Expanding Geographic Horizons along the Maritime Silk Road

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Hyunhee Park. *Mapping the Chinese and Islamic Worlds: Cross-Cultural Exchange in Pre-modern Asia*. Cambridge, etc.: Cambridge University Press, 2012. xxviii, 276 pp. ISBN 978-1-107-01868-6.

Park's book is a revision of her Yale dissertation (supervised by Valerie Hansen). She sets out "to understand the extent of the geographic knowledge that existed between two of the principal actors that created this interconnected world of Asia, namely China and the Islamic world, as well as the processes by which they gained this knowledge over centuries of continuous contact" (p. 1) Specifically, her questions include: "What geographic information can be gleaned from Arabic and Chinese narratives: What are the formats and genres of geographic and travel writing that present these bits of information? What is their status as fact or fiction, and how can we evaluate that status? What new information can we find in each period, and how can we interpret it within the context of the Sino-Islamic contacts? What are the possible conduits of new information about other societies? Finally, in what ways did increased cross-cultural understanding broaden the overall world view of these two societies and lead to further cross-cultural contact?" (p. 13) In addition to textual sources, she considers material and visual evidence, especially maps. She brings to this agenda enviable linguistic ability in the major East Asian languages, Arabic, French, and at least some Persian. The agenda is ambitious, the results somewhat uneven.

While it is true that the book "is the first to treat both sides of the exchange equally, using a comparative analysis of major primary sources in Chinese, Arabic, and Persian," in a sense her task is the same one Ferdinand von Richthofen and a good many of his followers set when initiating the study of what he termed "the Silk Roads." The emphasis here is on great empires/civilizations. For Richthofen it was Han China and Rome; for Park it is China and the Islamic worlds, even if at various times fragmented politically. One consequence of this approach then is to downplay what comes between the bookends of Asia. While one can appreciate her consicious decision for practical reasons of scope not to treat South and Southeast Asia, this then has to compromise what she says about the ways in which knowledge was transmitted. Moreover, if Richthofen seemed to focus too much on overland routes, Park consciously chooses to do the reverse, emphasizing the maritime connections. This is in fact a welcome change in emphasis from traditional treatments of "the Silk Roads." However, too often her downgrading of overland contacts seems forced, especially when she is discussing transmission of important knowledge that explicitly arrived via overland contacts. On the Chinese end, the south is privileged; the areas controlled by the northern dynasties after the fall of the Tang largely ignored. In the Islamic world, Inner Asia gets short shrift (even if some of the key intellectuals such as Mahmud al-Kashgarī and al-Bīrūnī, whom she discusses, were from Central Asia).

Another aspect of Park's approach which deserves emphasis involves her method for analyzing information in her sources. While she is concerned to provide a sense of context for the various sources, in the first instance her criterion for their value is a modern one: she specifies (p. 203, n.4), "when I refer to 'precise' or 'accurate' depictions, I mean those that are in accord with our modern-day understanding." Fair enough, but the resulting treatment of the material largely is a positivist one, often expressed in wishful thinking about how a given source somehow might be construed as evidence of a march toward greater understanding, deeper knowledge or the like. In the first instance here, the emphasis is on how political and economic considerations fueled a conscious effort to learn more about those on the other end of Asia. One might wish that she had tried to enter more deeply into the thought world of those who produced, quoted or copied the sources. To have done so might have widened our appreciation of how the old and the new

often were combined in incompatible ways (if we judge by a standard of progress toward deeper and more accurate knowledge), and how in some cases the evidence reveals not how much people knew but rather how little. Insofar as there are problems here, they arise most frequently in the treatment of the relationship between text and image, a matter to be discussed more fully below.

Park divides the material by three major chronological periods — 750–1260, 1260–1368, and 1368–1500 — and within them treats first Chinese perceptions of the Islamic world and then the converse, the perceptions of China in the Islamic world. To a considerable degree her periodization relates to the developments in maritime connections between east and west Asia, which as she notes, grew steadily after 750. Within that first period, initially the contacts seem mainly to have been in the hands of Muslims who came to China, but in successive sub-periods, while there was a growth of Chinese "direct" contact, trade came to involve intermediaries, with, she argues, a consequent decline in the transmission of information. She emphasizes what we have long known that the Mongol/Yuan period represented the acme of cross-Asian exchange of knowledge, but unlike many others who have focused on the Mongols as an overland empire, she stresses their interest in the maritime trade. One could quibble as to whether 1368 (the end of the Yuan) is the best dividing point between her second and third periods, given the fact that in the first third of the 15th century there were such important exchanges between the Timurids and Ming, and given the evidence of the Ming "treasure fleets." Most would agree that a period of decline in cross-Asian contacts followed, leading up to the appearance of the Europeans in the Indian Ocean. Of course, as we know, even that supposedly game-changing event has come under scrutiny from the standpoint of its impact on both the Indian Ocean exchange and the fate of the overland routes.

Even though, as Park readily acknowledges, there has been substantial scholarly attention to individual texts, for many readers her summaries and quotations from eyewitness sources or the surviving compilations that quoted them will be new and most welcome. One might wish, of course, for an appendix (or companion volume) with full texts in translation, and in some cases, parallel textual comparisons would have best illustrated borrowings and edits from one source to another.

The first of her significant Chinese authors is Du Huan 杜環, captured by the Arabs at the Battle of Talas in 751, an event taken here as seminal for certain issues of east-west exchange, even if (as Jonathan Bloom has stressed but Park chooses to ignore) we should not necessarily believe the secret of paper manufacture came to the Islamic world only as a consequence of that battle.[1] In the interpretation here (p. 29), the Arab-Chinese conflict in Inner Asia and the Tang withdrawal there and replacement by other polities (notably Tibet) meant the cutting off of the overland routes and stimulated the rise of the maritime routes in the later Tang period. One might well ask whether "this situation" in Central Asia (as opposed to the Arab conquest of Sogdiana) then explains "the disappearance of non-Chinese groups like the merchant Sogdians."[2] It is helpful to know that Du Huan's "remarkably accurate and rich knowledge about the Islamic world" may largely reflect what he saw in Kufa, but the implication that one might then generalize from that perspective to other parts of the Islamic world is a bit misleading. Moreover, even if he conveyed a vague understanding of the vast extent of Arab conquests, at least from the evidence presented here there is no indication he was specific about those conquests having reached as far as the Iberian peninsula. Indeed, Park to some extent seems to contradict herself when she appropriately indicates that Du Huan's "Western Sea" probably meant for him the Persian Gulf.

Of primary importance for expanding Chinese knowledge of the West as maritime trade blossomed was a description called "The Route to the Foreign Countries across the Sea from Guangzhou" (*Guangzhou tong haiyi dao* 廣州通海夷道) compiled around the year 800 CE by Jia Dan 賈耽 and included in the *New History of the Tang Dynasty* (*Xin Tangshu* 新唐書). This is "the earliest extant document from either China or the Islamic world that describes the maritime route between Guangzhou and the Persian Gulf" (p. 32). Park conveniently illustrates on a schematic diagram the main places he mentioned, which seem to connect to two itineraries, one East-West and the other coming up from the east African coast and intersecting with it. Undoubtedly the itineraries reflect information obtained from Muslim merchants or sailors. She nicely juxtaposes (pp. 30–31) this scheme with a map illustrating locations in the Indian Ocean world where finds of 8th–10th century Chinese ceramics have been made, providing physical documentation of the trade.[3]

More problematic than Jia Dan's textual description is his *Map of Chinese and Non-Chinese Territories in the World* (*Hainei huayi tu* 海內華夷圖), which has not survived and at best can be "reconstructed" from evidence in a wood-block printed atlas of the end of the 11th century (and two somewhat later maps). While Park recognizes that such reconstruction may be seen as problematic, she optimistically concludes from the indications Jia Dan must have been a source

for the Song-era maps that his original "represented the [then] sum of geographic knowledge that existed in China." "Jia Dan's map may have contained even more information about foreign places than the evidence reveals. We cannot be sure if his map actually contained all seven of the routes to China that he describes verbally in a surviving written source ... However, sources from the Tang period show that many maps about foreign territories existed then, including a map of India brought to China by Wang Xuance［王玄策］(flourished seventh century)... Unfortunately, all of these Tang maps are lost..." (p. 37)

Indeed, the reproductions of the Song-era maps, the first ones we actually do have, suggest that by the 12th century Chinese cartography was able to produce a remarkably accurate depiction of China. However, the "depiction" of foreign locations was confined to listing a selection of names in the margins. This is a perfect illustration of the point Cordell Yee emphasized in his (granted, controversial) treatment of Chinese cartography in the standard history edited by Harley and Woodward: namely that the textual traditions in geography took precedence in China, and texts were not necessarily "illustrated" accurately in maps.[4] Park's introduction (p. 35) of Pei Xiu 裴秀 (224–271 CE), whose principles for drawing maps indeed seem to have been advanced even if we do not have concrete examples of their being put into practice, is somewhat misleading, as any discussion of the Chinese grid system that first appears on the Song-era maps needs careful explanation of the fact that it is not the scientific equivalent of the grid system theorized in the West by Ptolemy. It would have been helpful had Park specifically engaged with Yee's discussion of these matters, but instead she glosses over it, leaving us with the impression that textual description and mapping advanced in concert, even if not entirely overlapping in content. She assumes, for example, that Jia Dan, "who valued much of drawing precisely measured maps," "also used a grid system for his precise mapmaking" (p. 35).

Other than the maps which seem to have reflected official government initiatives, there are ones produced by Buddhist scholars in the 13th century intended to illustrate, if schematically, the important Buddhist sites visited by Xuanzang back in the 7th century. I am somewhat puzzled by Park's assertion that on them "country locations are plotted with relative accuracy when compared to written geographic sources" (p. 38). By this she seems to mean the newer written sources conveying knowledge of the Islamic world, not the written sources from a much earlier century which were the concern of the 13th-century authors of the maps. There is no reason to *expect* the maps should represent some kind of progress in a scheme whereby geographic information was being updated, even if, true, the maps are the first which have survived in China that "graphically portray the overland routes to all the countries of the western regions which previously had only been described in written, rather than illustrated form" (p. 40). I cannot share Park's optimism that the Buddhist "Map of the Five Indian States in the West" (*Xitu wuyin zhi tu* 西土五印之圖), specifically tied to Xuanzang, "bears realistic features such as a clear coastline outlining the triangular-shaped Indian subcontinent" (p. 40), even if she undoubtedly is correct that the distortion of all the land mass into a rectangle probably embodies the Chinese understanding of a "rectangular-shaped world" (importantly, one might add, a concept of a flat earth). The Buddhist "Geographic Map of the Land of China to the East" (*Dong zhendan dili tu* 東震旦地理圖) does add to the older information some names — such as Arabia (Dashi) and Baghdad (Baida) — that must have come from more recent texts, but the fact that these few newer names are left floating in the southwest ocean may not simply reflect "limitations of space" (p. 42). There is no reason to think the cartographer would have known where to place them in any accurate visual sense other than "out there" on the fringes of the known world. In fact, Park later admits that "Chinese cartographers only drew maps of China proper accurately" (p. 58). I suspect to some extent Park's treatment of these maps, which embody a Buddhist world view that has little, if anything, to do with pre-modern political and economic concerns, may have been compromised in her book by editorial demands that she cut her text. Her separate article (2010) on these maps in fact does a better job of contextualizing them for what they are rather than emphasizing what they are not.

There is, however, every reason to believe that the well-documented expansion of maritime trade under the Southern Song contributed significantly to the information available in China about the Islamic world. It seems that in this period Chinese merchants were significant in at least the eastern region of the maritime trade, even as Muslim merchants from as far away as Siraf in the Persian Gulf were important figures in the Chinese ports. Officials involved in government administration of shipping compiled manuals, notably Zhou Qufei's 周去非 *Notes from the Land beyond the Passes* (*Lingwai daida* 嶺外代答) (1178) and Zhao Rugua's 趙汝适 *Description of the Foreign Lands* (*Zhufan zhi* 諸蕃志) (1215) (pp. 46ff). Zhou's book includes two chapters on the Islamic world in which, among other topics, he elaborates on religious beliefs and practices. His treatment of the sea routes parallels that earlier by Jia Dan but contains additional practical detail. Half a century after Zhou Qufei, as Superinten-

dent of Merchant Shipping in Quanzhou, Zhao Rugua drew on his predecessor's account but supplemented it with other sources.[5] His description of what is probably Baghdad is quite detailed, and he knew at least something about Egypt. Of course one might question whether his comment that the sources of the Nile were as yet unknown really demonstrates (as Park suggests) how "encounters between Muslims and Chinese went beyond commercial transactions and reached the level [of] cultural intellectual exchange"(p. 53). Hirth and Rockhill's statement about the Song interest in geography is certainly worth recalling here, if only to have provoked a possible rebuttal:

> Geographical studies, though extensively applied to every part of China proper during the twelfth and thirteenth centuries, were treated with considerable contempt where foreign countries were concerned ... The knowledge of foreign countries was an obscure, unprofitable hobby, taken up only by a few officials whose special dutries disposed them to make these researches, and which in no way appealed to the public fancy. Confucian philosphers actually threw discredit on what was then known of the geography of foreign parts..." [*Chau Ju-Kua*, p. 38].

While Park stresses how Zhou and Zhao's accounts include "detailed sailing guides to the Islamic world" (p. 53), regrettably her decision not to focus on South and Southeast Asia leaves the reader to learn elsewhere what they wrote on those regions. Given the fact that the maps she discusses do such a bad job of depicting any of the coastal realities beyond China proper, one really would like to know more about what the texts contain, if Chinese readers were to be able "to imagine a series of ports that formed a line that stretched all the way to the Islamic world" (p. 54). Furthermore, one wishes for some additional information on the evidence for the distribution of the texts. Park makes the important point (p. 50) that wood-block printing opened the way for wide distribution of geographic information. Zhou's work was printed several times under the Ming (pp. 214–15, n. 86). But earlier? And, is it reasonable to conclude that wood-block printing necessarily "improved the quality of geographic knowledge that circulated" (p. 50) if such printing also disseminated what from the standpoint of "geographic knowledge" was a dated Buddhist cosmography embodied in the Song-era maps discussed above? Neither printing, nor for that matter literacy, can unequivocably be shown to be agents of progress. While Park cites de Weerdt's valuable recent article (2009) on Song maps, her summary footnote (p. 211, n. 42) regarding what de Weerdt says about their reception does not really do justice to that discussion. The issue of reception, which merits serious attention, involves more than just commentary by "politicians" (an anachronistic term) regarding foreign policy. The positioning of China with reference to vaguely defined foreign regions of arguably little intrinsic interest for Chinese intellectuals tells us much about the shaping of identity.[6]

Park opens her analysis of early Islamic geographical works by stressing that, unlike the inwardly-focused Chinese, the Muslim geographers from the very beginning "conceived of a larger world, a feature of the worldview they inherited from Greek and Persian geographers before them." The respective maps are a clear indication of this: "Chinese cartographers only drew maps of China proper accurately, while Muslim cartographers could create world maps that plotted even distant China and its neighbors with relative accuracy" (p. 58). Of course "relative accuracy" is at best a slippery concept. Apart from the question of who had the tools and perspective with which to draw a world map, in looking at the weight given information about China within the larger corpus of Islamic geographic literature, one has to wonder whether China was any more central to Islamic geographers than was the Islamic world to their counterparts in China.

In reviewing the evidence from texts and maps, Park clearly is wanting to believe that amongst Islamic world geographers "information aggregated" (p. 90) in kind of progressive fashion, culminating in the "great syntheses" by al-Idrīsī and Yāqūt. In fact though, she cannot avoid the contradictions inherent in any scheme that imposes a modern standard of progress on pre-modern history, and she ends up admitting that after the 10th century, much of Islamic geography was derivative, updating of information was at best uneven, and the world maps "retained many inaccuracies" even as al-Idrīsī's "Ptolemaic framework contains accuracy to resemble modern maps"[!] (p. 90). As much as anything, the conundrums here (some easily avoidable) result from her tendency to want to treat "Islamic geography" as some kind of unified or unifiable entity, even as she obviously knows better and occasionally says as much.

I wonder whether her results would have been different had her publisher allowed her more space in which to expand her analysis of each individual source. Yes, she provides succinct and largely well-informed descriptions of the provenance of the sources and relevant facts of authors' biographies. But there seems to be no space here (or inclination) to move beyond "what the text contains about China" to a deeper contextualization that would really clarify each author's goals and method. A possibly fruitful way to clarify some of the issues would have been to adopt the distinction, developed by Aleksandr V. Podo-

sinov (1978) in a seminal essay 35 years ago, between what he called the chorographic and cartographic approaches to geographical information in pre-modern sources.[7] His distinction is between what we might term a possibly subjective descriptive approach and an "objective" or scientific one. At the core of the cartographic approach is the use of astronomically determined precise coordinates for latitude and longitude, which for accurate two-dimensional mapping (as measured by a modern standard) has to include a methodology that accomodates the reality of a spherical earth. In the history of cartography, as Park's quotation above seems to suggest, Ptolemy's pioneering approach laid the basis for the development of modern cartography. Later, where she discusses the beginnings of Islamic cartography, somewhat unclearly she says that some "features of the Balkhī School maps resemble reconstructions of Ptolemy's longitudinal and latitudinal coordinates" (p. 77), even though one authoritative treatment of Islamic cartography insists that even those Islamic geographers who knew Ptolemy's work failed to apply it to the making of maps.[8] It is important to distinguish between the inspiration Ptolemy provided that indeed sparked an effort among Islamic-world elites to measure more precisely geographic coordinates of key locations and any serious effort to translate this information into a scientific map. Park seems to be suggesting that the supposed "reliance on [Ptolemaic] precedent" was retrograde, and that, notwithstanding such an obsolete approach, somehow the mapmakers were able to incorporate new and more accurate information from first-hand observation. Yes, there is evidence of the latter, but did it really result in more scientifically constructed maps? At very least here one might wish for a clearer articulation of what could reasonably have served as the basis for the creation of maps that might match our modern expectations for accuracy.

In fact what the earliest extant Islamic maps depict is generally schematic, with the greatest detail derived not from any mathematically precise tables, but rather from chorographic sources, in the first instance itineraries. The itineraries themselves more often than not are composites, not records of single journeys. Such considerations then behoove us to treat with skepticism any attempt to reconstruct missing maps in order to find in them scientific cartography, starting with the supposedly pathbreaking one commissioned by Caliph al-Ma'mūn in the 9th century and ending with the one inscribed on silver for the Norman King of Sicily Roger II in the 12th century. That said, yes, as Park describes, we can and should appreciate what the creators and their patrons at least professed they were attempting to do, whether or not there is any hard evidence to prove that they achieved that result. Al-Masʿūdi's statement that Caliph al-Ma'mūn's map was superior to that of Ptolemy tells us really very little about either; it is important to remember that we have no example of Ptolemaic maps from Ptolemy's own time — only much later interpretations which may or may not accurately depict his intent. Even in cases where we know that the authors of geographical treatises in the Islamic world envisaged maps to illustrate them (and where maps that supposedly are those same illustrations or good copies of them are extant), it is clear that the mapping tended to be schematic. Maps may have served as mnemonic devices and, as Park suggests (p. 73) when she turns to their analysis, can help us to understand the conceptual world embodied in written sources. However, what were considered to be the more precise details (as was also true in the Chinese case) were contained in the accompanying texts.

Even though Park opens with al-Ma'mūn's project for compiling geographic information and speculates on his map, the more substantial first part of her chapter on the Islamic sources deals with the descriptive texts, beginning with the important Ibn Khurradādhbih, who became director of posts in the Abbasid Caliphate in the 9th century and complied a very influential description of routes and realms (*Kitāb al-Masālik wa'l-mamālik*). The great bulk of its itineraries lies in the central lands of the Caliphate. He did draw on information about several itineraries of Jewish merchants who traded across Asia all the way to China. And one small part of his book traces a maritime itinerary that contains a brief description of southeastern China, gives some sense of Chinese products, and at least hints at knowledge of lands further east.

What Park might have clarified in her discussion of Ibn Khurradādhbih is that the more fantastic stories he incorporates into the work (as opposed to the "objective" official account of routes) seem to have been insertions in the a second version of the book he produced for a different patron several decades after the first version. Thus, even with this one author, one may establish how different purposes could lead to results of greater or lesser value as measured by some modern standard. To recognize this might also then lead to a fuller treatment of the *adab* genres than Park provides — that is insofar as geographic information in the Islamic world really did become "popular" (as Park claims it did), its embellishment and transformation into other literary genres needs serious consideration. A rare exception is her brief discussion of the 10th–century writer Ibn al-Faqīh, offered here mainly to illustrate how "folkloric" approaches of such writers of belles lettres, while popular, contributed little to the progress of scientific geography (pp. 75–76). Like-

wise, the "Wonders of India" and "Thousand and One Nights" tales receive only passing mention (p. 64).

Ibn Khurradādhbih's treatment of China seems quite cryptic when compared with that in another text composed at the same time in the middle of the 9th century. The anonymous "Accounts of China and India" (*Akhbār al-Sīn wa-l-Hind*) has come down to us in a larger compilation of the early 10th century attributed to Abū Zayd, who, significantly, was from Siraf, a port on the Persian Gulf which figured prominently in the early trade with India and points farther east. In addition to the anonymous text, Abū Zayd obtained from other merchants, one a certain Suleyman, a good deal of information regarding the China trade and Muslim involvement in it. With generous quotations and summaries, Park conveys well the richness of this material. However, by extracting only the China information from the anonymous text (which integrates it thoroughly in a consciously comparative fashion with the material on India), she lessens our appreciation of that one source.[9] She merely emphasizes (p. 64) how striking it is that the text regards China as of equal importance with India, given the fact that China was more distant for an author based in the Middle East.

Abū Zayd's compilation includes specific, if not wholly accurate, information on the Huang Chao 黃巢 rebellion in 874–884 CE. Importantly it resulted in the decimation of the foreign population in the major port of Guangzhou and may have contributed to what Park emphasizes was a "restructuring" of the maritime routes, long-distance travel all the way to the Middle East giving way to networked connections over shorter distances. Consequent to this, while Chinese knowledge of the Islamic world seems to have increased (the examples being in the works of Zhou Qufei and Zhao Rugua), "Middle Eastern knowledge appears to have declined."[10] What she seems to mean here is that for a long time there were few significant additions to the body of information on China available in the Islamic world.

Park transitions to cartography by discussing al-Mas'ūdī's puzzlement over how remains from an Indian Ocean stitched-plank vessel might have ended up in the Mediterranean, the most likely explanation being a connection around the north of the "known world" via the encircling ocean which was commonly depicted on the circular world maps developed by the so-called Balkhī School of cartographers in the 10th–11th centuries. It is unlikely that they "mapped the entire known world, including China, *before* they composed regional geographic treatises and maps comparing different parts of the Islamic world" (p. 75, my emphasis). Moreover, it is hard to see in their largely standardized circular maps of the world as they knew it "a quite accurate representation of Eurasia" (p. 76). Parts of it and North Africa, yes. Insertion of generalized symbols for geographical features such as mountains and seas is only the vaguest reflection of the incorporation of updated knowledge.

In the larger history of geography in the Islamic world, al-Muqaddasī and al-Bīrūnī loom large precisely because of their serious scientific credentials and methodologies. However, it is critically important that one not distort their accomplishments either in descriptive geography or in mapping. Al-Muqqadasī is the writer considered to be the most sophisticated and critical of all the Islamic geographers. He laid out carefully a scientific methodology (p. 77), but he confines his attention to the Central Islamic lands. His only mention of China is a somewhat confused designation of a "Sea of China" that may at one point include even all the Indian Ocean, and his maps (insofar as we have them) are amongst the sketchiest of all those attributed to the Balkhī School.[11] Apart from his major study of India, al-Bīrūnī provides new information on China, which came to him, it seems, primarily via a Liao embassy that traveled via the overland routes to Ghazna in Afghanistan. Obviously this fact makes Park uncomfortable, where she is wanting to maintain that the overland routes were "no longer flourishing" (pp. 79–80). The world map attached to al-Bīrūnī's book on astrology is indeed of interest for features that differentiate it from those commonly found on the Balkhī School maps (pp. 78–80), but how far do we want to go in claiming it "more closely matches modern day representations"? It is highly schematic. India is shown as an extension of China projecting in Ptolemaic fashion around part of the Indian Ocean. Khurasan is China's neighbor to the north (hardly one of the "places close to China" in any geographic reality we would recognize). That the large land mass of the Ptolemaic tradition that extended eastward from Africa is gone is of real interest — the Indian Ocean opens into the encircling sea. But what does this tell us? Could it reflect some desire by the artist to create a symmetrical composition? Or does it illustrate that the more serious Arab scientists (al-Muqaddasī is explicit in this regard) were unwilling to plot on their maps or describe places about which they knew nothing? And this new representation of the Indian Ocean and Africa as a more modest peninsula oriented to the south was far from widely accepted, even if, as we shall see, it seems to suggest an important link to some significant later world maps.

Park is right to bring to our attention this and other world maps that depart from the dominant Balkhī School model, although her use of them at times seems forced. An example is the unique map attributed to Mahmud al-Kashgarī as the illustration to his impor-

tant study of Turkic dialects. Al-Kashgarī contributed incredibly important new information on Inner Asia, but beyond his apparent understanding that northern and southern China were ruled by different dynasties, does he really say much of substance about China? And there is reason to think that an illustrator other than al-Kashgarī added on the edges of his map the locations peripheral to the inner Asian regions that were al-Kashgarī's main concern.[12] At very least, al-Kashgarī is yet another nail in the coffin in which one should bury attempts to downgrade the importance of overland routes.

Park deserves credit for bringing to our attention a very recent discovery, an early manuscript *Book of Curiosities* (*Kitāb gharā'ib*) which contains several maps including a not yet fully analyzed one that "illustrates the Silk Road extending across Central Asia without connecting to China" (p. 80).[13] She seizes on this to suggest it reflects the "decline in overland trade" in the 10th and 11th centuries, although, as with the al-Kashgarī map, it is also evidence that "some partial overland contact between the Islamic world and China appears likely." In fact there is much more which might be said about the geography represented the maps of the *Book of Curiosities*, not the least being the suggestion that its compiler knew about an overland route extending from Northen India up into Tibet or through the mountains of Southeast Asia to China. Whether the maps themselves can be used as evidence about how active certain itineraries were is another matter, since they are highly schematic — the one of the Indian Ocean depicts an oval-shaped enclosed lake. The interesting fact that a map scale is in the margins of the world map is worth noting, although there is no reason to believe it had anything to do with the construction of the map itself.

That new information about China did in fact make its way into descriptive texts between the late 10th and 12th centuries, some of it attesting to the continuing importance of overland connections, can be seen from the important anonymous Persian text, *The Regions of the World* (*Hudūd al-Ālam*) (p. 81). While Park highlights the fact that it contains information on East Turkestan, a bit more is needed here to emphasize that the compiler's main source indeed seems to have been a northern one. And, if anything, his concerns focus more on Tibet than on China, which occupies in fact a rather small part of his world. Marwazī's 12th-century work, as she appreciates but could even more fully explain, contains much more, some derived from simply repeating information in al-Bīrūnī, but also material that is new, undoubtedly derived from informants who used the maritime routes. Yet here as earlier, Park finds it difficult to accomodate how much evidence points in the direction of the continuing significance of overland routes: Marwazī "gained additional information through channels created by limited connections between the overland and sea routes at the time" (p. 82).

More important are her generalizations (which beg, however, for refinement) regarding on the one hand the uneven distribution of information about the Far East in Islamic sources (areas closer to China tend to have more on it) and on the other hand the sharing of that information. What is needed here is clearly articulated genealogies of traditions within the world of Islamic geography, which might then enable us to come up with something analogous to what Boris N. Zakhoder years ago (1962, 1967) did in determining how for a number of important Islamic geographers there was a common core of a "Caspian collection" of information on Eastern Europe. A related example is what Tibbets does in his stemmata illustrating the relationships among the manuscript traditions that preserve the work of the Balkhī School (*History of Cartography* 1993, esp. pp. 113, 138). Even if the emphasis is on sharing (with an eye to "progress" as defined largely by the accumulation of new material), there also needs to be a clear articulation of the limits to progress. It is possible to document how different authors describing the same important region might take very little from a supposedly authoritative predecessor whose work they knew and in effect approach the task of description *de novo*.[14]

For Park and many authorities, the work of the early geographers in the Islamic world culminates in al-Idrīsī and Yakūt, whose syntheses incorporated much of the earlier material and added some that was new. In light of what she has already described in some detail with an emphasis on accuracy and "modern" features, how are we to parse Park's enthusiastic take on the vision of al-Idrīsī's patron, Roger II, the Norman king of Sicily in the mid-12th century? His interest in geography, we are told, "sounds like an expression of the kind of scientific curiosity beginning to awaken in Christian Europe," which "eventually would replace older standards of geography, whose approach to making world maps was symbolic, fanciful, and myth-based rather than scientific" (p. 83). Yet did this vision really translate into something so forward-looking, any more than did the apparently scientific visions of Caliph al-Ma'mūn or al-Muqaddasī? This may sound heretical, but, as Gustave von Grunebaum long ago (1962) articulated for a different set of examples, maybe the best way to characterize the indeed impressive accomplishments of al-Idrīsī and Yakūt is as a kind of "cultural classicism," efforts at encyclopedic compilations which, rather than looking forward, are anchoring in place a body of knowledge that, if anything, might end up closing the doors to real in-

novation stimulated, among other things, by cultural borrowing.

What we find in al-Idrīsī is systematically organized compendia of geographic information region by region, where possible based on whatever new information he could acquire, but including contradictory information if he could not decide which source was correct. For each region there is a map, drawn to a standard that allows the regional maps to be connected into a very large one covering al-Idrīsī's world. That said, however, while he drew on and modified the earlier work based on Persian and Greek sources (notably Ptolemy) as corrected by earlier Islamic scientists such as al-Khwarezmī, al-Idrisī's maps are not constructed by what we would consider to be modern scientific methods. Park makes this fairly clear in stating that what we find here is "a rough means for plotting longitudinal and latitudinal location" (p. 84), where the emphasis certainly should be on the "rough." But notwithstanding her assertions that both the reconstructed large world map (based on the sectional maps) and the single circular world map are the "first extant world maps that drew most of Eurasia and North Africa with detail and accuracy," the reader begins to lose confidence as she admits most of what he knew about China was largely based on old information. "Like the Balkhī School and al-Bīrūnī maps, al-Idrīsī placed Central Asia north of China, which is roughly correct, and follows the Greek tradition of locating the legendary places of Gog and Magog northeast of China..." (p. 84). Certainly it is difficult to recognize in al-Idrīsī's world anything close to what we would understand as the contours of India and southeast Asia, and his Africa extends all the way to the east, encompassing most of the Indian Ocean.

As Irina G. Konovalova, who has carefully analyzed all of al-Idrīsī's information for Eastern Europe, emphasizes, the nature of his (and other medieval geographers') methods renders absurd any attempt to locate many of their toponyms on a modern map, since so often the specific details on those earlier maps can be comprehended only within the framework of a mental construct the pre-modern author had devised for a given region. Such constructs may have little to do with with "geographic reality" as we would know it. Each of al-Idrīsī's regions then must be subject to minute analysis, the results of which are likely to show wide variation in terms of anything we might think of as "accuracy."[15]

One of the most challenging aspects of the tasks Park has set for herself is to be able to demonstrate cultural exchange. Texts may suggest how in China or in the Islamic world compilers of information about the other drew upon the knowledge of those who had been there. Some of the informants are known to us, but many are anonymous and their role suggested largely by somewhat vague indications that the sizeable communities of merchants or seamen could be valuable sources. Oral transmission of practical information about navigation, what products were available in various ports, or what rulers presided over them is one thing. Communication by translation of geographic treatises compiled within the other cultural region and the exchange of scientific knowledge of how to construct maps is another matter. Indeed, before the Mongol period, as Park recognizes, there is little evidence of such exchange. Since many aspects of cultural exchange in the Mongol period have been thoroughly studied (as Park communicates), my comments here will focus primarily on cartography. This will require looking beyond the chronological boundaries of the Yuan Dynasty.

Modern maps generally have a well-defined projection, a scale, and place objects with reference to a grid (graticule) marking latitude and longitude. Discussions of progress in cartography then naturally focus considerable attention on the use of a grid, what it may have meant to the cartographer, and whether or not it developed autonomously within a given culture or might instead have been borrowed. While one can hypothesize the use of a grid for drawing maps where we may have only a description that seems to suggest such a "scientific" approach (for example, in the map project of Caliph Ma'mūn), one needs to look most closely in the first instance at surviving maps, which may, of course, be much later in date than when the grid was first used.

For China, the first such surviving map is on a 12th-century (Song period) stele, where the grid of uniform squares likely was superimposed on a map drawn originally by ground survey methods. The grid here served not as the framework on which to construct the map but rather simply as a device allowing the viewer of the map to measure distances. Since there seems to have been no compensation for curvature of the earth by any kind of sophisticated projection of the geographic data, naturally the accuracy of measurements using the grid might be only approximate and probably worse the farther away one moved from the center of the map. Even though Park sides with those who believe this (p. 35), one can only speculate whether the use of the grid on this Song map had anything to do with the sensible instructions for good map making laid out by Pei Xiu back in the 3rd century or whether Jia Dan in the 8th century might also have used a grid.[16]

In western Asia, while latitudinal climate divisions which could be matched with numerical latitudes can be traced back at least to Ptolemy, the earliest extant

Islamic maps with a grid illustrate the works of the 14th-century geographer Hamdallāh Mustawfī, although in manuscripts of a later century. In one case the grid covers the land areas on a circular world map where the cartography seems to be related to the scheme devised by al-Bīrūnī for depicting the Indian Ocean (see above). In another case (the manuscript apparently from the 16th century), where there is much more detail, the grid has been used to position names of locations, one to a square, presumably roughly where numerical coordinates would place them. As Tibbets has pointed out though, this use of a grid is quite crude, since there is no sense of adapting it for the curvature of the earth, and the results are certainly not very precise. What is claimed to be the earliest case of an Islamic map's having a properly adjusted graticule with curved lines for longitude is on a map illustrating the works of another 14th-century geographer, al-Umarī, but it seems almost certain that the graticule was added no earlier than the late 16th century and likely reflects a European borrowing.[17]

The earliest extant map produced in China that displays with reasonable accuracy (by modern standards) regions in the Islamic Middle East and Central Asia dates from the Yuan (Mongol) period. It has only the barest representation of geographic features but lays out on a regular grid the names of cities and the divisions of the Mongol Empire in approximately the locations we would expect on a modern map. While the map allegedly is based on a late Yuan Dynasty one, its modern survival is in a version included in a compilation published by Wei Yuan 魏源 in 1842, which contains in the first instance maps based on modern European cartography but also includes some apparently fanciful reconstructions of earlier Chinese ones. Perhaps because of this context, Cordell Yee ignored the purported Yuan map which Wei claimed he had copied with only minor emendations from the 14th-century source. In fact, this map had long attracted attention of European scholars, who apparently accepted it as authentic.[18] As Park explains (and illustrates on p. 143), the map is strikingly similar to one of the maps of Hamdallāh Mustafī, dated to around 1330 (though known only from a 16th-century copy) and possibly related to work done two decades earlier in the atelier of the Ilkhanid Grand Vizier Rashīd al-Dīn and the even earlier work of a geographer who worked under Ilkhanid patronage, Zakariyā b. Muhammad al-Qazwīnī. The question that scholars have argued over is which of the maps might have influenced the other. Further, what relationship might this idea of a gridded map have to the one illustrated by the 12th-century Song stele? While Park is hesitant to take sides on these questions, she nonetheless concludes that at least there must have been "some kind of information exchange between geographers in both societies and the transfer of the new coordinate system from Iran to China during the Mongol period" (p. 144). As she notes, neither map indicates longitudes and latitudes. Certainly, as she elaborates, there is ample contextual information concerning projects beginning back under Khubilai in which Muslim experts were involved, projects which show how cartography from the Muslim world *could* have influenced the Yuan map. What we cannot know is what role, if any, Chinese might have had in the production of this map beyond translating captions for it.

It would have been worthwhile here, I think, had she gone a bit farther and cited Jonathan Bloom's incisive comment relating to the question of whether Islamic and Chinese map grids could have influenced one another. His particular interest is architectural plans which must have used grids, but he also connects this with gridded maps and argues for the transmission of the models from East to West.

> The effective use of maps and architectural plans demands not only that some people be able to draw them but also that other people be able to decode them, and there is no indication that Chinese and Iranian cartographers and builders shared any vocabulary of spatial representation. Increased contacts with China [in the Mongol period] may have presented Chinese gridded maps to Iranian eyes, but that did not guarantee that Iranian viewers were privy to how they were meant to be read...In short a series of crisscrossed parallel lines might have very different functions and meanings in different cultural contexts.[19]

The existence of the Yuan-period map and the other evidence we have about the employment of Muslim experts in China makes it clear that Islamic cartography at least to some degree must have been known in East Asia, a knowledge that then continued down into the early Ming period. The most famous of the maps that reflect this is one compiled in Korea in 1402 known as the *Kangnido* (*The Map of Integrated Regions and Terrains and of Historical Countries and Capitals*), which drew heavily on Chinese sources but also obviously used some western, Islamic source. Park and others understandably analyze it as a way of extrapolating what "Chinese geographers" might have come to understand about the more distant world beginning back in the time of Khubilai. The map centers on a huge China; in the east is a very large Korea, both shown with considerable detail and accuracy. As with the earlier Chinese cartographic traditions, the contours of Southeast Asia bear no resemblance to reality, nor does India.[20] The western quarter of this map is the one which has attracted great interest, its source

(judging from the toponyms transcribed from Arabic and Persian and the contours) surely from the Islamic tradition. On it one can see a recognizable Arabian peninsula and Red Sea, a rather distorted but partially recognizable Mediterranean, and the Nile River extending north from the Mountains of the Moon on an Africa that deceptively has a rough approximation of the contours of Africa as we know it today — that is, somewhat triangular shaped, with open ocean to its south and west. While the Persian Gulf here bears little correspondence to what one might expect from earlier Islamic cartography, on the whole one can see how Islamic maps could have served as the basis for this depiction of "the West" (see Kauz 2013).

In her discussion of the Kangnido map, Park elaborates on the Islamic parallels and indicates what seems to be known about the possible Chinese sources (which, however, are not extant). Her discussion of the first ever (on an exant map) depiction of "the whole of" Africa could use some clarification though. She does suggest sensibly that the effort to fit everything into the rectangular format could explain some of the choices made by the cartographer, at the same time that she indulges in pure speculation: "perhaps the content [of the map] derived from the firsthand observations of some Muslims who sailed around the African horn" (p. 105). In support of this tantalizing possibility, she cites the pseudo-historical claims by Gavin Menzies at the same time that she says there is so far no evidence to prove his contentions about Chinese having sailed around Africa before the Portuguese. In another place (pp. 148–50), she cites al-Umarī's account about a maritime expedition sent out by the Sultan of Mali to see how far one could venture in the encircling sea. However, that proves little, since the vessels vanished; if they discovered anything, we cannot know what it might have been.

In fact, a close examination of the Africa of the Kangnido map shows that it relies on a source that had even a garbled idea of the Nile (shown as flowing into the Red Sea), and no information whatsoever on points anywhere close to the southern tip of the continent. The schematic representation of the source of the Nile is just that, schematic, and a huge lake is shown in the center of the continent. This is surely short of a map with "detailed, colored illustrations of the African continent," nor can we consider that the Mediterranean Sea on the map is "quite precise," even if one might allow some margin for interpretation in stating that the map has "fairly accurate contours" (pp. 105–06). Yet the map is hugely interesting, seeming to represent a somewhat awkward splicing of cartographic material from two conceptually very different traditions. And, as Park shows, the tradition represented in this map continued well into the Ming era — that is, Chinese maps did not simply revert to a focus only on China (p. 166).

Not surprisingly, the evidence this provides to illustrate cultural projects in East Asia under the Mongols has its analogues in the Ilkhanid realm of the West (where Hamdallah Mustawfī, a native of Qazwin, worked). As Park indicates, the cultural projects overseen by Rashīd al-Dīn at the beginning of the 14th century provide vivid evidence of cultural exchange (pp. 131–38). While we can but speculate about his lost work on geography (Park would like to believe it actually was completed), we certainly can get an idea of the breadth of his geographic purview from his pioneering effort at compiling world history. He surely had Mongol sources brought directly from the court of the Great Khan in China. He knew a lot about Yuan institutions, although, and here I think we need to be somewhat more cautious than Park is, his information about earlier Chinese history was cryptic, and the depictions of Chinese rulers that illustrated his manuscript are largely a kind of "orientalist" fantasizing of real Chinese imperial garb.[21] His information on Buddhism seems to have derived from an account by a Kashmiri monk. That he devotes attention to the subject at all is remarkable. The illustrations to that text though are again a kind of curious orientalizing fantasy that mixes styles and motifs from several different artistic traditions. The artists seem not to have had in hand (or been willing to use) genuine Buddhist art. The overall picture then is that of a kind of awkward splicing of traditions and information, exactly what one might expect of cross-cultural exchange where the two parties to it came at the material from such different perspectives and traditions.

A somewhat different perspective on what cultural exchange East and West under the Ilkhanids might have produced is to be found in the relatively recently discovered miscellany *The Treasury of Tabriz* (*Safineh-yi Tabrīz*) compiled and copied apparently by one Abū 'l-Majd primarily in the 1320s. Park focuses on its map (pp. 140–41), which has clear affinities with the 13th-century one attributed to al-Qazwīnī, but without any discussion of why the manuscript of *The Treasury* is so interesting.[22] As she notes, its map does include a few place names important in the Mongol period that were not on the earlier map and distinguishes northern and southern China, older information that in the Yuan period was anachronistic once China had been unified. Yet there is little here to suggest any kind of profound transmission of new knowledge about the Far East. While the map may have been intended to illustrate a couple of very short texts about climates and regions, as Sonja Brentjes has observed, the information in those texts and on the map does not always agree. Brentjes also notes a number of unusual

features of the map, some positive ("towns in Turkestan and Afghanistan are mostly placed correctly"), but much distorted ("in Europe, Africa, western Asia, Arabian peninsula the localities are often misplaced"; "the Gulf of Bengal [Bahr al-Hind] goes far to the north (6th climate)..."). The manuscript also contains brief descriptive geographical material on Tabriz and its immediate surroundings.

So there is little here to suggest more than a passing interest in the geography of the wider and contemporary world. While the compiler was interested in some of the recent Ilkhanid political history and the history of Tabriz, much more of his attention was devoted to literature: he copied a lot of poetry and literary criticism. He had some interest in astronomy and astrology (represented in a treatise by the famous Ilkhanid astronomer Nasīr al-Dīn Tūsī), the occult and mysticism. He also copied some advice (wisdom) literature. The manuscript is so important because it provides a rare, nearly intact snapshot of the range of interests of a member of the educated Persian elite who was not, however, a scholar on the level of Rashīd al-Dīn.

This is the kind of contextualization that can help enhance our appreciation of where the geographic knowledge of the "other," which is the focus of Park's book, really fits. It is exactly such contextualization that Yee emphasizes is needed if we are to understand what cartography meant in China beyond merely the drawing and printing of some maps which may or may not, by modern measure, be deemed accurate: "In effect, the map serves as a substitute for reality, implying a high degree of formal likeness. But in accordance with Chinese aesthetic theory, the physical world and the psychological become fused. Physical descriptions are intertwined with acts of perception ... cartographic forms were meant not only to reproduce but to express" (*History of Cartography* 1994, pp. 162–63). Might this be the case in the Islamic world? Not necessarily, but to ask that question might evoke some interesting answers.

There is much more to be said about Park's book. For example, I met here for the first time Wang Dayuan 汪大渊 (1311–50) who wrote about travels along the routes all the way to Africa which Park would like to believe he actually saw (as she indicates, there are doubts about how far west he may have gone) (pp. 114–18). Her treatment of the records from the Zheng He 鄭和 voyages of the first third of the 15th century is of interest, even if one may be uncomfortable with her implication that one can read real geography off the schematic navigation maps preserved in Mao Yuanyi's 茅元儀 *Treatise of Military Preparation* (*Wubei zhi* 武備志) of 1621. In short, as the reader may sense, I have found her book to be immensely stimulating. She has accomplished a lot of what she set out to do. Yes, she might have gotten more out of some of her reading (and perhaps thereby modified her analytical approach). Had she had more helpful editors, I think some of the inconsistencies could have smoothed over. As one who cannot read the sources in the original Arabic or East Asian languages, I should be the last to suggest additions to her bibliography, though in at least one case, such would have helped avoid a significant mistake.[23] It would have been nice to have had a more complete index.

Of course the big topic here is that designated by her sub-title: cross-cultural exchange. Even to attempt to give it justice would require a whole set of volumes, so that the relevant evidence from art, literature, various intellectual disciplines and technology might be treated in depth. To contextualize any one area of exchange with at best only passing reference to the many others is a practical necessity for a dissertation project such as this. The result though left this reader wondering how much "exchange" really is represented by her evidence concerning geographic knowledge. Yes, one can speculate, for example, that "in the open international atmosphere of seaport Quanzhou, where local Chinese regularly interacted with many foreigners, some of them probably recalled diverse geographic ideas originating in ancient periods in order to break from the authoritative Chinese-centered worldview" (p. 115). Arguably too much of the emphasis here is on geographic knowledge for purely practical economic or political purposes; in fact we get too little of what may have constituted the "Chinese-centered worldview" or, what one can reasonably posit was an Islamic (or Iranian, or Arab) one. A listing of products available in a far-off place may have practical value, but is obtaining them going to change either one's perception of oneself or of the other culture? A Muslim map with a poorly drawn China off on the fringes of a world centered on Arabia or Iran hardly can be construed to indicate that there was much interest in the "other" any more than does a Chinese map listing the names of a few western locations in its margins. A travel account by someone not familiar with the local languages is no more likely in pre-modern times to tell us of meaningful exchange than it would in our own time.

The instances where it might be possible to find some deeper level of interaction and understanding arguably are few though they may, of course, be highly significant. However, if, as seems to be the case, on both ends of this "exchange" there was a "decline" in knowledge of (and interest in) the other by the time one arrives in the 16th century, then might that not have to raise questions about how *meaningful* was the exchange that had earlier taken place? Lurking in the

background here are the concerns of so much of the traditional scholarship whose standard for assessment is the modern world. Ostensibly this was the starting point for the noted Arabist Sir Hamilton Gibb (1955) when he addressed the question of what constitutes conditions for successful borrowing from one cultural sphere to another. But his analytical approach went beyond just holding up a modern standard. Borrowing, he argued, is a sign of cultural vitality, but for borrowings to take and be creatively re-worked and integrated into the receiving culture, it is necessary that there be a predisposition for their reception. On the face of it, in certain very specific circumstances there was a remarkable growth of geographic knowledge thanks to active contacts between China and Islamic west Asia, but if it seems not to have developed into a mature plant in either place, then we might possibly discover that the soil and climate in which we might have hoped it would flourish were better suited to a different species.

About the author

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Notes

1. She cites Bloom 2001, where he analyzes the story about the transmission of paper-making technology via prisoners taken at Talas. However, she ignores the fact that he then (see pp. 43–45) questions this tale in favor of an argument about the acquisition of that knowledge in Central Asia and the Middle East well prior to the battle.

2. While Park and others refer to Étienne de la Vaissière's masterful treatment of the Sogdians, where he very carefully analyzes the evidence about the reasons for the end of Sogdian overland trade to China, what tends to escape notice is the fact that his concern is specifically with the Sogdian trade. I think he leaves open the question of whether other overland trade routes were important, ones that may not be connected necessarily with Sogdian activity. See de la Vaissière 2005, Part 4.

3. While commenting in any detail on this evidence is clearly not Park's purpose (she is following expert opinion here), one might wish to interject a note of caution regarding what the mere presence of some Chinese ceramics excavated in the Middle East may suggest. One can show an apparent rise and fall of such imports by doing a statistical time series from any excavation site (such as Siraf), but the absolute percentage of recovered Chinese ceramics from any of these Middle Eastern sites tends to be quite small compared to the very large quantity of ceramics produced in the Middle East and found at the same sites. At Siraf, for example, in what appears to be the peak period of the importation of Chinese ceramics, the first quarter of the 9th century, they constitute less than 1 % of the finds, even if this represents a several-fold increase over the percentage for the preceding decades. And that bump in the statistics is but a brief one. See Hodges and Whitehouse 1983, esp. pp. 145–49; for the detailed analysis of the ceramics, see Tampoe 1989. Should we read this as evidence for a "dramatic" increase in the maritime trade with China? Evidence from one site in Yemen for a somewhat later period is more impressive, though still less than 4% of the ceramic finds (Rougeulle 2004, p. 215; see also Zhao 2004). Of considerable relevance for any study of this subject is the evidence about the spread of Islamic-world imitations of Chinese wares, which apparently are more numerous than the actual Chinese examples. While Park appreciates (e.g., p. 45) the evidence underwater archaeology is providing about the capacity of ships trading from China to carry large quantities of ceramics (as evidenced in part by the size of some cargoes that have been recovered), some caution is also needed in what conclusions this may support regarding increased trade with West Asia — to gloss over the Southeast Asia connections is to miss a lot. So far we know little about the ultimate destinations of such cargoes, which surely in many cases must have been short of the Middle East. See, for example, Flecker 2002, pp. 132–33.

Unfortunately, Park somewhat garbles (pp. 65–66 and notes 32–35) the information we have for two of the really important wrecks, known respectively as the Intan and Belitung ships, for the locations where they were found. It is easy to conflate the information about them (I have done so myself), in the process confusing what is known about their structure (for Intan, we can only hypothesize, for Belitung we know much more; the two, according to Flecker, were most likely of different construction and provenance) and attributing the cargo of one to the other. For the Belitung wreck, which is perhaps the best one to support her arguments about trade to the West, it is too bad she saw only the preliminary reports, which now have been supplemented by the substantial volume *Shipwrecked* 2010.

4. See Yee's several essays in *History of Cartography* 1994, especially starting on p. 65, for his development of ideas about a new approach to the study of Chinese maps. See also the enthusiastic review by Paul Wheatley (1996), which explains why Yee's approach is so interesting.

5. Zhao's work has long been known (and is much cited) from Hirth and Rockhill's copiously annotated translation (*Chau Ju-Kua* 1911).

6. It would also be useful for the earlier Tang-period to explore the subject self-perception with reference to the "other" by looking at belles lettres. See, for example, Schafer 1951, which Park does not cite.

7. For those who do not read Russian, there is a summary of the important points in the long review Podosinov wrote with Leonid Chekhin (1991) on *The History of Cartography*, Vol. 1.

8. See the explicit statements by Gerald R. Tibbetts in *History of Cartography* 1993: "One thing not taken up by Arab scholars was Ptolemy's chapter on the construction of geographical map projections... The link between Ptolemy's mathematics and actual map production seems never to have been made. The impetus Ptolemy's work gave to the Arabs, however, does seem to have aroused an interest in map production..." (pp. 94–95), and "al-Istakhrī and Ibn Hawqal [key representatives of the Balkhī School of cartography — DW] show no interest in projections or mathematical astronomy. Neither do they mention longitude and latitude in any form, or any sort of map construction" (p. 115). On the response to Ptolemy's listings of geographic coordinates though, see the good summary in Anton M. Heinen's chapter on geography in *Different Aspects* 2003, esp. pp. 472–77.

9. For the integral text in English translation, see *Arabic Classical Accounts* 1989, pp. 33–57.

10. In support of this statement, Park refers to an important article by Kenneth Hall (2004), ignoring, however, one of his most important points, which is that the Southeast Asian component of that trade deserves attention it has not received by historians who have traditionally emphasized the Middle Eastern or Chinese ends of the route. In other words, much of what he says implicitly undermines her approach, something that perhaps was inconvenient to admit. The important subject of the changing emphases

in the geographic focus of writers in southeastern China regarding the maritime routes has been treated extensively by Roderich Ptak, whose work is listed in Park's bibliography, even if it is not clear she has absorbed some of his nuanced observations (see, for example, Ptak 2001).

11. For a translation which includes images of the maps, see Muqaddasī 2001.

12. This is one of the points made by Andreas Kaplony (2008) in a valuable article which Park cites even if she may have missed that detail.

13. I think she might gotten more out of the two articles she cites: Johns and Savage-Smith 2003; Rapoport 2008.

14. An example is in Irina G. Konovalova's careful analysis of the descriptions of the Black Sea by al-Idrīsī, Ibn Sa'īd and Abū al-Fidā (Dzhakson et al. 2013, summarized on p. 277). Each author had his own purpose, which governed his selection of data. Of course this *could* be interpreted as progress, in that it reflects conscious decisions about the use of evidence, where one might at least assume alternatives were available and examined first.

15. See Dzhakson et al., esp. p. 199. All three authors, who have written extensively on early concepts of geographic space, offer in this book stimulating ideas about newer approaches to understanding pre-modern geography which, if applied to the material Park covers, could move us well beyond her traditional methodology. Konovalova's section in *Imagines Mundi* is devoted to Islamic geography, with a particular focus on al-Idrīsī, on whose material concerning Eastern Europe she has also published an annotated text edition and a separate monograph. It would be difficult to recognize the Black Sea as we know it from al-Idrīsī's sectional map of it, even though he had at least some very good sources of information from those who had been there.

16. Compare the treatment of this topic by Cordell Yee in *History of Cartography* 1994, esp. pp. 46ff.

17. See the discussion by Tibbets in *History of Cartography* 1993, pp. 148–50. He reproduces the Mustawfī maps on pp. 150 and 152, and al-Umarī's map on p. 153, where, however, the graticule is not visible. Park's reproduction of that same map shows the lines clearly, probably enhanced by her source, Fuat Sezgin, who apparently suggests that the graticule dates to the 14th century.

18. Emil Bretschneider (1967/1888, Vol. 2) published it with transliterated names and devoted a lengthy analysis to identifying them with known locations. He calls it the "only interesting map in Wei Yuan's book and dismisses the others as "pure inventions of his fancy" (p. 4, n. 785). Park discusses this map on pp. 100–103 and 142–44. Unlike in the book, where her discussion is broken up into different sections, she provides a more coherent treatment of the map in a separate essay (2013). She does not cite Albert Herrmann's long appendix to Hedin 1922, which reproduces a number of the earliest maps from China. The Yuan one is on Pl. 8, facing p. 278, with a facsimile of the original Chinese print and a parallel version with translations of all the captions on it. He suggests that it must be a Chinese translation of a western, probably Arab map, perhaps via a version on which the place names had been written in Mongolian.

19. Bloom 2008 (in the final typescript version of this book which I am using, the quotation is on p. 59). Park cites Bloom's article even if not engaging with this conclusion of his.

20. Park is explicit about this, even though she then overemphasizes "accuracy" when discussing the areas the map depicts further west: "The map jams the Indian subcontinent between China and the Islamic world, depicts Southeast Asian countries as small islands, and omits a complete coastline between China and the Islamic world" (p. 122).

21. For a valuable analysis of the illustrations to Rashīd al-Dīn's history, see Blair 1995.

22. Her source here is Qiu 2011. The article contains what appears (in the pdf file I have seen) to be a very poor reproduction of the map and is devoted mainly to the identification of the geographic names written on it. There is a facsimile edition of the whole manuscript which I have not seen and Park does not cite. Neither does she use the very informative collection of articles edited by Seyed-Gohrab and McGlinn (2007). The brief description of the geographic content in the latter is on pp. 56–58 and specifically on the map, pp. 208–09, esp. n. 290, quoting the analysis by Sonja Brentjes.

23. In the early 15th century, the mission of Ch'en Ch'eng to the Timurid ruler Shāhrukh met him in his capital Herat (not Samarkand; cf. Park, pp. 168–69), and Ch'en Ch'eng's remarkable description is of Herat. In describing this mission, unusually for her Park seems not to have read the original text, the Herat section of which is available in English translation in Rossabi 1983. And she might have been inspired to write more about it, had she read the careful analysis published by Felicia Hecker (1993), who demonstrates how precise the descriptive material is and how impressive it is that Ch'en was able to transcribe a good many Persian words accurately, even if it is likely he did not know the language.