alongside an established port, al-Shihr, only 50 km away.²⁶ This spatial expression of some kind of plurality of trading networks suggests that, unlike al-Shihr, Sharma may not have been part of the established mercantile system in Yemen. Finally, in East Africa, evidence of deep-sea fishing, never dating before the eleventh century, suggests that the local people settled in several ports along the Swahili coast had acquired the technical ability to sail far into the ocean by then. This coincides with visible evidence for changes in local architecture, eating practices, and plant economies, all clearly linked to transoceanic exchange.²⁷ These trading cities do not appear to have been politically united, but rather functioned as autonomous city-states.

However, small polities spatially concentrated on the littoral and economically reliant on transoceanic trade were not the only actors who participated in maritime commerce of the Indian Ocean between the eleventh and thirteenth centuries. In the same period, Fatimids continued to control much of both shores of the Red Sea and to extend their influence further south through the client the Sulayhid dynasty in Yemen (1047–1138). In Gujarat, the Chaulukya dynasty (940–1244, but substantially more powerful after an eleventh–twelfth-century expansion) invested heavily in trade, crucially including both maritime and overland trade. The Chaulukya kingdom was highly agriculturally productive and known for crafts, especially textile production. While maritime trade was part of the Chaulukya economy, it was not a dominant one.²⁸ Further south, the Chola Empire reached its maximum extent in the late eleventh century, stretching from Kerala to the Maldives to Sri Lanka (with a substantial foray into southeast Asia). Their seaborne expansion has earned them the name “Chola thalassocracy,” and maritime trade was clearly economically important, but this was hardly a small, mercantile community independent of a large

Arabian Sea” (paper presented at the Before Capitalist Hegemony workshop, Centre for Research in the Arts, Social Sciences and Humanities, University of Cambridge, December 9, 2022).

25. Roxani Eleni Margariti, “Mercantile Networks, Port Cities, and ‘Pirate’ States: Conflict and Competition in the Indian Ocean World of Trade before the Sixteenth Century,” *Journal of the Economic and Social History of the Orient* 51 (2008): 543–77.

26. Axelle Rougeulle, “Présentation générale,” in *Sharma: Un entrepôt de commerce médiéval sur la côte du Hadramawt (Yémen, ca 980–1180)*, ed. Axelle Rougeulle, 31–38 (Oxford: Archaeopress, 2015).

27. Jeffrey Fleisher, Paul Lane, Mark Horton, and Adria LaViolette, “When Did the Swahili Become Maritime?,” *American Anthropologist* 117, no. 1 (2015): 1–16.

28. Vardhman Kumar Jain, *Trade and Traders in Western India, A.D. 1000–1300* (New Delhi: Munshiram Manoharlal Publishers, 1990), 12–34, 71.

polity.²⁹ Rather, the Chola Empire was the large polity. These are all examples of large, land-based states, where political elites were often involved in maritime trade, whether through restricting trade in certain goods, providing naval protection to merchants, or controlling sea routes plied by commercial ships.

With time, some of the small, mercantile polities expanded their territory, often across the sea, and projected their political power beyond their boundaries. Hormuz began as a similarly sized rival of Kish, yet by the time it was conquered by the Portuguese, it was much more than a port with a small hinterland. In 1301, the new ruler Ayyaz moved Hormuz the city from the coast of Iran to the less well-provisioned but more defensible island of Jarun. At the same time, Hormuz the polity expanded. At its apogee it had some kind of control over shores from eastern Arabia to Oman, and in Iran from Minab to Lengeh. In Oman, Ayyaz built a secondary capital at Qalhat.³⁰ This city was built fast and appears designed to project political power in a visual language rooted in Persianate traditions. This is visible in the Kashani tiling of the mosque (known archaeologically and remarked on by Ibn Baṭṭūṭa), the use of highly ornamental stucco, the construction of a hammam (the only known example from Oman), and the presence of twelve mausolea, including a particularly large one dedicated to Ayyaz's wife (also regionally a unique structure).³¹ The direction of Hormuz's expansion points to the polity's primary interest: full control over the Strait of Hormuz and thus the route between the Persian Gulf and the Indian Ocean. They seem to have been successful here, since Hormuz's impact on local trade network was momentous, as suggested by the concentration of Chinese ceramic imports in Qalhat, with few specimens found elsewhere along the coast of the Batinah plain.³² At the same time, parts of the Malabar and Swahili coasts, including several mercantile cities, were united under single dynasties (the Kingdom of Calicut and the Kilwa Sultanate).

These are all examples of development that fit Campbell's description, but the difference between them and the earlier, much smaller polities such as Kish, Old Hormuz, and the decentralized Swahili or Malabari city-states is notable. This raises the question of what was unique about the polities across the Indian Ocean world through time other than their being located on the Indian Ocean shores. Independence from land-based polities? Yet at the same time as Hormuz, Calicut, and Kilwa were expanding their power along the coast,

29. Philippe Beaujard, "Gujarat and Long-Distance Trade in the Indian Ocean Region before the Sixteenth Century," in *Transregional Trade and Traders: Situating Gujarat in the Indian Ocean from Early Times to 1900*, ed. Edward A. Alpers and Chaya Goswami, 68–99 (Oxford: Oxford University Press, 2019), 80.

30. Vladimír Liščák, "Catalan Atlas of 1375 and Hormuz around 1300," *Advances in Cartography and GIScience of the International Cartographic Association* 1 (2019): 1–7; David Commins, *The Gulf States: A Modern History* (London: I.B. Tauris, 2012), 30.

31. Axelle Rougeulle, Thomas Creissen, and Vincent Bernard, "The Great Mosque of Qalhāt Rediscovered: Main Results of the 2008–2010 Excavations at Qalhāt, Oman," *Proceedings of the Seminar for Arabian Studies* 42 (2012): 341–56, at 347; Axelle Rougeulle and Fabien Lesguer, "Public Bathing in Medieval Oman: The Qalhāt Hammam," *The Journal of Oman Studies* 20 (2019): 17700, at 196; Axelle Rougeulle, *Qalhat: A Medieval Port City of Oman* (Oxford: Archaeopress, 2023), 111–22.

32. Maria Gajewska, Leila Araar, Rosalind MacDonald, Charlotte Nash, Alix Normandeau, Eve MacDonald, and Seth Priestman, "Seeb Community History Project: Survey of a Medieval Town on the Coast of Oman" (paper presented at the 2023 ASOR Annual Meeting, University of Chicago, November 16, 2023).

in Yemen the Rasulid dynasty (1229–1454) was also strongly involved in transoceanic trade and projecting its political power not only overland but also across the sea, while remaining very much a “land-based” polity with strong links between maritime trade and production inland.³³ Two key commodities exported out of Rasulid Yemen into India—horses and madder—both relied on access to substantial inland space necessary to produce them.³⁴

There is no unity of political formation here. Transoceanic trade clearly afforded economic possibilities, which were exploited by those settled across the littoral, but the actors who did so neither displayed underlying unity of political organization, nor was their diversity engendered through transoceanic interaction. Furthermore, the development of some polities along the littoral was clearly more influenced by transoceanic contact than that of others. This is a theme we will return to.

Economy of the Indian Ocean World

When discussing the Indian Ocean world, economy is often the starting point. It is a “world” because it is connected by the monsoon, and the monsoon winds facilitated primarily travel for the purpose of trade (and not, for example, military expansion or religious proselytizing). The aspects of the economy most often analyzed from an Indian Ocean perspective are exports and connectivity. Archaeological evidence can be useful in charting transoceanic connections and has been employed to assess, for example, the extent and scale of Abbasid or Chinese involvement in maritime exchange over time.³⁵ However, the other side of the economic equation—production—can also be visible in the archaeological record. The extant evidence, while limited and fragmentary, suggests that just as the political fragmentation described in the previous section changed the interplay between politics and transoceanic trade, the way producers (farmers, pastoralists, artisans) engaged with transoceanic demand also shifted. This shift is primarily visible in increasing productivity. Unlike raw numbers of exports from across the ocean, increased production would have had a profound influence on most people’s daily lives (which would have been dominated by productive activity). In this way, production is a more meaningful variable to observe than export or connectivity, since it would have impacted more people living along the maritime littoral.

If the scale, intensity, type, or output of productive activities across the Indian Ocean littoral changed in similar ways over the same time, this may suggest development influenced by some variable that crossed the ocean. This would be the case especially if such developments could be linked directly to production for transoceanic markets. Evidence from several sites excavated across the maritime littoral shows that such changes did take place and that at least sometimes they were directly linked to transoceanic demand. In this way, transoceanic links influenced the daily lives of many people settled along the littoral, creating a convergence of economic development that adds to the picture of an Indian Ocean world in which the lived experience of the inhabitants of one part would have been reflected in another part.

33. Vallet, *L’Arabie marchande*.

34. *Ibid.*, 218.

35. Rougeulle, “Medieval Trade Networks”; Priestman, “Analysis of Ceramic Exchange.”

On the East African coast, the dominant forms of crafts and manufacturing practiced across the region shifted around the eleventh century. Evidence for shell-bead making and ironworking, the two dominant crafts between the seventh and tenth centuries, declined, while traces of textile making emerged.³⁶ This shift has been observed on archaeological sites on the Swahili coast; archaeological data from other parts of the western Indian Ocean littoral have not been synthesized in the same way. For some regions, the issue is clearly data availability: hardly any suitable sites have been excavated in southwestern India, while in northwestern India, excavations of most coastal sites did not record data for the medieval period with enough chronological resolution to observe diachronic change, or else did not target evidence of crafts and manufacturing. On the other hand, there are two sites in the Persian Gulf and one in Sind where diachronic change in craft production can be observed around the tenth–eleventh centuries: Bilad al-Qadim (modern Bahrain), Julfar (Ras al-Khaimah, UAE), and Banbhore (Pakistan). This is hardly a large dataset, but it is a starting point, and the chronological concordance with political change (above) and the shifts to crafts practice on the East African coast makes it an intriguing one.

Bilad al-Qadim was the largest settlement on the island of Awal (modern Bahrain) between the eighth and thirteenth centuries. Its size as well as certain features of the built environment (a single large dwelling, originally with some defensive features, later rebuilt without them) and the ceramic record (a high concentration of imported, glazed pottery from Iraq in said building) have led the excavators to interpret it as a local capital, with an Abbasid official in residence. This house was abandoned when the Qarmatians sacked Bahrain in the last years of the ninth century. Bahrain was under Qarmatian control until 1076, when a local dynasty, the Uyunids, took over.³⁷

Archaeological evidence shows the impact (sometimes negative) the Qarmatian invasion had on Bilad al-Qadim (including the abandonment of the large building, never reoccupied), but of more interest to this article are the subsequent developments of the eleventh to thirteenth centuries. At the time, the site grew in size (and presumably population). Concurrently, evidence of large-scale manufacturing activity appeared in the archaeological record for the first time, in the form of pottery production (including glazed ware, which suggests relative technical sophistication). At least some of this pottery was exported, with sherds found in Kush on the coast of Ras al-Khaimah.³⁸

The archaeological site of Kush has been associated with the historic toponym “Julfar,” which is believed to have referred to a succession of settlements on the UAE coast: Kush until the fourteenth century, when its lagoon silted up, then the adjoining sites of al-Mataf and al-Nudud.³⁹ A clear change in how people lived at Kush is visible in the archaeological record concurrently with the developments on Bilad al-Qadim described above.

36. Adria LaViolette, “Craft and Industry,” in *The Swahili World*, 319–34, at 320.

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

38. Robert Carter, “The Pottery,” in *The Land of Enki*, 107–92, at 143.

39. Timothy Power, “Julfar and the Ports of Northern Oman,” in *The Ports of Oman*, ed. Abdurahman Al Salimi and Eric Staples, 219–44 (Hildesheim: Georg Olms Verlag, 2017), 221.

Kush had been settled since as early as the fourth century. It appears to have originally been established as a Sasanian garrison town, and to have retained a defensive function under the Umayyads and Abbasids. The last defensive structure (a mudbrick tower) in Kush was abandoned around the late eleventh to twelfth centuries.⁴⁰ Timothy Power has linked this to the advent of Nabhanid control over the coast of modern Ras al-Khaimah. Unlike the previous dynasties who ruled the coast (Buyids, then Seljuks from Kerman), the Nabhanids were based in Oman, not on the Persian coast. Consequently, they did not need a military outpost to attack Oman or to guard against Omani incursions.⁴¹

Power also notes that from the same period comes Yāqūt al-Ḥamawī's (d. 1229) description of Julfar as a "fertile" or "productive" (*mukhaṣṣaba*) town that exported "sheep, cheese and ghee"—that is, pastoralist produce.⁴² This is also when pottery production developed in the area. While initially smaller scale, the "Julfar Ware" eventually became a key local product, exported across the Persian Gulf and beyond to southern Arabia and East Africa from the fourteenth century onwards, as well as inland to Oman and modern al-Ain and al-Dhafra in Abu Dhabi.⁴³ By the fourteenth century, a former military town had become a productive hub.

Finally, the Muslim occupation at Banbhore in Sind (usually identified with Debal/Daybul—the first city in Sind conquered by the Umayyads) began, as at Bilad al-Qadim and Kush, with the construction of public buildings and defensive structures (in this case, a city wall). By the eleventh century, the latter was rebuilt at a smaller scale and in substantially less durable material than previously, suggesting less investment in the maintenance of defensive structures. Traces of productive activities dated to the same period have been identified on site. The earliest, glass production, may date to the tenth century, but the two others are from the eleventh century or later: ivory carving began in the eleventh and iron smelting in the twelfth.⁴⁴ Of these, ivory carving is particularly notable, as the extensive number of ivory offcuts suggests it was practiced at considerable scale, and the quality of the finished products was described as remarkable by the specialist who analyzed the remains.⁴⁵ The decorations on these objects were exclusively geometric (whereas Indian ivories are often carved with not only geometric but also vegetal or figural shapes), which may point to production for primarily Muslim markets—for Banbhore, these would have

40. Derek Kennet, *Sasanian and Islamic Pottery from Ras Al-Khaimah: Classification, Chronology and Analysis of Trade in the Western Indian Ocean* (Oxford: Archaeopress, 2004), 14–15; Power, "Julfar," 221–28.

41. Power, "Julfar," 232.

42. *Ibid.*, 228.

43. Seth Priestman, *Ceramic Exchange and the Indian Ocean Economy (AD 400–1275)*, 2 vols. (London: British Museum, 2021), 2:65; also the author's own experience working in the UAE.

44. F. A. Khan, *Banbhore: A Preliminary Report on the Recent Archaeological Excavations at Banbhore* (Islamabad: Department of Archaeology and Museums, Ministry of Education and Information, Government of Pakistan, 1964), 13–14; Valeria Piacentini Fiorani, "Site of Banbhore on the Indus Delta: A Major Stage along the Silk Route of the Past Mansūrah and Its Outlet to the Sea, Daybul (8th–10th Centuries CE)," *Sindh Antiquities* 5, no. 2 (2019): 17–45.

45. Giorgio Affani, "The Ivories of Banbhore: A Preliminary Paleo-Technological Report," *Sindh Antiquities* 5, no. 2 (2019): 104–8.

included cities accessible inland through the Indus River, but also those which could be reached only by sea.⁴⁶ As the most important Sindi port on the Indian Ocean, Banbhore must have been economically powerful throughout its occupation; however, it either developed or significantly expanded craft production only from the eleventh century onwards, just as its military significance waned. At least some of this craft production catered to demand from destinations across the ocean.

The three sites present a similar pattern of development: politically and/or militarily important towns losing this significance around the eleventh century and concurrently developing industries whose produce was exported across the sea. Evidence from three sites is, again, hardly extensive data. However, taken together, these at least highlight a potential trend: the positive impact of increasing transoceanic connectivity from the eleventh century onwards (which seems reasonably certain) on the development of local industries. The data are also supported by evidence from the East African coast and by the development of a fine ceramic industry (sgraffiato ware) in southeastern Iran in this period, whose products were exported across the western Indian Ocean, so common that they constitute type-finds for the eleventh to thirteenth centuries from the Red Sea to East Africa to coastal western India.⁴⁷ The contemporaneity of these developments at least begets a question of whether they were not engendered by growing transoceanic connectivity.

Evidence of another industry emerging in this period comes from Gujarat. In this case, it is not only the correlation between the general economic climate and growing connectivity across the ocean and the emergence of this industry that suggest it was linked to transoceanic developments; rather, maritime connections are integrated into the very fabric of the goods produced.

Textiles have been a key Gujarati export throughout history.⁴⁸ Gujarati soils are well-suited to cotton cultivation, while also supporting the kind of intensive agriculture that allows the production of surplus to sustain nonagricultural populations.⁴⁹ In documents dating to the Rasulid dynasty in Yemen (1229–1454), three types emerge as the most popular fabrics imported from Gujarat: *khām*, *abrād*, and *maḥābish* (sing. *miḥbash*). *Khām* was unbleached calico, *abrād* a type of striped cloths.⁵⁰ The term *miḥbash* is used in the Cairo Geniza to describe a red-and-black textile used for clothes and for pillowcases. Based on this visual description, their relatively low price (which suggested cotton textiles), and comparison with other types of textiles mentioned in the Geniza, Ruth Barnes has proposed that *miḥbash* referred to a block-printed cotton textile, dyed blue (dark indigo blue has historically been described as “black” in Arabic sources) and/or red.⁵¹

46. Ibid.

47. Axelle Rougeulle, “The Sharma Horizon: Sgraffiato Wares and Other Glazed Ceramics of the Indian Ocean Trade (c. AD 980–1140),” *Proceedings of the Seminar for Arabian Studies* 35 (2005): 223–46.

48. Giorgio Riello, *Cotton: The Fabric That Made the Modern World* (Cambridge: Cambridge University Press, 2013), 324–25.

49. Jain, *Trade and Traders*, 12–18.

50. Vallet, *L'Arabie marchande*, 571.

51. Ruth Barnes, *Indian Block-Printed Textiles in Egypt: The Newberry Collection of the Ashmolean Museum*,

An extensive collection of such textiles has been excavated from Fustat and a smaller one—from Quseir al-Qadim, a medieval port on the Egyptian Red Sea coast.⁵² Other examples have been identified in Indonesia, where they had been passed down as family heirlooms for centuries.⁵³ All can be securely identified with Indian production, based both on stylistic and technical grounds. The Persian historian Vassef (d. 1328) also described printed cloth of Cambay, further identifying printed textiles with the main Gujarati port.⁵⁴

Technologically, these textiles were unique among the fabrics exported across the medieval Indian Ocean, as no other region produced block-printed fabric. Their “unique selling point,” as it were, lay in this decoration, rather than other factors such as the rarity of material (cotton) or dyes (common plant dyes), or the quality of weaving (all known examples are relatively coarse tabbies).⁵⁵ Block-printing would have enabled the production of patterned textiles significantly faster than alternative methods: hand-painting, embroidery, or weaving the patterns directly into the cloth. The earliest clear Indian reference to a calico printer comes from the tenth century (the *Paiyalacchi* of Dhanapala, a Prakrit lexicon), while the *Manasollasa* might mention a printing block.⁵⁶ No such terms have been preserved in Arabic sources for this period, and no block-printed textiles that seem not to have been made in India have been found in archaeological contexts in the relevant period. All this suggests that at the time when most of these textiles were produced—eleventh to sixteenth centuries—within the western Indian Ocean, block-printing was either unique to Gujarat or at least very rare elsewhere. Therefore, the ability to quickly produce relatively large quantities of patterned textiles would have distinguished the Gujarati textile industry from regional and trans-regional rivals.

The lack of such textiles in the archaeological record of Gujarat is no evidence of their not being consumed there. Gujarati climate is not conducive to textile preservation, unlike Egyptian climate, while the rarity that would have contributed to the textiles’ high value and allowed them to be preserved as family heirlooms in Indonesia would not have applied in Gujarat. Therefore, they may have been traded inland to India. However, what is clear is that the textiles were consumed across the Indian Ocean, in Egypt, Yemen, Abyssinia, and Indonesia (very likely in other places too).⁵⁷ At least a part—and likely a substantial part—of the block-printing textile industry in Gujarat responded to transoceanic demand.

Oxford (Oxford: Clarendon Press, 1997); idem, *Indian Cotton for Cairo: The Royal Ontario Museum’s Gujarati Textiles and the Early Western Indian Ocean Trade* (London: Routledge, 2017).

52. Barnes, *Indian Block-Printed Textiles in Egypt*; Katherine Strange Burke and Donald Whitcomb, “Quseir Al-Qadim in the Thirteenth Century: A Community and Its Textiles,” *Ars Orientalis* 34 (2004): 82–97.

53. Ruth Barnes, “Indian Textiles for Island Taste: Gujarati Cloth in Eastern Indonesia,” *Ars Orientalis* 34 (2004): 134–49.

54. K. A. S. M. I. Alam, “Textile Crafts and Trade in India in the 16th and 17th Centuries” (PhD diss., Aligarh Muslim University, 2004), 198.

55. Giorgio Riello and Prasanna Parthasarathi, *The Spinning World: A Global History of Cotton Textiles, 1200–1850* (Oxford: Oxford University Press, 2009), 21.

56. Alam, “Textile Crafts,” 198; Vijaya Ramaswamy, “Notes on the Textile Technology in Medieval India with Special Reference to the South,” *The Indian Economic and Social History Review* 17, no. 2 (1980): 227–41, at 237.

57. For Abyssinia, see Vallet, *L’Arabie marchande*, 413.

Furthermore, there is some evidence that one of the two main colorants used for these textiles (and potentially the mordant used with it) was imported from Yemen.⁵⁸ This would mean that transoceanic connections were embedded in these textiles throughout their life cycle, not only at the consumption but also the production end. In this way, Gujarati block-printed textiles constitute a material example of how transoceanic connectivity influenced productive activities across the oceanic littoral.

This left an imprint on the structure of society in the region as well. Although not described in written sources, the sheer complexity of *maḥābīsh* production would have demanded some kind of coordination. The simplest type of a block-printed textile—dichromatic white and blue,⁵⁹ with only printed decoration (some combined printed and hand-painted motifs)—would have required at least eight steps from cotton harvest to finished product: harvest, ginning, carding, spinning, weaving, bleaching, resist-printing, and dyeing. In many cases, the process would have been more complicated, including multiple dye baths for one color (to obtain a deeper hue) and for different colors (for trichromatic textiles), combining different colorants (e.g., iron with madder to produce a cool shade of red), mordanting, several printing sessions, or additional design painting. This is all without considering the additional work that went into growing the cotton, designing and making the printing blocks, and designing the textiles. How they were designed also varied depending on the intended market: the extant Egyptian textiles are more likely to be blue than red, while the opposite was true in Indonesia, with trichromatic or dichromatic red-and-white specimens identified but no blue and white ones.⁶⁰ According to sources dating to the Rasulid dynasty, only blue textiles were popular in Abyssinia.⁶¹ The decorative motifs prevalent on Egyptian and Indonesian examples also differed. Such tastes had to be communicated to artisans by merchants or middlemen ordering and purchasing the textiles. In short, producing a *miḥbash* was not only labor intensive but crucially complex, and it would have required substantial craft specialization, investment, and coordination.

Such “intense specialization and division of labor” was the norm by the seventeenth century, when British East India Company sources described specialized artisans: spinners, weavers, bleachers, printers, and dyers. Surendra Gopal takes this division of labor, as well as the artisans’ mobility and availability for hire, to be markers of a “proto-capitalist” system, for her directly associated with the European incursion into the Indian Ocean.⁶² However, the material evidence of Gujarati medieval block-printed textiles strongly suggests the

58. Maria Gajewska, “Cotton Roads: Crossing the Indian Ocean” (paper presented at the International Congress on the Study of the Middle Ages, University of Leeds, July 6, 2022); idem, “Made by the Ocean: The Economic and Social Role of Block-Printed Textiles from Medieval Gujarat” (paper presented at the 36e Congrès du Comité International d’Histoire de l’Art, Lyon, June 27, 2024).

59. Indigo, the blue dye used, did not require a mordant, unlike red dyes, making this the simplest type to make.

60. See the catalogue in Barnes, *Indian Block-Printed Textiles in Egypt*, for Egyptian; idem, “Indian Textiles,” for Indonesian.

61. Vallet, *L’Arabie marchande*, 413.

62. Surendra Gopal, “Form of Textile Production in Gujarat in the XVII Century,” *Proceedings of the Indian History Congress 27* (1965): 219–22, at 220–21.

presence of at least some of these structures before the European incursion into India. At a minimum, sophisticated craft specialization and division of labor existed. What we cannot ascertain with current evidence is whether features of commercial capitalism developed concurrently: Did the artisans work on advances from merchants, for instance? Did the merchants coordinate the productive process? This was the case at least sometimes by the seventeenth century, and while the default assumption, especially within European scholarship, has been that these developments originated with the European presence in India, there is no a priori reason as to why this had to be the case.

Gujarati block-printed textiles are a particularly clear example of how developments of productive activities influenced by transoceanic commerce would have impacted people's lives. The evidence from other sites discussed in this section suggests that this was not the only region where such developments took place (even if it does seem that in Gujarat they were the most "advanced"—if one takes proximity to capitalism as a measure of advancement). The nature of such productive activities varied, but they all seem to have been influenced by transoceanic developments. Here, the region—at least where evidence is available—does behave like a (soft) "world."

Tastes of the Indian Ocean World

Chaudhuri emphatically stated that culture—presumably including visual culture—provided the "dividing lines" of the Indian Ocean littoral.⁶³ Material evidence to some extent contradicts this. Certain facets of visual culture were shared across the ocean, as indeed can be seen to this day by anyone who compares traditional architecture in, for example, Jeddah, Muscat, and Zanzibar. Some similarities were grounded in environmental constraints, others crossed climatic zones, still others were both a matter of availability, adaptation, and choice.

The interactions between evolving urban fabric and transoceanic connections have been most studied on the East African coast, where towns constructed of coral stone ("stone towns"), built since the late thirteenth century, have become synonymous with Swahili urbanism.⁶⁴ Construction in coral rag (as opposed to softer *Porites* coral, which was utilized in Swahili architecture since at least the eleventh century but whose scarcity and softness did not make it suitable for high-volume, large-scale construction) enabled building many large, durable, and imposing buildings. It did not, however, enable urbanism per se, which predated the development of stone towns. When Ibn Baṭṭūṭa (d. 1369) visited Kilwa, one of the largest regional urban centers, he described a city "among the most beautiful...and most elegantly built." This fine city was, according to him, built entirely of wood.⁶⁵ Wood leaves far fewer traces in the archaeological record than stone, so the full extent of "wood

63. Chaudhuri, *Trade and Civilisation*, 3.

64. Mark Horton, "Swahili Architecture, Space and Social Structure," in *Architecture and Order: Approaches to Social Space*, ed. Michael Parker Pearson and Colin Richards, 132–52 (London: Routledge, 1994).

65. Abū 'Abd Allāh Muḥammad b. 'Abd Allāh al-Lawātī al-Ṭanjī Ibn Baṭṭūṭa, *Muḥadhdhab riḥlat Ibn Baṭṭūṭa al-musammā Tuḥfat al-nuzzār fī gharā'ib al-amṣār wa-'ajā'ib al-asfār*, ed. Aḥmad 'Awāmīrī and Jād Mawlā, 2 vols. (Cairo: al-Maṭba'at al-Amīriyya, 1933), 1:200.

towns” on the East African coast is difficult to estimate. However, that Ibn Baṭṭūṭa’s Kilwa had been rebuilt entirely in stone by the time Duarte Barbosa visited (1516), and that it had become one of the most famous stone town ruins since, points to urban continuity.⁶⁶ Swahili urbanism utilized stone architecture, but it was not engendered by the availability of stone or the knowledge of how to use it.

The shift from wood to stone urbanism at Kilwa must have happened between the fourteenth and early sixteenth centuries. The chronology is important here, as it broadly accords with the adoption of stone architecture at a few other towns elsewhere along the western Indian Ocean littoral. Stone began to replace or supplement mudbrick construction at Julfar from the mid-to-late fifteenth century onwards.⁶⁷ Qalhat, the secondary Hormuzi capital in Oman, was built in the thirteenth–fourteenth centuries, largely of coral stone.⁶⁸ There were similarities between how towns in different parts of the oceanic littoral were constructed.

Other elements were shared as well. Extant and modern examples of such coral stone architecture are usually thickly plastered, which can at least partially be explained as a protective measure against salty sea breeze. Wooden roofing is attested archaeologically and historically. In Kilwa, Duarte Barbosa described heavy, carved wooden doors, which are a common feature of traditional architecture in coastal Hejaz and Yemen, East Africa, and Oman, as are intricate wooden *mashrabiyyāt*.⁶⁹ Traditional architecture across the western Indian Ocean littoral is clearly tied to resource availability (coral stone) and to practical considerations (protection against salt erosion). However, there were elements of choice as well: the inhabitants of Kilwa did not have to build in coral stone, they could have stuck with wooden architecture, and those of Julfar could have kept building in mudbrick or palm frond. Hard wood such as teak often had to be imported, not necessarily to East Africa, which has its own high-quality wood, but to Oman, southern Arabia, and the Red Sea littoral.

Furthermore, even the elements of this architectural style tied to practical constraints produced a visual effect whose striking similarities would have been apparent to anyone traversing the western Indian Ocean. Visually, the contrast between the gleaming white walls and dark hard wood, the heft and craftsmanship of carved doors and screens, is distinctive and can be recognized from Mogadishu to Muscat and from Jeddah to Zanzibar. Archaeological and historical evidence suggests that this style began to emerge by the fifteenth century. The consequences were that by then, no matter how much of this architectural style was down to aesthetic choice, rather than resource availability and environmental constraints, someone traveling from one part of the western Indian Ocean to another would have recognized a familiar urban fabric.

66. Duarte Barbosa, *The Book of Duarte Barbosa: An Account of the Countries Bordering on the Indian Ocean and Their Inhabitants*, trans. Mansel Longworth Dames (London: Routledge, 2016), 17.

67. Robert Carter, Bing Zhao, Kevin Lane, and Christian Velde, “The Rise and Ruin of a Medieval Port Town: A Reconsideration of the Development of Julfar,” *Arabian Archaeology and Epigraphy* 31 (2020): 501–23, at 510.

68. Rougeulle, *Qalhat*, 139, 161, 197, 204.

69. Barbosa, *Book of Duarte Barbosa*, 17.

At least one architectural element popular in different parts of the western Indian Ocean basin explicitly referenced maritime trade: inset glazed ceramics, usually Chinese blue-and-white porcelain, but sometimes also Chinese Longquan celadon or Iranian frit-ware.⁷⁰ Examples of architectural use of such ceramics can be found across the oceanic littoral, in Oman, Yemen, East Africa, and Indonesia. By contrast, the practice did not generally extend inland (with the very occasional exception in Oman). Most examples date from the fifteenth to sixteenth centuries and later, although the earliest come from probably the late thirteenth to fourteenth centuries. These ceramics came from the ocean and stayed close to the ocean, providing an example of a “transoceanic style.” The objects were produced in China for the export market, imported through maritime routes, and employed architecturally along the Indian Ocean littoral, specifically in regions that for various reasons (political ties inland, economic reliance on maritime commerce) had particularly strong commercial connections to the Indian Ocean. Here, their absence in parts of the western Indian Ocean that were somewhat isolated from the broader region due to accessibility (Red Sea, upper Persian Gulf) or the presence of very strong inland connections (northwestern India) is interesting, although the fact that such ceramics have not so far been identified in Malabar or the Maldives somewhat goes against the idea that the architectural use of Chinese bowls characterized regions particularly dependent on oceanic connections in their culture and economy.

In addition to their use in sacral and domestic architecture, Chinese (and occasionally Iranian) bowls were also inset into graves, although this practice seems to have been confined to the East African coast. However, the funerary environment preserves another facet of material culture that was shared along the oceanic littoral and, again, generally did not extend inland: Gujarati marble tombstones. The manufacturing and distribution of these has been extensively analyzed by Elizabeth Lambourn and there is little point in repeating her work here. Suffice to say that marble tombstones carved in Gujarat were exported from Cambay between the late thirteenth and fifteenth centuries, with examples found in Tanzania, Somalia, Aden, Dhofar, southern Iran, Somnath, Maharashtra, Goa, Kerala, the Maldives, Sri Lanka, Sumatra, and Java, almost always on the coast (and when inland, as in southern Iran, not too far in). All shared a similar style and are readily recognizable as products of the Gujarati marble-carving industry.⁷¹ The timeline of their export broadly matches the increasing quantities of exported *maḥābīsh*, as well as the beginning of architectural use of Chinese ceramics and of coral stone construction. They constituted another bit of aesthetic taste shared across the ocean.

The timelines of the adoption of these technical and decorative elements are noteworthy: the shared tastes in architecture developed at a time when states for whom oceanic

70. Vera-Simone Schulz, “Coral Stone Architecture, Chinese Porcelain, and Indian Ocean Artifacts along the Swahili Coast: Cross-Cultural Dynamics in Medieval East Africa,” in “International Conference: Architecture across Boundaries,” *KnE Social Sciences* (2019): 222–35; Mark Horton, Jeffrey Fleisher, and Stephanie Wynne-Jones, “The Mosques of Songo Mnara in Their Urban Landscape,” *Journal of Islamic Archaeology* 4, no. 2 (2017): 163–88, at 168.

71. Elizabeth Lambourn, “Carving and Communities: Marble Carving for Muslim Patrons at Khambhat and around the Indian Ocean Rim, Late Thirteenth–Mid-Fifteenth Centuries,” *Ars Orientalis* 34 (2004): 99–133.

commerce was a key source of taxation revenue appeared along the littoral (Hormuz, Rasulid Yemen, Kilwa Sultanate). It was also the time when the first references to a “Shirazi” identity on the East African coast were made, explicitly linking the elite, mercantile, Muslim culture on the Swahili coast with a city in Iran (in the *Kilwa Chronicle*, whose two extant manuscripts, both probably copied from a slightly earlier source or based on earlier oral traditions, were published in Portuguese in 1552 and in Arabic around the same time).⁷² In other words, at this time, political power and cultural identity were being consciously grounded in transoceanic sources. It is probably no coincidence that the only extant, truly transoceanic facet of architectural decoration dates to the same period.

Discussion: The Indian Ocean Worlds

The above demonstrates that the influence of transoceanic connections on political, economic, and cultural development varied significantly across the western Indian Ocean littoral. This is hardly a discovery. However, the interesting trend emerging from the above is the evidence for progressive transoceanic integration over time, not only economic but also cultural and political. Economic integration has been postulated by researchers before, but as a thesis is rarely supported by tangible, material evidence of how this integration impacted people’s daily lives, or of how notions of how political power could be legitimized, expressed, and expanded evolved.

Looking at material culture evidence across the western Indian Ocean diachronically demonstrates that this progressive integration had a material impact on daily life across the oceanic littoral, influencing people’s living environment and routine activities. In one region, Gujarat, it may have led to the development of a proto-capitalist economic system—something usually associated with European incursion into the Indian Ocean. Likewise, states such as Kish, Hormuz, Rasulid Yemen, or the Kilwa Sultanate expanded their boundaries along the coast and projected their soft power primarily across the sea. This trend found a stark expression in Portuguese imperialism—the spatial extent of Portuguese territorial possessions reveals a polity primarily, if not exclusively, interested in control over maritime routes. This violent, highly political way of engaging with transoceanic trade routes was not a foreign import in the western Indian Ocean, and perhaps neither was an early form of capitalism. Whatever new forms of economic and political organization European colonialism brought to the region, they had “homegrown” antecedents. Spatially, the Portuguese expansion followed a path first charted by Hormuz, albeit the Portuguese took it further. Economically, the labor division, specialization, and reliance on merchants’ input (through control or financing) attested in Gujarat under the British East India Company was rooted in earlier forms of labor and production organization.

In a synchronic perspective, certain regions of the western Indian Ocean seem to have been affected more strongly by transoceanic commerce than others. Architectural

72. Sylvia Wu, “In the Name of Shirāz: The Stone Mosques of the East African Coast Reconsidered,” *postmedieval* 13, no. 3–4 (2022): 497–515, at 506. This relates explicitly to *references* to the dynasty and hence the use of a transoceanic identity to describe and legitimize power, not the dynasty itself, which probably dates to the eleventh century.

similarities developed along the oceanic littoral, but not everywhere. Specific decorative and display elements—Chinese ceramic architectural decoration, Gujarati marble tombstones—became popular in some places but not others. Small states reliant primarily on transoceanic trade for economic revenues and for their direction of expansion emerged in certain regions, while elsewhere, the coast was more or less always a part of land-based polities. The question is whether any patterns can be observed regarding where such commonalities were more likely to emerge.

The natural environment provided one key determinant. The parts of the western Indian Ocean littoral that were the most “oceanic”—adopting building in coral stone and teak, using imported Chinese bowls as architectural decorations, commemorating important people with Gujarati marble tombstones, developing political structures reliant on transoceanic commerce, expanding boundaries and extending influence along the shore and across the ocean, rather than inland (and also ones that adopted crops which spread across the ocean—rice, coconut, bananas)—were the ones with relatively fewer or less strong ties to other (non-transoceanic) polities. For instance, the Egyptian coast of the Red Sea was separated from the Indian Ocean by a difficult-to-navigate strait (Bab al-Mandab) and a difficult-to-navigate sea full of coral reefs. On the other hand, relatively well-trodden roads linked it to the Nile valley and from there to Cairo, one of the greatest cities in the Middle East in this period. Unsurprisingly, if one looks at the archaeological record of Quseir al-Qadim, a port on the Red Sea coast, it has much evidence of imports from across the ocean (especially spices and other plants), but few signs of the transoceanic cultural or political developments listed above.⁷³ At the other end of the spectrum, towns on the East African coast, where access to the interior was difficult, developed in step with the progressing economic integration across the Indian Ocean.

The distribution of Gujarati marble tombstones documented by Lambourn is instructive here: all were found on shores with easy access to the ocean (unrestricted by straits or perilous coral reefs as in the Red Sea, or perilous sea water confluences, as in the upper Persian Gulf) and with difficult access inland, obstructed by desert, mountains, or dense forest—or by the sea, in the case of islands. I suggest that in these parts of the Indian Ocean, where transoceanic connections by necessity became relatively more important than land links, an “Indian Ocean culture” was developing by the fourteenth–fifteenth centuries. This was not the case everywhere across the littoral.

For this reason, these were also the parts whose economies were most reliant on transoceanic developments. Letters found in the house of apparently the most important merchant of Quseir al-Qadim suggest that, although the site was involved in transoceanic spice trade, it was primarily an entrepôt for grain going from the Nile valley to the

73. See data in Lucy Blue and David Peacock, *Myos Hormos – Quseir al-Qadim: Roman and Islamic Port on the Red Sea*, vol. 2, *Finds from the Excavations 1999–2003* (Oxford: Oxbow Books, 2006); Marijke van der Veen, *Consumption, Trade and Innovation: Exploring the Botanical Remains from the Roman and Islamic Ports at Quseir al-Qadim, Egypt* (Frankfurt: Afrika Magna Verlag, 2011); Marijke van der Veen and Jacob Morales, “Food Globalisation and the Red Sea: New Evidence from the Ancient Ports at Quseir al-Qadim, Egypt,” in *Human Interaction with the Environment in the Red Sea: Selected Papers of Red Sea Project VI*, ed. Dionisius A. Agius, Emad Khalil, Eleanor Scerri, and Alun Williams, 254–89 (Leiden: Brill, 2017).

Hejaz.⁷⁴ In the upper Persian Gulf, developments in Baghdad and Basra had more impact on settlement density than progressive integration along the Indian Ocean littoral (with settlement numbers dropping sharply after the ninth–tenth centuries).⁷⁵ Gujarat, although in some ways so profoundly integrated with the Indian Ocean world, seems to have been just as much reliant on agriculture and inland trade in India as it was on transoceanic connections—and it showed few visual signs of aesthetic integration with the Indian Ocean.

I would therefore suggest that, taking Green's prompt on the relative importance of political, economic, and cultural connections within a bounded sphere of interaction to its development for the label "world" to apply, the "Indian Ocean world" in the medieval period can be conceptualized as two "worlds." Parts of the oceanic shores were deeply integrated, which found expression in political, economic, and cultural commonalities. Other regions interacted with this shared sphere, sometimes even had crucial influence on it, but they themselves were not primarily influenced by events and interactions within that sphere. There needs to be a language to talk about these differences—subsuming both "parts" of the oceanic littoral under the same heading obscures the analytical value of the term "Indian Ocean world." It also leads to a situation where certain regional developments—the depopulation and apparent economic decline in the post-tenth-century coastal upper Persian Gulf, while transoceanic networks were thriving, for instance—seem like anomalies against the backdrop of the broader littoral, where in fact they were not.

At the same time, the difference is not essential but of intensity—relative importance of connections, not their presence or absence. This means that where the boundary is drawn is up for debate and that it most likely shifted over time. The purpose of drawing attention to this duality is not to force a rigid, binary division on future studies of the oceanic littoral, but to highlight how the possibility of drawing such divisions ad hoc (depending on the timeframe of a study) could increase the utility of the Indian Ocean world as an analytical framework and clarify how it is defined.

Conclusion: What's in a World?

This article has listed some examples of how economics, politics, and taste developed along the western Indian Ocean littoral in the medieval period, highlighting instances of convergent development across different subregions, in different domains. In doing so, it has argued that such confluences could be observed, that their incidence increased from the eleventh century onwards, and that sometimes, they created a political and visual landscape that would have been recognizable as familiar to people who traveled across the western Indian Ocean littoral. The extent to which the subregions were influenced by transoceanic connections and exchange depended partly on how easily accessible the ocean was to them, and to how easily accessible other (overland, riverine) connections were.

74. Li Guo, *Commerce, Culture, and Community in a Red Sea Port in the Thirteenth Century: The Arabic Documents from Quseir* (Leiden: Brill, 2004), 35.

75. Maria Gajewska, "Economic Connectivity and Social Change in the Middle Islamic Gulf: Beyond Regionalism" (MA thesis, University College London, 2018), 43–44.

Regions that enjoyed relatively easy access to maritime routes, but difficult access to other trade routes and centers of economic, cultural, and political power, developed more in step, were more integrated with one another, and even looked more similar than those where the opposite was true. In this way, the article has moved beyond Pearson's assertion that the (pre-eighteenth-century) Indian Ocean world as a whole was discrete and connected enough to be an object of historical inquiry, to arguing that this did not apply to all its parts in the same way, and that based on their environmental constraints, two different "Indian Ocean worlds," one more integrated and one less, can be defined for the medieval period.⁷⁶ The following paragraphs are devoted to considering why this matters, and how it can be applied by archaeologists across the oceanic littoral.

The presence of oceanic connections in the material (usually ceramic) record on a given archaeological site is universally noted in archaeological monographs across the western Indian Ocean littoral. In older work, this sometimes did not go beyond a very superficial note on the presence of a given type of pottery—Chinese porcelain, for example—coupled with surface-level references to geographies or travelogues describing a site as on the "China Sea," a "port of all the world," and so on.⁷⁷ In more recent scholarship, similarities between the material, mostly ceramic, record of sites across the ocean have been noted. Certain trends in ceramic distribution cross the ocean, and a picture of a typical Indian Ocean ceramic assemblage has emerged.⁷⁸ This allows for trans-regional comparisons and for the identification of relative anomalies that can be interpretively significant. For instance, the unusually high proportion of both imported material in general and of East Asian ceramics in particular in the pottery assemblage at Sharma in Yemen has been integrated in the narrative of this site as a purely commercial entrepôt set up by merchants fleeing declining Siraf.⁷⁹ In Al-Balid in Oman, the high proportion of Indian ceramics in the pottery assemblage, coupled with other Indian material culture, has been cited as evidence for a potential Indian "quarter" on site.⁸⁰

What is lacking is a more holistic consideration of how the material culture of a given site was integrated into the transoceanic sphere of influence. Considering the impact of transoceanic connections on what cities looked like, what people did for most of their day (i.e., what kind of labor they performed), what they ate, how and where they socialized and prayed, how they commemorated their dead—gives a full and dynamic picture of how transoceanic connections influenced lives and societies along the Indian Ocean littoral. It

76. Pearson, *Indian Ocean*, 377–78.

77. Donald Whitcomb, "Evidence of the Umayyad Period from the Aqaba Excavations," *The Fourth International Conference on the History of Bilād al-Shām during the Umayyad Period: Proceedings of the Third Symposium 2* (1987): 164–84, at 165.

78. Rougeulle, "Sharma Horizon"; Vishwas S. Gogte, "Ancient Port at Chaul: Semulla of the Periplus of the Erythraean Sea," *Bulletin of the Deccan College Post-Graduate and Research Institute* 66–67 (2007): 161–82, at 171–72; Priestman, *Ceramic Exchange*.

79. Éric Vallet, "Sharma et l'essor du commerce islamique dans l'océan Indien occidental (Xe–XIIIe siècle)," in *Sharma*, 467–78.

80. Lynne S. Newton and Juris Zarins, "A Possible Indian Quarter at Al-Baleed in the Fourteenth–Seventeenth Centuries AD?," *Proceedings of the Seminar for Arabian Studies* 44 (2014): 257–76.

may never be possible to tell whether people who lived in ports along the Indian Ocean in the medieval period considered themselves a part of a shared “world.” It should, however, be possible to see whether there were enough similarities in their lives and enough trans-regional convergence in how they developed to have provided a potential basis for such a consideration.

Bibliography

- Affani, Giorgio. “The Ivories of Banbhore: A Preliminary Paleo-Technological Report.” *Sindh Antiquities* 5, no. 2 (2019): 104–8.
- Alam, K. A. S. M. I. “Textile Crafts and Trade in India in the 16th and 17th Centuries.” PhD dissertation, Aligarh Muslim University, 2004.
- Allsen, Thomas. *The Steppe and the Sea: Pearls in the Mongol Empire*. Philadelphia: University of Pennsylvania Press, 2019.
- Alpers, Edward A. “Indian Ocean Studies: How Did We Get Here and Where Are We Going? A Historian’s Perspective.” *Journal of Indian Ocean World Studies* 5, no. 2 (2022): 314–36.
- Banaji, Jairus. “Regions That Look Seaward’: Changing Fortunes, Submerged Histories, and the Slow Capitalism of the Sea.” In *Across the Ocean: Nine Essays on the Indo-Mediterranean Trade*, edited by Federico De Romanis and Marco Maiuro, 114–93. Leiden: Brill, 2015.
- Barbosa, Duarte. *The Book of Duarte Barbosa: An Account of the Countries Bordering on the Indian Ocean and Their Inhabitants*. Translated by Mansel Longworth Dames. London: Routledge, 2016.
- Barnes, Ruth. *Indian Block-Printed Textiles in Egypt: The Newberry Collection of the Ashmolean Museum*, Oxford. Oxford: Clarendon Press, 1997.
- . *Indian Cotton for Cairo: The Royal Ontario Museum’s Gujarati Textiles and the Early Western Indian Ocean Trade*. London: Routledge, 2017.
- . “Indian Textiles for Island Taste: Gujarati Cloth in Eastern Indonesia.” *Ars Orientalis* 34 (2004): 134–49.
- Beaujard, Philippe. “Gujarat and Long-Distance Trade in the Indian Ocean Region before the Sixteenth Century.” In *Transregional Trade and Traders: Situating Gujarat in the Indian Ocean from Early Times to 1900*, edited by Edward A. Alpers and Chaya Goswami, 68–99. Oxford: Oxford University Press, 2019.
- . “The Progressive Integration of Eastern Africa into an Afro-Eurasian World-System, First–Fifteenth Centuries CE.” In *The Swahili World*, edited by Stephanie Wynne-Jones and Adria LaViolette, 365–77. London: Routledge, 2018.
- . *The Worlds of the Indian Ocean*. 2 vols. Cambridge: Cambridge University Press, 2019.

- Blue, Lucy, and David Peacock. *Myos Hormos – Quseir al-Qadim: Roman and Islamic Port on the Red Sea*. Vol. 2, *Finds from the Excavations 1999–2003*. Oxford: Oxbow Books, 2006.
- Bramoullé, David. “The Fatimids and the Red Sea (969–1171).” In *Navigated Spaces, Connected Places: Proceedings of the Red Sea Project V Held at the University of Exeter, 16–19 September 2010*, edited by Dionisius A. Agius, John P. Cooper, Athena Trakadas, and Chiara Zazzaro, 127–36. Oxford: Archaeopress, 2012.
- Campbell, Gwyn. “Slavery in the Indian Ocean World.” In *The Routledge History of Slavery*, edited by Gad Heuman and Trevor Burnard, 52–63. London: Routledge, 2010.
- Carter, Robert. “The Pottery.” In *The Land of Enki in the Islamic Era: Pearls, Palms, and Religious Identity in Bahrain*, edited by Timothy Insoll, 107–92. New York: Kegan Paul, 2005.
- , Bing Zhao, Kevin Lane, and Christian Velde. “The Rise and Ruin of a Medieval Port Town: A Reconsideration of the Development of Julfar.” *Arabian Archaeology and Epigraphy* 31 (2020): 501–23.
- Chaudhuri, Kirit Narayan. *Trade and Civilisation in the Indian Ocean*. Cambridge: Cambridge University Press, 1985.
- Chong, Alan, and Stephen A. Murphy, eds. *The Tang Shipwreck: Art and Exchange in the 9th Century*. Singapore: Asian Civilisations Museum, 2017.
- Commins, David. *The Gulf States: A Modern History*. London: I.B. Tauris, 2012.
- Fleisher, Jeffrey, Paul Lane, Mark Horton, and Adria LaViolette. “When Did the Swahili Become Maritime?” *American Anthropologist* 117, no. 1 (2015): 1–16.
- Gajewska, Maria. “Cotton Roads: Crossing the Indian Ocean.” Paper presented at the International Congress on the Study of the Middle Ages, University of Leeds, July 6, 2022.
- . “Economic Connectivity and Social Change in the Middle Islamic Gulf: Beyond Regionalism.” MA thesis, University College London, 2018.
- . “Made by the Ocean: The Economic and Social Role of Block-Printed Textiles from Medieval Gujarat.” Paper presented at the 36e Congrès du Comité International d’Histoire de l’Art, Lyon, June 27, 2024.
- , Leila Araar, Rosalind MacDonald, Charlotte Nash, Alix Normandeau, Eve MacDonald, and Seth Priestman. “Seeb Community History Project: Survey of a Medieval Town on the Coast of Oman.” Paper presented at the 2023 ASOR Annual Meeting, University of Chicago, November 16, 2023.
- George, Alain. “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* 3, no. 25 (2015): 579–624.

- Gogte, Vishwas S. "Ancient Port at Chaul: Semulla of the Periplus of the Erythraean Sea." *Bulletin of the Deccan College Post-Graduate and Research Institute* 66–67 (2007): 161–82.
- Goitein, Shlomo Dov, and Akiva Mordechai Friedman. *India Traders of the Middle Ages: Documents from the Cairo Geniza: "India Book."* Leiden: Brill, 2008.
- Gopal, Surendra. "Form of Textile Production in Gujarat in the XVII Century." *Proceedings of the Indian History Congress* 27 (1965): 219–22.
- Green, Nile. "Maritime Worlds and Global History: Comparing the Mediterranean and Indian Ocean through Barcelona and Bombay." *History Compass* 11, no. 7 (2013): 513–23.
- Guo, Li. *Commerce, Culture, and Community in a Red Sea Port in the Thirteenth Century: The Arabic Documents from Quseir.* Leiden: Brill, 2004.
- Ho, Engseung. *The Graves of Tarim: Genealogy and Mobility across the Indian Ocean.* Berkeley: University of California Press, 2006.
- Horton, Mark. "Swahili Architecture, Space and Social Structure." In *Architecture and Order: Approaches to Social Space*, edited by Michael Parker Pearson and Colin Richards, 132–52. London: Routledge, 1994.
- , Jeffrey Fleisher, and Stephanie Wynne-Jones. "The Mosques of Songo Mnara in Their Urban Landscape." *Journal of Islamic Archaeology* 4, no. 2 (2017): 163–88.
- Ibn Baṭṭūṭa, Abū ‘Abd Allāh Muḥammad b. ‘Abd Allāh al-Lawātī al-Ṭanjī. *Muhadhdhab riḥlat Ibn Baṭṭūṭa al-musammā Tuḥfat al-nuẓẓār fī gharā’ib al-amṣār wa-‘ajā’ib al-asfār.* Edited by Aḥmad ‘Awāmīrī and Jād Mawlā. 2 vols. Cairo: al-Maṭba‘a al-Amīriyya, 1933.
- Insoll, Timothy, ed. *The Land of Enki in the Islamic Era: Pearls, Palms, and Religious Identity in Bahrain.* New York: Kegan Paul, 2005.
- Jain, Vardhman Kumar. *Trade and Traders in Western India, A.D. 1000–1300.* New Delhi: Munshiram Manoharlal Publishers, 1990.
- Kauz, Ralph. "The Maritime Trade of Kish during the Mongol Period." In *Beyond the Legacy of Genghis Khan*, edited by Linda Komaroff, 51–67. Leiden: Brill, 2006.
- , and Roderich Ptak. "Hormuz in Yuan and Ming Sources." *Bulletin de l'École française d'Extrême-Orient* 88, no. 36 (2001): 27–75.
- Kennet, Derek. *Sasanian and Islamic Pottery from Ras Al-Khaimah: Classification, Chronology and Analysis of Trade in the Western Indian Ocean.* Oxford: Archaeopress, 2004.
- Khan, F. A. *Banbhore: A Preliminary Report on the Recent Archaeological Excavations at Banbhore.* Islamabad: Department of Archaeology and Museums, Ministry of Education and Information, Government of Pakistan, 1964.

- Lambert, Meg. . “**Belitung Shipwreck.**” *Trafficking Culture*, August 8, 2012.
- Lambourn, Elizabeth. “Carving and Communities: Marble Carving for Muslim Patrons at Khambhat and around the Indian Ocean Rim, Late Thirteenth–Mid-Fifteenth Centuries.” *Ars Orientalis* 34 (2004): 99–133.
- . “**Towards a Connected History of Equine Cultures in South Asia: Bahri (Sea) Horses and ‘Horsemnia’ in Thirteenth-Century South India.**” *The Medieval Globe* 2, no. 1 (2016): 57–100.
- LaViolette, Adria. “Craft and Industry.” In *The Swahili World*, edited by Stephanie Wynne-Jones and Adria LaViolette, 319–34. London: Routledge, 2018.
- Lewis, Bernard. “The Fatimids and the Route to India.” *Revue de la Faculté des sciences économiques de l’Université d’Istanbul* 1, no. 4 (1948–49): 50–54.
- Liščák, Vladimír. “Catalan Atlas of 1375 and Hormuz around 1300.” *Advances in Cartography and GIScience of the International Cartographic Association* 1 (2019): 1–7.
- Margariti, Roxani Eleni. “Mercantile Networks, Port Cities, and ‘Pirate’ States: Conflict and Competition in the Indian Ocean World of Trade before the Sixteenth Century.” *Journal of the Economic and Social History of the Orient* 51 (2008): 543–77.
- al-Mas‘ūdī, Abū al-Ḥasan ‘Alī b. al-Ḥusayn b. ‘Alī. *Murūj ad-ḍahab wa-ma‘ādin al-jawhar (The Meadows of Gold)*. Translated by Charles Barbier de Meynard and Pavet de Courteille. Paris: L’Imprimerie Impériale, 1864.
- al-Muqaddasī, Shams al-Dīn Abū ‘Abd Allāh Muḥammad b. Aḥmad b. Abī Bakr. *Aḥsan al-taqāsīm fī ma‘rifat al-aqālīm*. Edited by Michael Jan de Goeje. Leiden: Brill, 1906.
- Newton, Lynne S., and Juris Zarins. “A Possible Indian Quarter at Al-Baleed in the Fourteenth–Seventeenth Centuries AD?” *Proceedings of the Seminar for Arabian Studies* 44 (2014): 257–76.
- Pearson, Michael. *The Indian Ocean*. Oxford: Oxford University Press, 2003.
- . “Littoral Society: The Concept and the Problem.” *Journal of World History* 17, no. 4 (2006): 353–73.
- Piacentini Fiorani, Valeria. “Site of Banbhore on the Indus Delta: A Major Stage along the Silk Route of the Past Mansūrah and Its Outlet to the Sea, Daybul (8th–10th Centuries CE).” *Sindh Antiquities* 5, no. 2 (2019): 17–45.
- Power, Timothy. “Julfar and the Ports of Northern Oman.” In *The Ports of Oman*, edited by Abdulrahman Al Salimi and Eric Staples, 219–44. Hildesheim: Georg Olms Verlag, 2017.
- Priestman, Seth. “A Quantitative Archaeological Analysis of Ceramic Exchange in the Persian Gulf and Western Indian Ocean, AD c.400–1275.” PhD dissertation, University of Southampton, 2013.

- . *Ceramic Exchange and the Indian Ocean Economy (AD 400–1275)*. 2 vols. London: British Museum, 2021.
- Ramaswamy, Vijaya. “Notes on the Textile Technology in Medieval India with Special Reference to the South.” *The Indian Economic and Social History Review* 17, no. 2 (1980): 227–41.
- Rezakhani, Khodadad. “Floating Kingdoms: Economy and Politics in Post-Sasanian Persian Gulf and the Arabian Sea.” Paper presented at the Before Capitalist Hegemony workshop, Centre for Research in the Arts, Social Sciences and Humanities, University of Cambridge, November 9, 2022.
- Riello, Giorgio. *Cotton: The Fabric That Made the Modern World*. Cambridge: Cambridge University Press, 2013.
- , and Prasannan Parthasarathi. *The Spinning World: A Global History of Cotton Textiles, 1200–1850*. Oxford: Oxford University Press, 2009.
- Rougeulle, Axelle. “Medieval Trade Networks in the Western Indian Ocean (8th–14th Centuries): Some Reflections from the Distribution Pattern of Chinese Imports in the Islamic World.” In *Tradition and Archaeology: Early Maritime Contacts in the Indian Ocean*, edited by Himanshu Prabha Ray and Jean François Salles, 159–80. New Delhi: Manohar Publishers, 1996.
- . “Présentation generale.” In *Sharma: Un entrepôt de commerce médiéval sur la côte du Hadramawt (Yémen, ca 980–1180)*, edited by Axelle Rougeulle, 31–38. Oxford: Archaeopress, 2015.
- . *Qalhat: A Medieval Port City of Oman*. Oxford: Archaeopress, 2023.
- . “The Sharma Horizon: Sgraffiato Wares and Other Glazed Ceramics of the Indian Ocean Trade (c. AD 980–1140).” *Proceedings of the Seminar for Arabian Studies* 35 (2005): 223–46.
- , Thomas Creissen, and Vincent Bernard. “The Great Mosque of Qalhāt Rediscovered: Main Results of the 2008–2010 Excavations at Qalhāt, Oman.” *Proceedings of the Seminar for Arabian Studies* 42 (2012): 341–56.
- , and Fabien Lesguer. “Public Bathing in Medieval Oman: The Qalhat Hammam.” *The Journal of Oman Studies* 20 (2019): 177–200.
- Schulz, Vera-Simone. “Coral Stone Architecture, Chinese Porcelain, and Indian Ocean Artifacts along the Swahili Coast: Cross-Cultural Dynamics in Medieval East Africa.” In “International Conference: Architecture across Boundaries.” *KnE Social Sciences* (2019): 222–35.
- Strange Burke, Katherine, and Donald Whitcomb. “Qūṣeir Al-Qadīm in the Thirteenth Century: A Community and Its Textiles.” *Ars Orientalis* 34 (2004): 82–97.

- Vallet, Éric. *L'Arabie marchande: État et commerce sous les sultans rasūlides du Yémen (626–858/1229–1454)*. Paris: Éditions de la Sorbonne, 2010.
- . “Sharma et l’essor du commerce islamique dans l’océan Indien occidental (Xe-XIIe siècle).” In *Sharma: Un entrepôt de commerce médiéval sur la côte du Hadramawt (Yémen, ca 980–1180)*, edited by Axelle Rougeulle, 467–78. Oxford: Archaeopress, 2015.
- Veen, Marijke van der. *Consumption, Trade and Innovation: Exploring the Botanical Remains from the Roman and Islamic Ports at Quseir al-Qadim, Egypt*. Frankfurt: Afrika Magna Verlag, 2011.
- , and Jacob Morales. “Food Globalisation and the Red Sea: New Evidence from the Ancient Ports at Quseir al-Qadim, Egypt.” In *Human Interaction with the Environment in the Red Sea: Selected Papers of Red Sea Project VI*, edited by Dionisius A. Agius, Emad Khalil, Eleanor Scerri, and Alun Williams, 254–89. Leiden: Brill, 2017.
- Whitcomb, Donald. “Evidence of the Umayyad Period from the Aqaba Excavations.” *The Fourth International Conference on the History of Bilād al-Shām during the Umayyad Period: Proceedings of the Third Symposium 2* (1987): 164–84.
- Wu, Sylvia. “In the Name of Shirāz: The Stone Mosques of the East African Coast Reconsidered.” *postmedieval* 13, no. 3–4 (2022): 497–515.
- Yokkaichi, Yasuhiro. “Az Siraf bi Kish: Tijarat Oqeanos-i Hind o Kish dar ’asr maghoul.” In *Proceedings of the International Congress of Siraf Port*, 125–36. Bushehr, 2005.