On the Silk Road to China

The Material Reach of Interaction between the Roman Empire and Han Imperial China

Myrthe Sassen

Cover photo adapted from: https://chinese.gratis/tools/chinesecalligraphy/

On the Silk Road to China: The Material Reach of Interaction between the Roman Empire and Han Imperial China

Myrthe Sassen

Thesis BA3 1083VTHESY

Dr. M.E.J.J. van Aerde

University of Leiden, Faculty of Archaeology

Leiden 28/06/2020

Final version

Table of Contents

1. Introduction

For decades, the vast trade network known as the ancient Silk Road[1] has captured the imaginations of scholars and the general public alike. The two farthest ends of this network, the Roman Empire and Han China, are often used in comparison by virtue of being two of the largest, most influential political entities of their time, and indeed in history.[2] While immensely interesting in their contribution to empire theory and world history, such comparisons often neglect the more "on the ground" aspects of their shared history, namely those objects that travelled from one to the other end of this network. Though intermediary empires such as the Parthians in the Near East and the Kushans in India inhibited most of the direct contact between these two major world powers in the interest of maintaining their own trading positions (Hill 2009, 27 and 227-228), there are moments of contact between them; these occurred very rarely through the direct movement of people, and more often through the movement of goods. As such, understanding the reality of the material reach of this contact is vital to form a more accurate picture of the ancient Silk Road network, as well as the reality of global connectivity during this period. The following thesis aims to contribute to the closing of a gap in the academic discourse of the ancient Silk Road network, by looking at a so far relatively neglected source in studies on the subject: material remains from the Roman Empire found in or *en route* to Han China. The ultimate aim is to substantiate and contribute to the knowledge of exchange between the Roman Empire and Han China given to us by the ancient written sources, which have so far been the main source for academic and public understanding, and to enrich the current discourse regarding the ancient Silk Road network by setting a precedent for bottom-up research into the nature of the relationship between the Roman Empire and Han China. The remainder of this introductory chapter is dedicated to illustrating the need for such research, as well as to explaining the methodology and research questions used, and acknowledging

[1] A term, first coined in the 1870s by German geographer Ferdinand von Richthofen (Hansen 2015, 154), that the following will show to be somewhat misleading.

[2] See Adshead (1961), Adshead (2000), Roberts (2003), Hui (2005), Ostrovsky (2007), Mutschler and Mittag (2008), Edwards (2009), Scheidel (2009), and Zhang (2017) for a few examples. There has also been a Stanford University Project on the subject, called the Stanford University's Ancient Chinese and Mediterranean Empires Comparative History Project (ACME).

the inevitable limitations that were encountered. The final section of this chapter provides the necessary historical context, with a focus on Han China and reference to parallel developments in the Roman Empire.[3]

As might be gleaned from the historical overview at the end of this chapter, there are indeed fascinating similarities to be found between ancient China and the Mediterranean world. While potentially providing a valuable contribution to theories of empire-building and world history, these comparisons can hardly be used to discern the true nature of the relationship between the two world empires. This emphasis on theoretical comparison is likely to be due in part to the lack of surviving material evidence of direct contact between the two (Young 2001, 10), especially in the early period concerned here. This also results in an over-emphasis on the written record where it does concern contact between them. Especially on the subject of China, where detailed historical records were kept from the Spring and Autumn Period (770 - 481 B.C.E.) onwards, this emphasis is heavily felt (Hansen 2015, 57-58). While some recent archaeological studies have focussed on single material categories which show connections between the two empires,[4] no comprehensive overview has been made of all known Roman material found in Han China since the early 1950s.[5] While contemporary and later literary sources provide some insight into the view each empire had of the other,[6] an updated overview of all surviving material to have travelled all the way from either end of the ancient Silk Road network to the other that also provides interpretative conclusions about the implications these finds have for theories of connectivity, global trade, and the

[3] Which, as it concerns mostly events leading up to China's joining of the ancient Silk Road network, was still the Roman Republic for the largest part of this historical overview.
[4] Jiayao An and Brigitte Borell for example, who are also featured in the 'State of the Research' and 'Case Studies' chapters below.
[5] A thesis by Dr. Samuel Lieberman, published in 1953, was the last to attempt this. See also the chapter 'State of the Research' below.
[6] John E. Hill has provided an annotated translation of the *Book of Later Han (Hou Hanshu)* (2009), as well as a draft translation of *A Brief History of Wei* (*Weiluë*) (2004), while Homer H. Dubs gives a critical translation of parts of the *Book of Han (Hanshu)* (1938-1955). For a Roman perspective, we have, for example, the *Periplus Maris Erythraei,* translated by Lionel Casson (1989), to turn to. See also the 'Sources focussed on ancient texts' section below.

nature of previously neglected sections the ancient Silk Road network, would greatly contribute to our understanding of this complex ancient trading system.

What makes an independent and thorough analysis of the remaining archaeological material especially important, is knowing that our understanding of the past may be shaped and limited by our own modern perceptions of cultural and national identity.[7] Studies of the ancient Silk Road network are especially vulnerable to this, considering the great wealth of peoples and cultures that converged on it. Moreover, many of the written sources that inform us of these periods were in fact written several centuries later, such as the *Records of the Grand Historian (Shiji)* when used to describe the Zhou and Qin dynasties or *The Book of the Later Han (Hou Hanshu)*. But even more contemporary sources, like *The Book of Han (Han Shu),* or *The Records of the Grand Historian (Shiji)* when describing the early Han period, must be viewed as having been written from their own perspective, within their own geographical and temporal context, and having distinct motivations behind their writing. While providing valuable insight into the issues addressed in this thesis, and forming a large part of the source material of the following historical overview, they must be combined with independently analysed archaeological material before one can make well-rounded interpretations about the complex nature of trade and interaction within this network. It is often said, after all, that a piece of writing reveals more about the author than it does the subject. Forgetting

[7] To provide an amusing illustration of this, we can turn briefly to an example of a 16th century soldier-merchant named Galeoto Pereira, who during his time spent in a Ming jail learned of the unusual differences in naming the country he found himself in. "Pereira found strangest that Chinese [Zhongguoren] did not know that they were Chinese [Zhongguoren]. He says: "We are accustomed to calling this county China and its inhabitants Chins, but when you ask Chinese [Zhongguoren] why they are called this, they say "[we] don't have this name, never had." Pereira was very intrigued, and asked again: "What is your entire country called? When someone from another nation asks you what country you are from, what do you answer?" The Chinese [Zhongguoren] thought this a very odd question. In the end, they answered: "In earlier times there were many kingdoms. By now there is only one ruler. But each state still uses its ancient name. These states are the present-day provinces (sheng). The state as a whole is called the Great Ming (Da Ming), its inhabitants are called Great Ming People (Da Ming Ren)." (Dirlik 2015). Although this example of confusion between the Portuguese merchant and his Chinese conversation partner(s) about naming their country dates from a later period than the present paper will be concerned with, it serves to illustrate how written accounts can be misleading depending on the author, their sources, and the author's understanding of them. While Pereira considered China to be a country fitting his own view of the nation-state, the Chinese he encountered had never named or viewed their own country in these terms.

this can be one's downfall when relying on written sources unquestioningly, yet it can become a valuable tool when studying the past from a multidisciplinary approach. This is the aim of the following thesis, albeit on a smaller scale, by looking only at the Roman finds recovered from within or *en route* to Han China and placing them within the context of the ancient written sources and research so far conducted.

In general, historical overview works of either region hardly mention the other or such material, while many do acknowledge that extensive trade took place during this period, and was of vital importance to both empires.[8] When speaking about the ancient Silk Road network, many like to speak of 'the trade network that connected the Far East to the Mediterranean', emphasising its grandeur and historical significance. It is therefore all the more surprising that so little attention has been paid, scholarly or otherwise, to painting a detailed and accurate picture of the archaeological material that made it all the way across this massive network. Where it concerns western publications about the ancient Silk Road network, China is often treated quite marginally, and not entirely without reason. Though opening a single node in its border to the trade network in 121 B.C.E. and initially providing the commodity that ended up giving the network its name (Hill 2009, vi), most of China remained closed to foreigners for a great many years, and Chinese society continued to focus on its own development while reaping the benefits of foreign trade. Those who write on the more specialised topic of Roman exchange with China and vice versa, are often quick to acknowledge the lack of surviving material remains, especially of the Han period,[9] while others grossly overestimate the amount of archaeological evidence,[10] or hardly seem to acknowledge it at all.[11] A need for clarification seems clear.

This thesis therefore focusses on answering the question: What can we learn of the nature of the contact between Han China and the Roman Empire from the material

[8] Alcock and Osborne (2012), Scarre (2013), and Hansen (2015) devote just a few sentences to the trade that actually reached China.
[9] See for example Young 2001 xxix – xxx.
[10] Bueno (2016), for example, speaks of "multitudes" of Roman material excavated in China.
[11] See for example McLaughlin (2016).

remains of their exchange?

To answer this, the following subquestions must be answered:

- What kind of objects were exchanged between Han China and the Roman Empire?
- To what extent did objects travel between Han China and the Roman Empire?
- What patterns emerge from the archaeology of this exchange about wider connectivity?
- How does that change our knowledge of the contact between Han China and the Roman Empire?

To answer these questions, the following methods will be employed. As one of the objectives is to conduct an independent analysis of the material remains before substantiating it with written sources, while at the same time correcting an imbalance in western academic literature, which is often heavily focussed on the perspective of the Roman Empire, case studies of objects recovered from Han China or its immediate surroundings that are traceable to the Roman Empire take centre stage. Three case studies, each focussed on a different type of material - rather than a single find - that was felt to contribute most significantly to answering the research questions above, are presented. Each case study is analysed archaeologically, after which the discussion chapter places them in the wider context of ancient written sources and previous research done on these categories of finds. This allows each case study to inform observations about the wider implications they provide concerning contact between the Roman Empire and Han China, and global trade at the time of the ancient Silk Road network more broadly. To provide necessary context for these case studies, a historical overview of the relevant period is first presented. A crucial section also, to be able to use this research to move forward in this direction in the future, is to provide an overview of the current state of the research into the topic of contact between the Roman Empire and Han China.

As the present paper concerns a thesis for the completion of a Bachelor's degree, some limitations must be acknowledged. The foremost of these is limited access to resources. It has become abundantly clear throughout this research project that while many authors claim material remnants do exist, such as Roman glassware and coins found in China, archaeological analysis of this material has either not taken place or has not been widely published in English. As such, the selected case studies are of a limited nature and must not be seen as an exhaustive inventory of all existing material of each type, nor should the three types of material presented be seen as the only material categories known or existing that may inform conclusions on this topic. Rather, the present thesis should be seen as both a precedent and an illustration of the need for further research of this kind. This is further enforced by the limited length of the Bachelor thesis, which placed limitations on the material that could be included.

Furthermore, as touched upon above, both academic and public interest in western academia tends to focus on the viewpoint of the Roman Empire,[12] in all likelihood at least partly due to the linguistic barrier mentioned above. While this linguistic barrier has also played a significant limiting role in the present thesis, an attempt has been made to provide some balance by writing with China as a focal point, albeit including ample reference to similar and contemporary developments in the Roman Empire.

The above introduction has provided a necessary framework for the paper to follow, and will dive into a general historical background below, which opens with a brief illustration of the state of the Roman Empire leading up to the start of the 1st millennium C.E. before diving into a more detailed account of Chinese history up to that point. The next chapter will build on this by providing a summarizing analysis of the current state of academic research as it concerns trade between the Roman Empire and Han China along the ancient Silk Road network. The third chapter details the illustrative case studies of Roman archaeological finds in or *en route* to

[12] Already in 1953, Dr. Samuel Lieberman lamented that the topic of contact between the Roman Empire and China was "relegated by Classical scholars to a few footnotes or parenthetical pages in their studies on the Roman East, or on relations of Rome with India or Parthia." (Lieberman 1953, 10).

Han China, followed by an interpretative discussion of these case studies against the backdrop of the ancient written sources and wider historical context, as well as the theoretical implications of this body of finds and literature in the fourth chapter. The final chapter provides a brief summarizing conclusion.

Historical background

The year 27 B.C.E. saw a significant change for the Roman Republic. Having united the large number of local groups, Etruscan city-states, and Greek colonies on the Italian peninsula to a unified society through a series of military successes, friendly annexations and alliances (Scarre 2013, 491), the city of Rome had made itself the political and administrative centre of a culturally diverse and complex society (Scarre 2013, 504 & 506). The city and its territories had been a republic since 509 B.C.E., and continued to expand beyond peninsular Italy toward the end of the 1st millennium B.C.E., largely as a result of the high honorary and monetary rewards bestowed upon military victors (Scarre 2013, 504). The central importance of military success in Roman society meant the higher classes of the Roman Republic were fiercely competitive over their political influence, and factional disputes seem to have often taken on the character of popularity contests within the city of Rome (Scarre 2013, 504-505). The struggle of navigating elite (patrician) interests and public (plebeian) support characterized the later years of the Roman Republic, culminating in a bitter civil war (Scarre 2013, 505). Julius Caesar had been accused of amassing too much power for himself and was ultimately assassinated for his troubles (Crook *et al.* 1994, 458-467), but his adopted son and heir Octavian would ultimately become the first emperor of the Roman Empire. Octavian took to battle against the forces of Ptolemaic Egypt, the last remaining of the three Hellenistic kingdoms that together once formed the Hellenistic Empire of Alexander the Great, in 31 B.C.E. (Scarre 2013, 505). His decisive victory firmly established Octavian as the sole ruler of the Mediterranean, and led the Roman Senate and People (*Senātus Populusque Rōmānus*) to name him Emperor Augustus in 27 B.C.E. (Gates 2003, 335). So officially began the Roman Empire. Augustus undertook major administrative reorganizations, working to firmly establish the borders of the new Empire, as well as his own image (Scarre 2013, 505). His rule and the several

centuries succeeding it are known as the *pax romana*, or Roman Peace, during which a more or less unbroken chain of emperors ruled the Mediterranean (Scarre 2013, 505-506).

Authors writing on the subject of imperial comparisons rely on these large-scale developments to draw conclusions on empire theory.[13] Besides often being too focussed on finding parallels to truly consider the individual complexity of massive empires, the main focus of these works also often remains on Rome and our familiar West.[14] In an effort to counterbalance this, the following section dives more deeply into the relevant history of the other massive player in the present discussion.

Around the same time that Rome is becoming a global superpower, China is undergoing its own complex and monumental developments. The Han dynasty (206 B.C.E. - 220 C.E.) had gained control over a large and central part of modern-day China in 206 B.C.E., after seizing power from the short-lived Qin dynasty (221 – 207 B.C.E.) (Hansen 2015, 90-106; see also Appendix A), who themselves had wrested control from the Zhou dynasty (1045 – 256 B.C.E.) (Hansen 2015, 56). Though the Zhou dynasty did not officially fall until 256 B.C.E., the years after 771 B.C.E. were characterised by conflict and unrest. The power of the Zhou grew weaker, and this latter half of their dynastic period is often divided into the Spring and Autumn period (770 - 481 B.C.E.) and the Warring States period (481 - 221 B.C.E.), both named for contemporary historical documents which have provided much insight into the periods (Scarre 2013, 566). Like the city-states of the pre-Roman Mediterranean, alliances were as easily formed as they were broken or shifted (Hansen 2015, 59; Scare 2013, 487). Out of this tumultuous period also came the first historical records of China known to us, as well as some of the most influential and well-known philosophers, such as Confucius and Sun Tzu, who tried to make sense of the uncertain times they found themselves in (Hansen 2015, 57-89).

[13] Such as the ones by Ostrovsky (2007), Scheidel (2009), and Zhang (2017) referred to in footnote 2 above.
[14] "Rome's Eastern Trade" (Young 2001), "Rome and the Distant East" (McLaughlin 2010), "Rome in the East" (Ball 2016), "The Roman Empire and the Silk Routes" (McLaughlin 2016).

The Zhou dynasty may be classified as a soft state with unclear borders and incipient forms of taxation (Hansen 2015, 54). This is decidedly not to be said for the Qin state that re-unified the kingdoms in 221 B.C.E. The amount of competing states had gradually decreased to three, which the Qin finally managed to unify in 221 B.C.E., after having conquered the eastern Zhou capital of Luoyang in 256 B.C.E. (Hansen 2015, 57, 86 & 92). The Qin were a strongly Legalist state, and the first emperor of China[15] enforced sweeping reforms on script, coinage, the legal system, infrastructure, trade networks, and the territory's political structure in order to unify his realm (Scarre 2013, 568-569), roughly two-thirds of modern China (Hansen 2015, 91; see also Appendix A). The Qin state implemented registration of individual households, and in doing so eliminated estate lords and other nobility as intermediaries between subjects and ruler (Hansen 2015, 95). This allowed the Qin to enforce direct taxation and mandatory military service on every man above sixteen or seventeen. The people were divided into 20 ranks, each with strict allowances for permitted amounts or sizes of clothing, land, slaves, and housing. These ranks were never hereditary, but purely based on performance and merit (Hansen 2015, 96). Qin society also strongly favoured producers over merchants, whom they felt contributed little of value to society. Though it is likely that this did not reflect the reality of many merchants being far richer than farmers and artisans, it likely did shape the thinking of many people (Hansen 2015, 93). Many of these reforms were already implemented in the Qin state before they conquered the other states, and were applied to them afterwards with varying degrees of success (Hansen 2015, 94). They marked a radical departure from the previous social hierarchies and political organization, and allowed the Qin to build a formidable army and a strong tax base which supported their conquest of the other states (Hansen 2015, 91). While the first emperor appears to have enjoyed a fair measure of popularity across China, considering a lack of uprisings, upon his death rebellions immediately rose up against his unpopular successor (Hansen 2015, 106). One of

[15] Qin Shi Huangdi (r. 221 – 210 B.C.E.), perhaps best known for his impressive tomb complex containing a massive terracotta army (Scarre 2013, 568-569).

them, led by a man named Liu Bang[16] ultimately succeeded in defeating all its rivals and the Qin state to establish the Han dynasty in 206 B.C.E. (Hansen 2015, 106).

With the Han dynasty began two centuries of peace and strong leadership in Chinese history that many would refer to with longing and admiration in turbulent years to come (Hansen 2015, 93), somewhat of a *pax romana* of China if you wish. Though publicly scathingly critical of the Qin policies, which they denounced as cruel and in direct conflict with Confucian values (Hansen 2015, 106), in practice much of Han society continued to be organized based on, and expand the groundwork laid by, the Qin (Hansen 2015, 91). Legal texts excavated from the Zhangjiashan tomb in Hubei show that early Han law-books often quoted Qin laws verbatim (Hansen 2015, 106 & 110), and the government offices retained the same three-branch division the Qin had created (Hansen 2015, 108). The Han also appear to have retained the disdain of Qin society for merchants as compared to producers, as well as the fact that this difference in social status did not usually reflect relative incomes. Despite the apparent disdain for merchants, the Han dynasty also saw the beginnings of a true market economy. While most estates continued to grow and hunt for their own food, they were no longer completely self-sufficient, and bought luxury goods and craft items at seasonal and year-round markets (Hansen 2015, 124).

Like the Zhou dynasty before them, the Han used the Mandate of Heaven, the idea that a ruling dynasty could only be overthrown if it had lost the support of the Heavens, to justify their conquest of the Qin. The term became a crucial tool for most if not all subsequent rulers and rebels alike to justify their claims of power (Hansen 2015, 43-44). A successful conquest, like that of the Han, paints the last ruler of the preceding dynasty as weak and unworthy of the support of Heaven, and therefore rebellion and conquest were justified. Conversely, if a leader manages to subdue a rebellion, or overcome some natural disaster Heaven unleashed upon them, they had proven to have retained the Mandate of Heaven. This concept

[16] One of only two emperors in Chinese history to be born a commoner. The other was the founder of the later Ming dynasty, Zhu Yuanzhang, who reigned from 1368 to 1398 (Hansen 2015, 106).

allows a new dynasty to justify their conquest, while also allowing them to maintain the honoured status of preceding dynasties if they wished, by stating that only the last (few) emperors had been unworthy. The term has shaped the idea of the dynastic cycle, prevalent since the Han dynasty in Chinese scholarship. It is important to realize that the Mandate of Heaven was only ever inferred after the fact, and was therefore a tool of justification more than a reality (Hansen 2015, 43-44, 93 & 103). While the dates given above may imply a more or less continuous dynastic rule from the Zhou into the Han, the strength of the ruling dynasty at any time varied greatly, as did the power of the emperor in relation to his regents, chancellors, eunuchs, and dowager empresses (Hansen 2015).

Though it is mentioned in the introduction above that Han China remained closed to foreign influence from the Silk Road network for much of this period, it is important to note that, like the Roman Empire, the territory of Qin and Han China in fact contained a great many diverse peoples, cultures, and histories. They are oftentimes overshadowed by the idea of a single (dynastic) Chinese history, tracing back all the way to the first officially acknowledged ruling dynasty of China (the Shang dynasty, 1600 – 1045 B.C.E.) through the Zhou dynasty by virtue of the long tradition of their script (Hansen 2015, 21). In reality, a great many states and peoples of non-Chinese culture and ethnicity were both absorbed into and displaced by the early Chinese-writing dynasties of Shang, Zhou, Qin and Han, of whom the written record subsequently tells very little despite continuous interaction (Hansen 2015, 22 & 58). Because the Chinese script could be adopted without learning the spoken language (Hansen 2015, 26),[17] China continued to contain many spoken dialects and languages within it throughout its history. As well as internal trade, the Han also conducted trade and exchange with the peoples on their borders, and engaged in battle over territory with them. After several years of conflict, the Han were forced to sign a rather humiliating peace treaty with the Xiongnu peoples to the North in 198 B.C.E., in which the Han sent yearly gifts of textiles, food, and wine to the Xiongnu in exchange for a promise not to invade China (Hansen 2015, 109). Yet they also engaged in lucrative trade with them,

[17] Similar to the Arabic numerals in use in many Western countries today.

where Chinese silk was exchanged for horses, furs, carpets, and precious gems such as jade (Hansen 2015, 123). To the South, the Yue people[18] also presented both trading partners and military opposition to the Han. Their territory was conquered around 110 B.C.E. by Emperor Wu, but lost again in the 1st century C.E. (Hansen 2015, 119).

The Han greatly expanded their territory in the early years of their reign, stretching it from around 2.300.000 km^2 at the height of the Qin dynasty to around 6.000.000 km^2 around 50 B.C.E. (Taagepera 1979, 127-130; see also Appendix A). The greatest expansion took place under the reign of Emperor Wu (141 – 87 B.C.E.), who also took great steps in eliminating checks on imperial power and establishing Confucianism as the core value of Han society (Hansen 2015, 118-121). He continued to battle against the Xiongnu, with neither side gaining a decisive upper hand. These measures and campaigns took a financial toll, however, and as the Roman Empire was entering an era of newfound stability in 27 B.C.E., Han China was heading toward economic disaster. There was increasing poverty among the general population, and the already large income gap between the nobility that had been granted land and titles by the first Han emperor, and those who worked the land for them, was further exacerbated (Hansen 2015, 125). This gap continued to widen, with the landed nobility amassing ever more power and influence, allowing them to take over more land from poor farmers and making it easier to avoid local taxes, which further eroded the tax base (Hansen 2015, 126). This caused great dissatisfaction and mistrust in the large estate owners among the general population, and even resulted in a brief coup by a man named Wang Mang in 9 C.E., before a restoration to power of the Han dynasty in 25 C.E. (Hansen 2015, 126). Despite regaining control, this coup compromised their power and standing irreversibly, having forced them to move their capital east from Chang'an to Luoyang (Hansen 2015, 127). The last two centuries of their reign were characterised by a gradual loss of power to the wealthy noble families which had

[18] "The Chinese called this region Nanyue, meaning Southern Yue, but the people who lived there reversed the two words. They pronounced the word Yue as Viet, and the compound as Vietnam, which is still the word used today." (Hansen 2015, 117)

helped it overthrow the usurping dynasty, as well as the eunuchs the emperors used in an attempt to stave off this noble influence (Hansen 2015, 127).

It is thus important to note, in order to do the kind of research this thesis aims to do, and as should be clear from these historical backgrounds, that the two empires did not go through parallel developments, and that their economic, political, and social situations differed greatly through time. The historical developments in the Roman Empire and Han China detailed here, though geographically far removed from each other, also did not occur in isolation. Starting in the 6th century B.C.E., the Silk Road trade network had been taking shape, and expanded to connect the Mediterranean to the East-African coast, the Near East, India, and ultimately China.[19] Though internal trade in China, as well as Chinese trade with the Xiongnu and other nomadic peoples to the north, and the Yue peoples - amongst others - to the south, had been ongoing in for many centuries,[20] this network of trade did not join the Silk Road network until the reign of Emperor Wu in 121 B.C.E. (Juliano and Lerner 2002, 2). Speaking in defence of state monopolies and foreign trade during a debate, one of the emperor's ministers emphasised the great profits of foreign trade in silk, as this was in high demand yet cost the Chinese very little (Hansen 2015, 123). Indeed, the network today is named after the abundance of Chinese silk that is said to have travelled along it, giving the misleading impression of China being its instigator. In reality, it was the interest of Emperor Wu in the "exotic" West and its foreign goods that caused him to send envoys in that direction and learn of the complex and lucrative trading system already in place between India, Africa, and the Near East (Ball 2016, 152). This does not mean silk was not a crucial trade good along this network, however. Many ancient sources, such as Pliny the Elder and the *Hou Hanshu* mention the exchange -through intermediaries – of it between the Roman Empire and Han China. Chinese silk is said to have been so popular in Rome that it caused Pliny the Elder to express concern about the drain on Roman coinage its high demand caused (P. 12.41.84). For its part, the Roman Empire as a whole had

[19] For a more detailed account of how this network took shape, refer for example to Liu (2010), Hansen (2012), or Benjamin (2018).
[20] The Qin had built a network of roads long enough to rival that of the Romans (Hansen 2015, 98).

also been quite tardy to the party of Silk Road trade, joining only as it conquered lands already involved in the system for decades or even centuries (Liu 2010, 20-22).[21] Through these ports of call it connected to the caravan routes, ports, and cities along the network that would ultimately connect them to China (Liu 2010, 21). A great variety of items other than silk are recorded to have travelled along this complex network of both over-land and maritime trade routes, but while some parts of the network are quite well-recorded archaeologically,[22] others, like the items that arrived through it to China, have relied almost solely on the written records so far. That is what the rest of the following thesis aims to rectify.

[21] The Red Sea coast of Egypt and Hellenistic Greece had both been involved in trade with India and the Near East long before the Romans or Chinese joined them (Liu 2010, 21).
[22] Trade ports in India, for example, have enjoyed quite extensive excavation and publication in recent years (Borell 2014, 10).

2. State of the Research

The topic of contact between the Roman Empire and Han China is not a new one, having first come into academic interest in the late 19th and early 20th centuries through collected and annotated translations and analyses of ancient literary sources of one empire to mention the other, as published by Hirth (1885) and Coedès (1910) (Bueno 2016, 3), not to mention excavations by such explorers as Aurel Stein and Sven Hedin (Li 2015, 280). In 1953, a dissertation by Dr. Samuel Lieberman attempted to provide a cohesive overview of all known written and archaeological sources of contact between Han China and the Roman Empire (Lieberman 1953, 11). New finds, analysis techniques, archaeological paradigms, and interpretative frameworks since the publication of Lieberman's dissertation make a re-evaluation of the material of crucial interest. Here we review past research relevant to only a subsection of Lieberman's topic, the Roman finds in Han China. Dr. André Bueno notes a recent new wave of interest in the topic in his 2016 paper, but emphasises that it has been studied only sporadically thus far (Bueno 2016, 1). Albeit based on mostly the same fragments of ancient literature time and again, he notes that new discoveries in archaeology continue to keep the topic alive (Bueno 2016, 3).

What follows is a brief account of the most notable works published relating to, or relevant for, the present discussion. For the sake of clarity, they have been divided broadly into four categories: sources which focus on material remains, sources focussed mainly on translating and analysing the ancient written material, and sources which relate to the Silk Road network more broadly (which should make use of both other types of sources). Brief attention is also given to even more broadly focussed historical overview works, such as the *Human Past* by Chris Scarre, a work recommended as essential reading to any starting archaeology student. This to provide a quick look also at how such books, which by their very nature must be brief and somewhat generalizing, deal with the topic of contact between Rome and China, if indeed they do at all. In their order the sections follow a broadly large-to-small scale, starting with the very "zoomed out" historical overview works and

ending with the sources relating to material remains, which will flow into the next chapter detailing our material case studies.

Historical overview works

As this type of broad historical overviews features only marginally in the rest of this thesis, three recent works were chosen to represent this category of literature. These are *Classical Archaeology* edited by Susan E. Alcock and Robin Osborne (Alcock and Osborne 2012), *The Open Empire: A History of China to 1800* by Valerie Hansen (Hansen 2015), and *The Human Past* edited by Chris Scarre (Scarre 2013). Not only were these felt to be representative of the way in which this type of academic literature treats the topic of contact between Rome and China, they are also each currently seen as essential reading for students of archaeology and Chinese history.

In general it can be said that these works still do not tend to lend too much attention to the topic. While sources writing on the history of China, such as the work by Valerie Hansen, do tend to include reference to the Silk Road network and its influence on Chinese society throughout, those writing from a classical archaeology perspective like Alcock and Osborne, or large scale works like the one by Scarr tend to be more inwardly focussed. That is not to say they neglect the topic entirely, but it is often, as Lieberman has also stated (Lieberman 1953, 10), relegated to footnotes or small paragraphs. This may reflect a bias in western scholarship, and classical archaeology in particular, or simply a language barrier in the published sources.

Sources focussed on the ancient Silk Road network or Roman Empire - Han China relations

Though the complaint by Dr. Lieberman mentioned in the previous section has been assuaged somewhat by the corpus of studies written in recent years on the specific topic of the ancient Silk Road network, these still often deal with the topic of contact between Han China and the Roman Empire only marginally, with a tendency to focus on areas closer to the Roman Empire like India, Arabia, and Africa when written from a Roman perspective. Recent examples include *Rome's Eastern Trade* by Gary K. Young (2001), *Rome and the Distant East* by Raoul McLaughlin

(2010), *Rome in the East* by Warwick Ball (2016), and *The Roman Empire and the Silk Routes* by Raoul McLaughlin (2016).

A few examples of studies which include a Chinese perspective on these developments are *China in Word History* by S.A.M. Adshead (2000), *The Silk Road in World History* by Xinru Liu (2010), *The Silk Road: A New History* by Valerie Hansen (2012), and *Empires of Ancient Eurasia* by Craig Benjamin (2018). Such studies written to include a Chinese perspective are few and far between, especially ones written in English. This is the understandable result of a general lack of archaeological material available to western scholars, as well as perhaps a small sense of complacency due to the apparent abundance of ancient written material available to fill this gap. However understandable, this creates a rather one-dimensional picture, not to mention a sometimes misleading or exaggerated impression of the archaeological material available to support the conclusions being made. Thankfully, scholars today such as Krisztina Hoppál (2015) and Brigitte Borell are working to bridge this gap by publishing analyses of previously undervalued or not sufficiently researched finds, re-evaluating previous conclusions, and including both China and Rome equally in their studies or giving preference to the Chinese perspective (more on these studies below).

Sources focussed on ancient texts

The ancient sources mostly referred to in the present thesis are the *Shiji* (Records of the Grand Historian), written by Sima Tan and Sima Qian around 94 B.C.E. and containing some accounts now considered mythological or greatly exaggerated (Hansen 2015, 37 & 43); the *Han Shu* (Book of Han) written by Ban Biao, Ban Gu, and finished by Ban Zhao in 111 C.E. (Hansen 2015, 129-130), the first dynastic (state commissioned) history of China; the *Weilue* (Brief Account of the Wei Dynasty), written between 239 and 265 C.E. by Yu Huan, another dynastic history, which gives a detailed account of the knowledge of the 'Peoples of the West' at that time (Hill 2004); the *Hou Hanshu* (Book of Later Han), written in exile by Fan Ye in 445 C.E. (Żuchowska 2015, 216) but covering the period from 25-220 C.E. (Hill 2004); and the *Periplus Maris Erythraei* (Periplus of the Erythraean Sea), written

anonymously by what most believe was a Greek merchant, possibly living in Roman Egypt, sometime in the 1st century C.E. (Hill 2009, xvi), which recounts in a very detailed manner the trade routes and items of the maritime Silk Road network, from Italy and Greece to the eastern coast of India, also giving some tentative reference to the lands further East (Casson 1989).

As mentioned at the beginning of this thesis, most studies on the contact between the Roman Empire and Han China rely quite heavily on these (and other) ancient written sources, in part due to the relative abundance of such texts available to us - especially from Chinese historical records[23] - but also to a lack of material remains available for research on the topic. On the bright side, this means that these studies based on ancient texts often focus much more directly on the contact and trade between the Roman Empire and Han China, with the interesting addition of giving us an impression of what each knew about the other and what their impressions were. Yet they tend to give a slightly one-dimensional impression of the situation.

Place-names and product identifications are often hotly debated. While these often phonetically detailed discussions go beyond the scope of this thesis, it is a further illustration of the importance of archaeological evidence to corroborate linguistic interpretations. Though the name *Da Qin*, used by the Han Chinese to refer (broadly) to the Roman Empire, is perhaps slightly more stable than the term *Seres* used by the Romans, it is far from fixed. It appears to have been used in various sources, or sometimes even within the same source, to refer alternatively to the 'Roman Orient', the Roman Empire in its entirety, or the city of Rome only (Hill 2004). While for our current purposes it suffices to use this term, as we do not greatly differentiate between products from the 'Roman Orient' or elsewhere in the Roman Empire, an awareness of the ongoing discussions on the topic of identifying place-names is vital to illustrate the need for archaeological corroboration.[24] Hill, in

[23] The Chinese began the practice of state-ordered national histories with the *Han Shu* (Book of Han) written by Ban Biao, Ban Gu, and Ban Zhao in 111 C.E. (Hansen 2015, 129-130). Many of the dynastic histories that followed are at least partly preserved, as well as some non-official histories such as the *Shiji,* which also contains some accounts now considered mythological or greatly exaggerated (Hansen 2015, 37 & 43), and the *Hou Hanshu*.

[24] For a prominent example of these linguistic discussions, see Leslie and Gardiner (1996) and the review of that work by Pulleybank (1999).

his 2004 draft translation of the *Weilue* puts it quite concisely: "Hirth, and many other scholars who followed him, have taken Da Qin to refer to the 'Roman Orient.' I think that the term is often clearly used in a broader sense than this to mean the Roman Empire, or any territory subservient to Rome. It is true that all the dependencies mentioned in the Weilue are probably found in the 'Roman Orient,' but it specifically mentions that it only lists a few of the dependencies of Da Qin, presumably the ones visited by the Chinese, or those reported on to the Chinese, because of their importance for east-west trade." (Hill 2004). Much like our interpretation of the term today, it seems likely that the term took on different meanings depending on context and knowledge of the speaker and their audience. The details the Chinese learned of the Romans and their products are at times very accurate and unexpectedly detailed, and sometimes just as detailed but completely wrong (Hill 2004). This does enforce the impression that they were reliant on a handful of individual accounts, which may have gone into detail in some areas they knew more of, or may have been wrongly understood or exaggerated by either side.

Sources focussed on material

As mentioned above, the majority of conclusions and interpretations on the topic of contact between the Roman Empire and China in the late 19th and early 20th centuries were based on ancient textual sources, much as it still is today. However, recent years have seen an increase in the academic discourse of papers written from the basis of archaeological material. Some of this material had not been re-evaluated since their first discoveries or descriptions in the 19th or 20th centuries. During the late 19th and early 20th centuries, research when it came to archaeological material in China and East Asia was mainly focussed on regions or localities, such as the extensive work of Louis Malleret on the Mekong Delta (1962) and the discoveries of Aurel Stein.[25] More recently, some have devoted themselves to more in-depth research of specific material groups and their travel along the ancient Silk

[25] For example his extensive 1907 work 'Ancient Khotan'.

Road network. Researchers like Jiayao An[26] and Brigitte Borell have written extensively on the trade and manufacture of glass all along the network for over 30 years, while Borell has also written extensively on Roman coins found in the East. Authors like Irene Good have taken on the task of trying to document the silk as it was traded along the Silk Road network (Good 1995; Good 2002). Though much of this recent work has not yet made it into the mainstream academic discourse on the topic of the ancient Silk Road network, it appears that the study of early trade and contact between the Roman Empire and Han China through the medium of archaeological material might gradually be becoming more prominent.

[26] An sadly writes mostly in Chinese and has based herself on many Chinese sources not widely available to western academia. It might therefore be assumed to be more material that is unavailable at present.

3. Case Studies

In this chapter, having established the historical and academic context we are able to base ourselves on above, we now move on to examining the archaeological material. As mentioned in the introduction, this chapter should not be seen as an exhaustive review of all archaeological material that was traded from the Roman Empire to Han China. Rather, it explores the categories of material mentioned in the ancient written sources, and illustrates the archaeological material so far documented, published, and made accessible.

Glass beads and vessels

One of the items that jumps out from the written sources as possibly one of the most important reciprocal goods that were exported from the Roman Empire was glass. The Chinese are believed not to have invented glassmaking, though by the time they officially joined the Silk Road network by opening the Jade Gate in 121 B.C.E.,[27] they were producing it (An 2002, 79). Of the goods mentioned in the ancient written sources, glass is one of the most well-explored archaeologically in recent years. Some of the earliest glass from the 'Western Regions'[28] so far discovered in China is in the form of eye beads excavated from the tomb of Marquis Yi of Zeng in Hubei, dating to the Warring States Period (481 – 221 B.C.E.), which look similar to eye beads excavated in Iran and are presumed to have been imported from that area (An 2002, 79). Shortly after, Chinese-made glass crops up in tombs in the form of cups, dishes, and other ware (An 2002, 79-82).

Glass made in China is often easily distinguishable from glass produced around the Mediterranean, as the former is composed of a lead-barium base and typically mimics forms found in Chinese ware of other materials such as lacquer, jade, or ceramic (An 2002, 81-82), whereas the latter consist of a soda-lime base which is not available in China (An 1984, 13). This allows for a more reliable interpretation of

[27] See historical context above.

[28] A term used quite frequently in ancient Chinese historical records when referring to places in the West more generally, or to places in the West of which a more precise location was not known. The *Shiji* (Records of the Grand Historian), *Han Shu* (Book of Han) and *Hou Hanshu* (Book of Later Han) all refer to the West as such at times (Hill 2004).

the Mediterranean origin of glass pieces than one only based on decorative and technical features, though these too play a large role. A combination of all three can be found in the glass sherds shown below (Fig. 3.1a).

These glass sherds found in tomb no. 2 in the Ganquan tomb complex, a Han-period tomb in Jiangsu dating to 67 C.E. were likely of a bowl displaying typically Roman decorative ridges, as well as marbling, a difficult glass manufacture technique found often in the Roman Empire, which produces opaque white streaks (An 1984, 3).[29] Chemical analysis revealed them to be of typically Roman soda-lime glass. Dr. Brigitte Borell mentions such ribbed bowls being the most easily

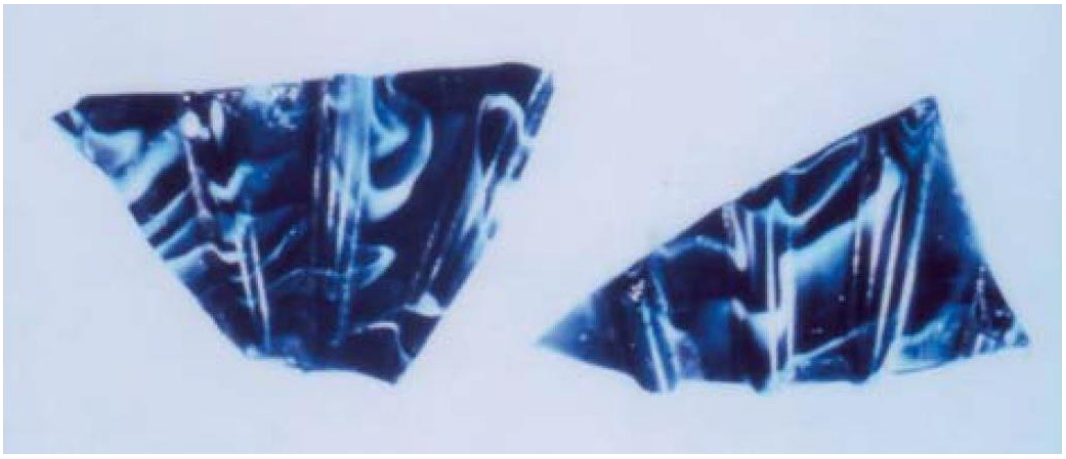


Fig. 3.1a Two of the sherds found in tomb no. 2 at Ganquan, showing ribbed decoration and marbling technique (Borell 2010, 128).

Fig. 3.1b Ribbed bowl found at Rednage, England, of the same type as the sherds from Ganquan (An 1984, 4).

[29] Looking very similar to marble, hence the name.

Fig. 3.1c Millefiori glass bowl also displaying the ribbed decoration found on the Ganquan bowl, found in Valkenburg (South Holland) and dating to the 1st century C.E. (www.rmo.nl).

identifiable of the Roman glass wares traded abroad, and dates their production to the 1st century B.C.E. until the 1st century C.E. (Borell 2010, 127). They have been found in many ports including Myos Hornos, Berenike, and Arikamedu (Borell 2010, 127). One found at Rednage in England, displaying both the ribbed decoration and marbled technique, dating to the 1st century C.E., is pictured below the sherds (Fig. 3.1b) to illustrate how the full bowl in the Ganquan tomb may have looked. Another bowl displaying the ribbed decoration is shown below it (Fig. 3.1c). This bowl was found in Valkenburg, South Holland, and is also dated to the 1st century C.E. (www.rmo.nl). The distribution of this decorative feature from England to China and many places in-between is testament to the massive reach of this type of item and the network it travelled along (An 1984, 2-3). In her 1984 dissertation, Jiayao An lists a total of 8 glass finds from China which can be firmly interpreted as Roman in origin: five bowls, one set of tray cups, and the marbled sherds (An 1984, 35).

Years later in 2009, Borell lists sixteen glass vessels excavated from several sites in Guangxi and two in neighbouring Vietnam (Borell 2012, 71-72). As mentioned in the historical context above, Vietnam came under increased Chinese influence in the 3rd century B.C.E., and was conquered possibly to as far south as Hue around 110 B.C.E. by Emperor Wu (Borell 2009, 491). All sixteen vessels date to the Han dynasty, and Borell identifies this as a distinct group of glass vessels, locally

produced as indicated by the composition of the glass and the designs which do not resemble anything found in the Mediterranean or the Near East (Borell 2009). Borell also lists 8 vessels that may be assigned to this group in museums around the world (Borell 2009, 492). She argues the composition and typology, similar to sherds found at Arikamedu and southern Thailand, most notably Bang Kluay Nok (see also the coin section below), speak for a local origin and an indication that this type of glass was traded over the sea-route westward (Borell 2009, 495) Though none such vessels have yet been identified to have reached the Mediterranean (Borell 2010, 132), one of the sites that yielded several of these glass vessels, the Hepu tomb complex, also revealed several glass beads of Mediterranean soda-lime glass which appear similar to Roman blue cameo glass, a bead typical of the late Republican and early Imperial era (Fig. 3.2) (Xiong 2014, 1233). So, while this section opened with glass as a reciprocal good for the Chinese silks, it seems possible that Chinese-made glass was also traded at least part of the way back as well.

Fig. 3.2 Impression of the Roman glass beads found at Hepu tomb (Xiong 2014, 1235).

Shedding further light on the possible maritime route Roman products may have taken to reach Han China and vice versa are finds from the site of Pangkung Paruk, on the island of Bali. Here, a large collection of 43 gold-glass beads[30] from Roman Egypt were discovered together with two Han Chinese bronze mirrors (Calo *et al.* 2020, 110 & 114). Nineteen very similar beads were excavated from the site of Óc Eo in southern Vietnam (Calo *et al.* 2020, 114).[31] The occurrence of these finds together indicates an important role for the site within the trade network to and from Han China. Such beads were also described in the *Periplus Maris Erythraei*, as an important trade item to southeast India, whence they were traded further east, presumably via the Thai-Malay peninsula and the Vietnamese coast (Casson 1989). The site of Pangkung Paruk proves another node in this part of the maritime trade network.

What does characterize all finds mentioned so far (aside from those of uncertain origin in museums worldwide) is their find locations in coastal provinces, leading many to assume that the bulk of trade in glass between Rome and China occurred over the sea routes of the Silk Road, very likely via India. Indeed, the main route of the glass trade in Han times does appear to have been by sea, as most finds from this period are from coastal regions. This also aligns with the ancient written sources. The *Han Shu,* in its section on geography, mentions a present of glass given to the Emperor Wu by envoys who came from the sea (An 1984, 28). The *Periplus Maris Erythraei* also records some information about the region of China and the trade of glassware to it from the Mediterranean (An 1984, 28). A few glass sherds found in the Indian seaport of Arikamedu, looking very similar to the ribbed marbled ones pictures above, also seem to corroborate this (An 1984, 28). Further depth is given to our knowledge of the routes these Roman glass vessels may have taken over sea by finds from sites like Pangkung Paruk in Bali and Óc Eo in southern Vietnam.

[30] These beads are made by inserting a sheet of gold foil between two pieces of transparent glass, and were primarily made in Roman Egypt and the Levant (Calo *et al.* 2020, 114).
[31] For more detail on this site, see the coin section below or Borell (2014).

Some recent finds, however, have shed some light on the possibility of overland trade of Roman glass to reach China as well. Another vessel with the marbled decoration technique, pictured below (Fig. 3.3), was discovered in Luoyang, the capital of the Eastern Han period (25 – 220 B.C.E.), in the inland and much more northern province of Henan. These would perhaps have come over the land route through Xinjiang, and An claims Chinese written records tell of western traders settling in the city at this time (An 2002, 83-84).

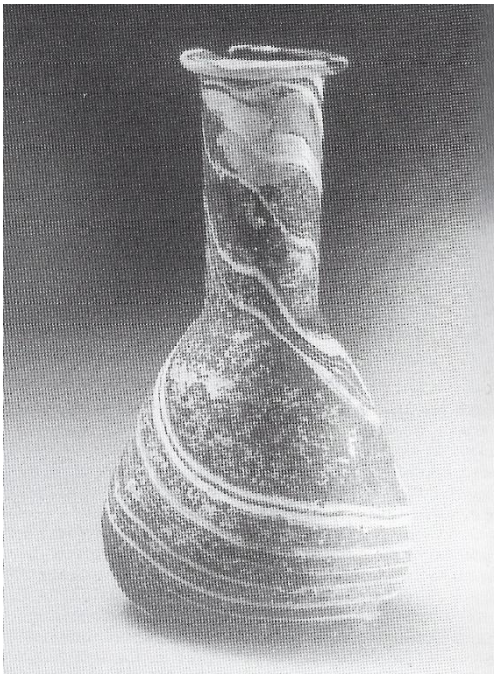


Fig. 3.3 Marbled glass bottle from an Eastern Han tomb in Luoyang (An 2002, 84).

This is an important find, as all other glass finds listed above were discovered in coastal areas. This bottle dating to the Eastern Han period shows glass was also likely traded over the land route through Xinjiang. Finds of a slightly later date appear to confirm this, as four Roman glass sherds were found at Loulan in Xinjiang, right on this most important land-route connecting China to the Mediterranean (An 1984, 26). Though these date to the Jin Period (318 – 420 C.E.), it does appear that glass may have been traded through this land-based Silk Road route as well. They also occur quite near the Xinjiang textile finds showing a multitude of cultural and stylistic influences including Greek and Roman motifs (Good 1995, 962; see textile section below). Eighteen beads, four of which are of similar appearance to the blue ones from Hepu tomb (Fig. 3.4), with the soda-lime composition typical of the Mediterranean region, were also excavated at Xigou site in Barköl Kazakh Autonomous County, Xinjiang (Wen *et al.* 2016). These beads, dated by Wen *et al.* to the late Warring States period or the early Western Han dynasty, provide another example of glass being traded to China through the overland routes of the ancient Silk Road network, though Wen *et al.* state that the flux used is non-typical for glass produced in North

Africa or the Near East and do not propose a precise point of origin (Wen *et al.* 2016, 376).

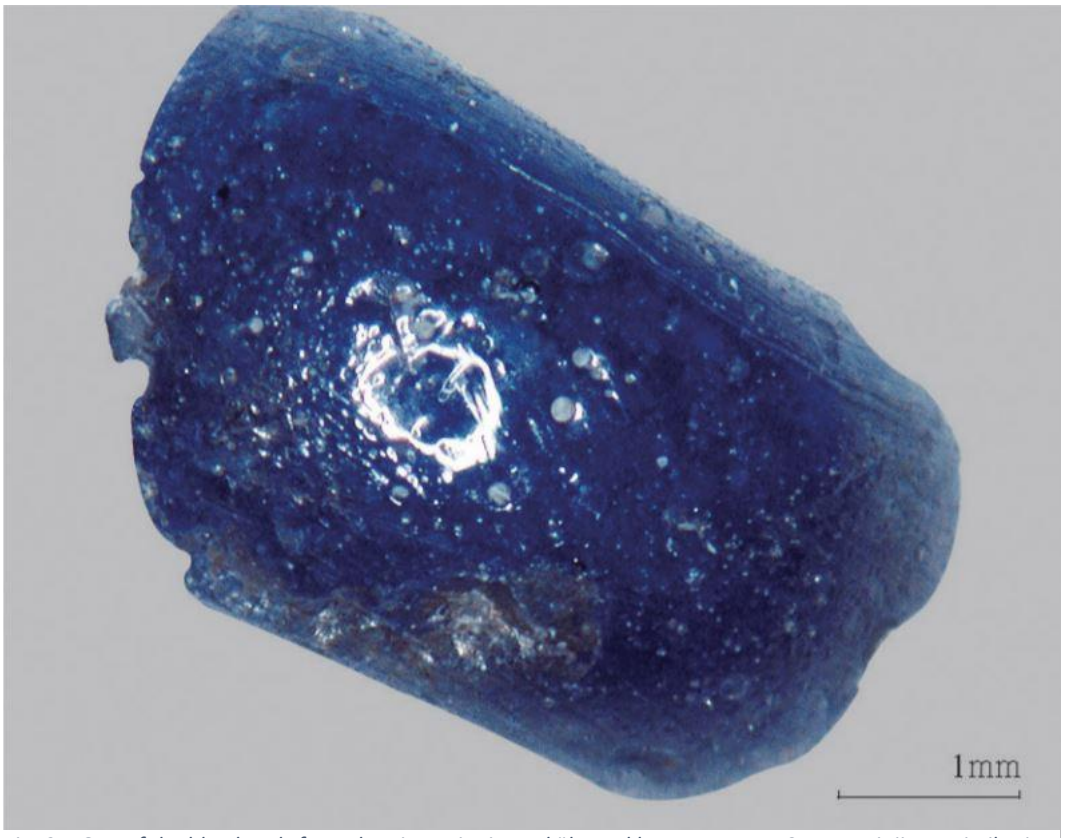


Fig. 3.4 One of the blue beads from the Xiguo site in Barköl Kazakh Autonomous County, Xinjiang, similar in appearance and composition to those found at the Hepu tomb complex (Wen et al. *2016, 375).*

Coins and their imitations

Another category of finds not to be neglected are coins of Roman origin found in China, if only for the frequent lamentations of Roman authors such as Pliny the Elder about the drain of Chinese silk on the Roman coinage (P. 12.41.84).[32] More general overview studies of the ancient Silk Road network sometimes refer to a multitude of coins having been found indicating this drain, but when diving deeper into the sources that are given for these claims – if indeed any are given – it is revealed that these numbers are often grossly exaggerated or refer to finds not from China itself but from India.[33]

[32]"And by the lowest reckoning India, China and the Arabian peninsula take from our empire 100 million sesterces every year—that is the sum which our luxuries and our women cost us; for what fraction of these imports, I ask you, now goes to the gods or to the powers of the lower world?"
[33] Bueno in his 2016 paper, for example, refers to a "multitude" of coins from Rome having been found in India and China, but refers for this claim to a source which never actually makes mention of China (Tchernia 2011).

One group of coins, excavated from Shanxi, quite near the Western Han (207 B.C.E. – 9 C.E.) capital of Chang'an and dated to the reigns of thirteen emperors between Tiberius and Aurelian (14 – 275 C.E.), has garnered much discussion since its discovery (Ball 2016, 154).[34] It is described in detail by S.W.Bushell (Raschke 1978, 729), as well as in the dissertation by Lieberman mentioned in the previous chapter (Lieberman 1953, 218-227), and many in the past have referred to it as proof of the drain on Roman coinage the trade in Chinese silk caused (Raschke 1978, 625). Bushell describes the group of sixteen coins thoroughly, including the depicted personages, dates, and dimensions of the coins, and interprets them as Roman coins which made their way to China as trade-material via the land-route through Xinjiang (Lieberman 1953, 218-223). A paper by the American Numismatic Society from 1886, shortly after the publication by Bushell, interprets the fact that the hoard represents coins dating to the reigns of emperors up to 250 years apart as indicating that the collection was meant as a gift of curiosity, possibly for Emperor Wu of Jin (r. 266 – 290 C.E.) (American Journal of Numismatics, and Bulletin of the American Numismatic and Archaeological Society 1886, 61). However, more recent studies have cast doubt on the authenticity, context, and previous interpretations of the hoard, and interpreted the fact that such a wide date range of coins occurred together differently. Lieberman expresses some doubt as to their authenticity, as the coins were dug up by a villager rather than professional archaeologists and lay in a private home for 50 or 60 years before being brought to the attention of Bushell, but argues that in the absence of photographs alternative judgement cannot be made (Lieberman 1953, 227). Then, by 1978 Raschke states the collection has been accepted as a later, perhaps even modern missionary's collection (Raschke 1978, 625), despite John Ferguson appearing to imply they arrived at the earlier date in his paper in the same volume of A.N.R.W.[35] (Ferguson 1978, 590). However, the article quoted as the most comprehensive argument for Raschke's interpretation,

[34] See Bushell (1886), American Journal of Numismatics, and Bulletin of the American Numismatic and Archaeological Society (1886), Lieberman (1953), Ferguson (1978), Raschke (1978), and Tchernia (2011).

[35] Standing for 'Aufstieg und Niedergang der Römischen Welt: Geschichte und Kultur Roms im Spiegel der Neueren Forschung'.

which also criticised earlier interpretations of the collection as proof of the drain of silk on Roman coinage, written by the prominent Chinese archaeologist Xia Nai, was published only in Chinese (Xia 1959). Though riddled with uncertainty, this group of coins at least serves to illustrate the great interest and speculation finds on this topic raise, and show that further research and excavation is needed to draw worthwhile conclusions, and how a lack of available documentation makes such endeavours extremely difficult. Perhaps most importantly, it shows how an incorrect early interpretation can ripple through into the academic discourse for many years, as some authors on the topic of Silk Road trade do still refer to this collection as genuine proof of the drain of Chinese silks on the Roman economy during the Han period.[36]

Dr. Qiang Li, in his comprehensive overview of coin finds from Rome in China, lists that over 100 coins from Rome have so far been excavated in China, but does not mention any of them dating to the Han period (Li 2015). Indeed, he dates most of them to the 5th – 7th centuries C.E., and gives no date for those that do not fall within this timeframe, likely because the date or authenticity is too uncertain. It seems we must look slightly farther afield for these older Roman coins that can provide us insight into the time period at hand here. We find ourselves on more certain footing with a coin discovered in 2016 near Bang Kluay Nok in peninsular Thailand, said to be the first Roman gold coin found in southeast Asia (Borell 2019, 58 & 60) (Fig. 3.4). The coin, of the *aureus* type, was minted during the reign of Emperor Domitian (r. 81-96 C.E.) in 8.6. C.E. (Borell 2019, 61), and features his profile portrait on the obverse side, as well as a legend stating "IMP CAES DOMIT AVG | GERM PM TR P V" for *Imp(erator) Caes(ar) Domit(ianus) Aug(ustus) Germ(anicus) P(ontifex) M(aximus) Tr(ibunicia) P(otestate) V.*", while the reverse shows the goddess Minerva and a legend stating "IMP XI COS [XII] | CENS P P P" for *Imp(erator) XI Co(n)s(ul) XII Cens(or) P(erpetuus) P(ater) P(atriae)*" (Borell 2019, 61).[37] Of course, the year the coin was minted does not tell us much about when it arrived in the Far East, as evidenced also by the 16-coin hoard mentioned above. However, its wear and age

[36] For example Ball (2016).
[37] For a more detailed description of the coin, see Borell (2019).

allowed Borell to infer a quite detailed description of its life before coming to be deposited in peninsular Thailand, and she assumes that though its journey must have taken quite long, it likely arrived in its final resting place in the early centuries C.E. (Borell 2019, 58 & 65). Most importantly, she argues the two holes that were added above the profile of Domitian indicate it came through India, where Roman coins and imitations of them were often worn as pendants (Borell 2014; Borell 2019, 62; more below).

Fig. 3.4 Obverse and reverse of the Roman coin of Domitian (minted 86 C.E.) found at Bang Kluay Nok (Borell 2019, 60).

A very different angle is presented by these finds of imitations of Roman coins at several sites in southeast Asia (Borell 2014; Borell 2017). Though we currently have no indication that this practice of copying Roman imagery onto locally minted coins or metal plates to wear as pendants made it into Han China, its presence in southeast Asia at sites also containing Roman and Han Chinese goods, from Óc Eo in the neighbouring polity of Funan,[38] to the Thai-Malay peninsula, to India (Borell 2014, 10; Borell 2017), shows the degree of exchange of both goods and styles along this vast trade network. The example below (Fig. 3.5a), from Óc Eo, shows a thin sheet of gold, 19 mm in diameter, depicting Emperor Antoninus Pius (r. 138 – 161 C.E.) and showing at the top a broken off extension that had likely been used to suspend it as a pendant (Borell 2014, 11), possibly in a similar manner to another

[38] This site has been interpreted by Young (2001) and Smagur and Hanus (2012), among others, as the ancient trading port of Cattigara mentioned by Ptolemy in his *Geography*.

Roman imitation pendant found at the Thai site of U Thong, pictured beside it (Fig. 3.5b) (Borell 2014, 11-12).

Fig. 3.5 Imitation gold coin pendants from Óc Eo and U Thong, respectively (Borell 2014, 11-12).

The original design it was based on had already been identified by Louis Malleret - the original excavator of Óc Eo - in 1962, who also noted the slight deviations between this sheet and the original coin design (Malleret 1962, 115-116).[39] Finds from within Han China, together with several Roman glass objects and intaglios and such imitation coin pendants (see also the other sections in this chapter) were recovered together with objects at the sites of Óc Eo in southern Vietnam (Borell 2014), as well as at the Bang Kluay Nok, Phu Khao Thong, Khao Sam Kaeo, and Khlong Thom sites on the Isthmus of Kra on the Thai-Malay peninsula (Borell 2019, 62). Crucially, the site of Khlong Thom also yielded a stone bivalve mould used for the casting of such pendants, including the suspension loop from which it would have hung (Borell 2014, 23). This confirmed that such pendants were most likely locally made, not directly imported from the Roman Empire as had been believed by some (Borell 2014, 24; Borell 2017, 152). It is believed that Óc Eo and the Isthmus of Kra served as key nodes in the maritime trade routes to and from China (Wang 1959, 19-20; Borell 2014, 8; Borell 2019, 59 & 63). This is further reinforced by the account in Chinese records of an embassy from *Da Qin* arriving with presents for the emperor in 166 C.E., recorded in the *Hou Hanshu* to have arrived via the

[39] For detailed studies of such pendants imitating Roman coins found in Thailand and Vietnam, see Borell (2014) and Borell (2017).

province of Rinan in Vietnam, then under the control of Han China (Hill 2009, 27; Borell 2019, 60).[40]

Together, the sites mentioned here and in the previous section indicate a lively metropolitan trade network which came into frequent contact, mostly through intermediaries, with the thriving trade network and goods from the 'Western Regions'. Despite these sites in southeast Asia showing finds from India, the Roman Empire, and China occurring together, indicating their role in the trade network that reached China, no securely dated coins from the Roman Empire are known to have been found in Han China itself. The imitations and finds listed above are of great importance because dates for the minting of Roman coins can be quite precisely determined, and the imitations were of close enough likeness to establish fairly secure *terminus post quem* dates for their arrival to southeast Asia. Yet it is important to keep in mind that when dealing with trade or imitations it is hard to precisely pinpoint when a particular design arrived in any location. It is also important not to see these pendants as evidence of direct contact between the Mediterranean and the trade nodes of southeast Asia, as Borell also emphasises (Borell 2014, 30). Rather, these finds shed light on an often-neglected part of the maritime Silk Road network (Cale *et al.* 2020, 122), one that allows us to better understand the routes via which finds may have made it to China in the Han period.

Silk and other cloth

When speaking on the topic of trade between the Roman Empire and Han China, one can hardly avoid giving some attention to silk. Though most famously known as

[40] "In the ninth Yanxi year [166 CE], during the reign of Emperor Huan, the king of Da Qin [the Romans], Andun [*Marcus Aurelius Antonius*, r. 161-180], sent envoys from beyond the frontiers through Rinan [Commandary on the central Vietnamese coast], to offer elephant tusks, rhinoceros horn, and turtle shell. This was the very first time there was [direct] communication [between the two countries]. The tribute brought was neither precious nor rare, therefore raising suspicions that the accounts [of Da Qin] might have been exaggerated." (Hill 2009, 27). It is generally accepted that this was not an official envoy, but rather a group of merchants being seen as such, and it is thought they brought their wares not from the Roman Empire itself but had picked them up along the way (Hill 2009, 287-303). Andun is believed to refer to either Marcus Aurelius Antonius or his predecessor Antoninus Pius, who died in 161 C.E.. Considering the length of the journey from the Roman Empire to Vietnam at the time, it is entirely possible the group would have been unaware of Antoninus Pius' passing (Borell 2014, 32). In any case, it is unlikely the emperor sent them himself.

the outgoing commodity from China that gave the ancient Silk Road network its name, there is reason to believe the trade in silk was not so one-sided. Thorley (1971) records a clever deception by the Parthians, in which they advertised Chinese silks that had been rewoven to a much thinner, more transparent cloth in workshops in Tyre, Sido, and Berytus, among others, as a fundamentally different silk. This not only allowed them to profit from selling back the same silks to the Chinese, but also enabled them to convince the Chinese that they did not hold the monopoly on silk production, thus keeping their prices down (Thorley 1971, 77-78). By the time of writing of the *Weilue,* however, the Chinese appear to have been aware of this practice (Hill 2004; Hill 2009, 470). Sadly, no material evidence is known to corroborate the written records in this, which might perhaps be explained by the fine nature of these rewoven silks, not to mention the natural fragility of all fabrics when confronted with spending extended periods of time in the ground. Irene Good, however, has shown through samples of silk cloth found at several sites in Europe, including several sites around the Mediterranean, that silk production was not a technique unique to China, and its production in Europe in fact predates the Han dynasty by some centuries (Good 1995, 959-960). She shows that wild silkworms capable of producing economically viable amounts of silk are distributed worldwide, and therefore fibre determination is of crucial importance to understanding the distribution of and trade in silk across the ancient Silk Road network, as the silks produced within and outside Han China differed fundamentally. Such distinctions are sometimes also brought to light in the ancient written sources, where 'sea silk' made from the wool of 'water sheep'[41] is mentioned as an important trade commodity from *Da Qin* (Hill 2009, 25 & 468-480). Good mentions there to be two key identifying features unique to Chinese silk in antiquity. The first is that the Chinese produced *processed* silk, where a technique of boiling the cocoons in an alkaline solution allowed long strands to be extracted without the need for spinning, resulting in a much finer weave and better quality of cloth, a technique not known in the West until the 6th century C.E.. The second is the use of the *Bombyx mori* type of moth, which was not used in western silks in antiquity (Good

[41] In fact it came from a type of mollusc (Hill 2009, 468-476).

1995, 960). Unfortunately, as Good also mentions, these definitions are often confused, misidentified, or not recorded on those rare occasions that silk is recovered from sites in Han China or the Roman Empire (Good 1995, 960-961).

Besides silk, the ancient written sources also mention ample other types of cloth being traded with *Da Qin*. The *Hou Hanshu* mentions "gold-thread embroideries, rugs woven with gold thread, delicate polychrome silks painted with gold, and asbestos cloth" as being products of *Da Qin* (Hill 2009, 25). Perhaps the most famous example of one of these fabric types, the gold-thread embroideries, was found in the Yingpan Ruins in the Lop Nur desert, Xinjiang. The remarkable conservation of a mummy discovered there, named the Yingpan Man and thought to have been of European descent, allowed archaeologists to identify "Graeco-Roman and ··· Persian" figures embroidered in gold on the gown the man wore (Mair 2010, 194), pictured here (Fig. 3.6). Though dating to the 3rd or 4th century C.E., after the collapse of the Han dynasty (Warneck 2012, 164), its presence in the Tarim Basin and curious combination of stylistic elements from different cultures that traded as part of the ancient Silk Road network ties in well with older, though less spectacular, finds from broadly the same region.

Fig. 3.6 The "sartorial shell" of the Yingpan Man, showing the gold embroidered outer coat with Greaco-Roman motifs (Mair 2010, 194).

As mentioned above, no rewoven Chinese silks from the Roman Empire have so far

been identified within China. However, Chinese silks have been recovered together with some of these other fabrics mentioned in the ancient written sources as being products of *Da Qin*. As early as 1925, the Kozlóv Expedition recovered several fabrics from the famous site of Noin-Ula in Mongolia, which have been identified as showing distinctly Graeco-Roman decorative features (Yetts 1926). The tombs are dated by their chief excavator, Colonel Kozlóv, to the 1st century B.C.E. (Yetts 1926, 173), and the fabrics discovered in them are described in some detail in the 1926 publication of the excavations by W. Perceval Yetts. All fabric samples highlighted by Yetts contain what he and the original excavators interpret as combinations of stylistic patterns from various cultures along the ancient Silk Road network, including Scythian, Sarmatian, Assyrian, Siberian, Chinese, and Bactrian influences in varying degrees (Yetts 1926). The most interesting to highlight at present is a remarkably preserved group of three fabric pieces, each embroidered with what Yetts describes as "Greek motives" (Yetts 1926, 177), pictured below (Fig. 3.7a-c). The combination of "Greek and Chinese motives" identified by Yetts in one of the pieces (Fig. 3.7c) is especially fascinating. Though we must be careful not to follow stylistic interpretations too blindly, another example of Mediterranean motifs recently excavated from the same site lends more weight to these interpretations (Karpova *et al.* 2016, 15). The strip of tapestry, pictured below (Fig. 3.8), features broad bands of ivy and thinner bands depicting waves. Though the detailed analysis done by Karpova *et al.* does not dive further into the meaning of these design elements, they appear distinctly similar to Greek and Roman designs. This interpretation gains more secure footing when combined with the analysis by Karpova *et al.* of the multiple dyes used in the tapestry, which led them to conclude that the dying and weaving of the tapestry most likely occurred in Roman Syria (Karpova *et al.* 2016, 20). The area where these fabrics were found lay near the frontiers between the Han and Xiongnu empires, and territorial boundaries changed frequently. Contact between the Xiongnu and the Han during these centuries was fraught, but frequent. Many battles occurred between them to gain wider control of valuable areas and resources (see also the historical context above). However, the exchange of goods was also abundant, and it was not uncommon for defeated

Chinese officers to join the enemy ranks rather than return home and be executed for their failure (Yetts 1926, 173). As such, cultural exchange between these two empires must have been fairly intense, despite the tensions.

It should be kept in mind that, though the fabric finds mentioned here were found in northwest China and Mongolia, this cannot be seen as immediate proof that the trade of fabrics occurred mostly over the land-routes of the ancient Silk Road network, as this concentration may have everything to do with the dry conditions of that area allowing for better conditions for the preservation of organic materials, rather than a preference of one route over the other for these materials, or a higher degree of cultural exchange or interaction on the over-land routes.

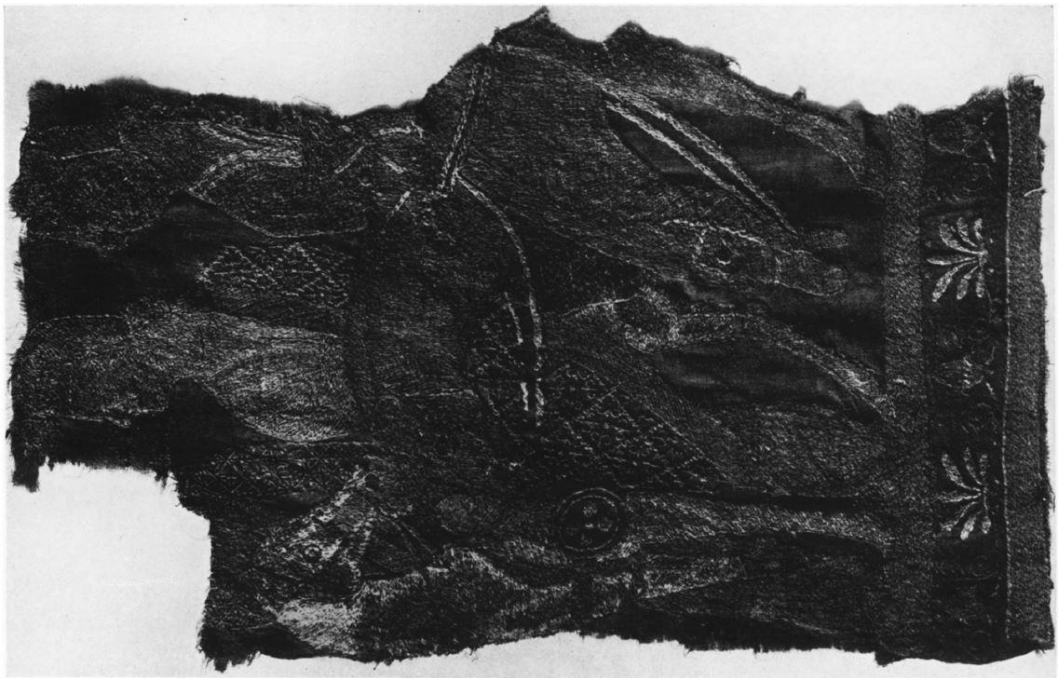


Fig. 3.7a Piece of fabric excavated from Noin-Ula in 1924-25, interpreted by Yetts as an "embroidered hanging, combining Greek and Scythian motives" (Yetts 1926, Plate III). It consists of a white, brown, and yellowish-red thread embroidery on a crimson background (Yetts 1926, 176).

Fig. 3.7b Piece of fabric excavated from Noin-Ula in 1924-25, interpreted by Yetts as an "embroidered hanging of Greek design" (Yetts 1926, Plate III). It consists of a white, brown, and yellowish-red thread embroidery on a crimson background (Yetts 1926, 176).

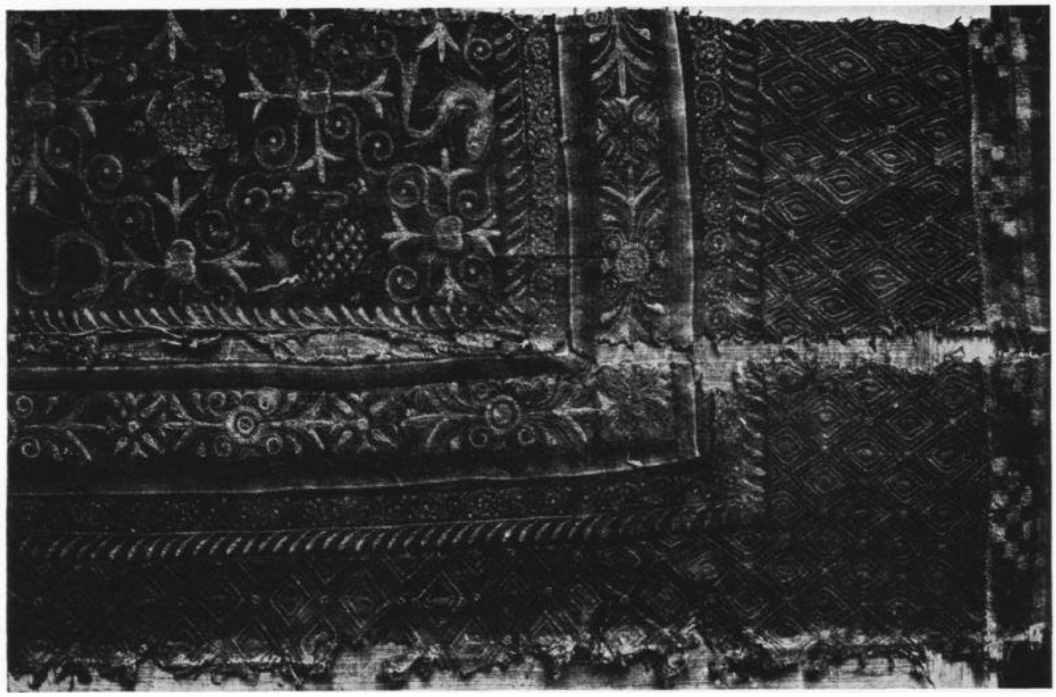


Fig. 3.7c Piece of fabric excavated from Noin-Ula in 1924-25, interpreted by Yetts as an "embroidered carpet, combining Greek and Chinese motives" (Yetts 1926, Plate III). It consists of a white, brown, and yellowish-red thread embroidery on a crimson background (Yetts 1926, 176).

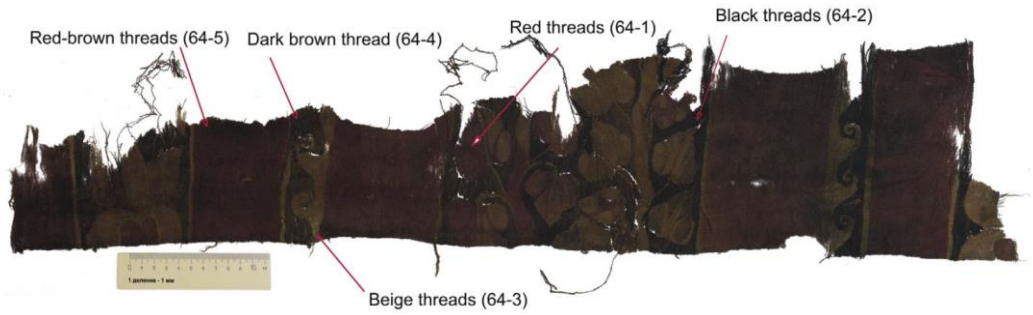


Fig. 3.8 Tapestry fragment from Noin-Ula, displaying what appear to be Graeco-Roman motifs and likely produced in Roman Syria (Karpova 2016, 20).

4. Discussion

Having detailed broadly three case studies of find categories above, it now becomes necessary to examine these findings for their potential contributions to a wider synthesis of global connectivity. As it stands, many of the papers and books that have touched upon the topic of trade between the Roman Empire and Han China did so from a very descriptive, rather than an analytic point of view. This is partly the result of their being a product of their own time, as many of these works were written in the 19th and early 20th centuries when dominant research paradigms were very different from today.[42] The sometimes optimistically high numbers of Roman coins still referred to in many modern sources are a likely result of this, as for example the 16 coin hoard mentioned above, which despite having been debunked as a much later missionary's collection, is still often referred to in more general studies of the ancient Silk Road network. Another example of this is the re-evaluation of the date of a famous bronze lamp discovered at Pong Tuk, Thailand by Brigitte Borell. The lamp was interpreted as Roman by its excavator (Picard 1955), but later re-dated convincingly by Borell as being of Byzantine origin (Borell 2008). Despite this, it is still referred to as a Roman lamp in most sources, which though perhaps not technically incorrect, creates confusion and incorrect implications when mentioned together with coins of the western Roman Empire or in works claiming to provide a general picture of trade relations and contact between the Roman Empire and Han China.[43] Precise dates are in those cases often not given and such materials with wide gaps in dating between them are grouped together. The discussion of the finds below thus aims to contribute a new feature to this body of research, in showing not only that these finds exist, but also what they can tell us about larger themes such as global connectivity and the nature of the ancient Silk Road network.

[42] Hirth (1885), Stein (1907), Yule (1915), Lieberman (1953), and Malleret (1962), just to name a few.
[43] As happens, for example, in Ball (2016, 153).

Material categories

To begin with the obvious here, the objects that were traded from the Roman Empire to Han China at least included glass, fabrics, and possibly gold coins, as is evident from the case studies presented above. The reasons each of these were bought by the Chinese may be difficult to pinpoint, but there are some indications. Jiayao An argues that glass was intriguing to the Chinese not only for its material qualities but also because it was a foreign invention (An 2002, 79). While her research also shows that the Chinese were already producing their own glass long before the period in question here, these were not of the clearness, quality and variety produced in Han China itself (An 2002, 82). The fact that most of the glass finds mentioned above are from very rich tombs of prominent individuals further attests to their perceived value. Yet Borell has shown that some Chinese glass was also exported, showing the complex nature of these trade relations (Borell 2010). The same may be said for the fabrics recovered from the Yingpan Man and the site of Noin-Ula, which featured combined motifs from many cultures including Hellenic styles. And though the gold pendants imitating Roman coins, and the single genuine Roman gold coin mentioned in the previous chapter were not located in Han China itself, their presence in the surrounding hubs of eastern Silk Road trade combined with the great importance given to gold as a trade ware in the ancient written sources from both the Roman Empire and Han China leaves almost no room for doubt that gold must have been one of the commodities traded with Han China. Yet the comparative absence of Roman coins in China is striking, considering the relative abundance of them at sites in India (Ferguson 1978, 590; Tchernia 1995), the lamentations of the Roman authors about the drain of Chinese silk on the Roman currency, and the material being placed at the top of the list of most of the ancient written sources of China that list the products of the Roman Empire (Thorley 1971, 76). The absence might be explained if one assumes that the Chinese melted and recast the gold they received, either in the form of bullion or coins, rather than buying ready-made objects and using them for their intended purpose (or an alternative purpose like wearing the coins as pendants), a theory also proposed by Ferguson (Ferguson 1978, 590). Bullion or coins would have been much easier to

stack, bundle, and transport, and unless a particular form or type was desired that could not be made locally, there was perhaps no reason to buy ready-made objects. It does indeed seem likely that China imported quite a lot of gold from the Roman Empire, as China itself produces little of it (Thorley 1971, 76) while the wearing of it as pendants (see chapter 3) seems to indicate that people did find the metal aesthetically pleasing. Its importance is further emphasised by its use in the famous jade burial suits of some members of the royal family, which were said to impart immortality on the wearer (Scarre 2013, 573).[44] This immortality may have been associated with gold due to its resistance to corrosion (Hill 2009, 260).

Another perhaps curious absence for many archaeologists in terms of the material categories mentioned here is pottery, as it so often forms a crucial part of archaeological research, especially where it concerns trade. Some say the terracotta army of the first Qin emperor (r. 221 – 210 B.C.E.) was inspired by Graeco-Bactrian artisans who gifted the emperor with terracotta in their style and inspired him, but notably the only sources referring to this are news articles. The theory is widely considered fanciful conjecture. Upon consideration, it may not be so surprising that pottery is not listed as a trade item from *Da Qin* in the ancient written sources, nor that there have so far been hardly any discoveries of Roman pottery found in China.[45] After all, China had its own thriving ceramics industry during the Han dynasty that continued to develop through the years, eventually becoming notoriously popular in Europe as well. It stands to reason that an empire so proficient in making their own pottery would find no need to import it unless they found it to be especially unique, useful, or beautiful, as was the case with glass. What it might indicate, however, is a lack of items being traded which would require being transported in pottery jugs or amphorae. It may also simply indicate a bias in previous scholarship, in that Chinese archaeologists have not focussed on excavating, examining, and documenting it, as it is not considered a luxury good.

[44] For a detailed description of such burial suits, see Capon and MacQuitty (1973).
[45] A glazed jug was recovered from an Eastern Han tomb in Hepu, but it is thought to have been made in the Parthian Empire, rather than the Roman Empire (Huang *et al.* 2014). This is the closest to pottery from the 'Western Regions' China appears to get.

Thus, while some may imagine the ancient Silk Road network where it concerned trade between the Roman Empire and Han China was limited to the exchange of Chinese silks for Roman coins when going off the written records, the case studies above make clear that neither party traded such a singular type of commodity. The Roman Empire did in fact produce its own silk and other cloth that was highly prized in Han China, and even respun the Chinese silks they bought into finer weaves to sell back. In return, the relative lack of early Roman coins found in China should at least cast doubt onto the theory that the buying of Chinese silk caused a significant drain on the Roman economy, though of course absence of evidence does not mean evidence of absence. Other categories of items have received much less attraction in the field of Silk Road studies, such as the Roman glass vessels and beads the have been found in and *en route* to China, yet they help us paint a much clearer picture of the variety of goods and the interest for them in Han China.

The extent and scale of trade

The extent to which objects travelled between the Roman Empire and Han China remains a difficult question to answer based on the few selected case studies presented here, as these are not intended to represent the full corpus of finds related to the trade between the Roman Empire and Han China. Yet the difficulty in finding them, especially any located deeper within China, might lead one to interpret that such material is very scarce indeed, as it may well be. Yet it must be kept in mind that this is more likely to represent a bias in research and availability of material to western scholars. Moreover, overview studies of Silk Road trade appear content to continue to base themselves on outdated evidence and interpretations, rather than some of the crucial new research being done into these materials by scholars such as Jiayao An and Brigitte Borell. If more such studies were facilitated and actively incorporated into studies of the ancient Silk Road network, we would perhaps be able to draw more significant conclusions about the extent of trade between the Roman Empire and Han China.

It does appear, however, that direct trade between the two empires was limited at best. We may trust that considering the consistency of Chinese recordkeeping, the

'embassy' of 166 C.E. mentioned in the previous chapter would not have been recorded as the first contact between the two empires if the presence of Roman traders in Chinese ports or market towns was common. Most likely, a host of intermediary traders facilitated the reach of Roman goods to the far-flung edges of their known world. The relative abundance of Roman and Han finds occurring together in areas surrounding Han China seems to suggest a fairly high degree of intermediary exchange (see also Ball 2016, 153-155). This is somewhat further corroborated by the *Periplus Maris Erythraei*, which does not extend its descriptions beyond the Indian subcontinent. Where it concerns the overland routes, the idea that the Xiongnu facilitated at least part of the trade between the Roman Empire and Han China is not a new one; however, solid evidence of this assumption is not always given. The finds from the Kozlóv Expedition prove that not only did the material cultures of the two empires meet in these steppe areas, but they were also thought by the Xiongnu themselves to hold enough prestige to be suitable as grave gifts for elite burials. Borell, meanwhile, paints a picture of the maritime Silk Road routes being concentrated on the two coasts of India, with Chinese ware being available year-round on the east coast due to the use of smaller boats and shallower waters, while the Roman exports to the west coast were dependent on monsoonal winds (Borell 2010, 138). The two sides were far from isolated, but this theory does explain a limited need for contact between the Roman and Chinese traders, as they would both have been mainly concentrated on separate coasts of India. Hill (2009) hypothesises that the high sales taxes applied by the Parthians led Chinese merchants to prefer Kushan India as a trade partner, seeking new routes to circumvent the Parthians. The Isthmus of Kra and the islands of Indonesia also appear to have played an important intermediary role in the trade of Roman goods toward China. As Borell states: "Geographically, the Thai-Malay Peninsula appears as a huge barrier within these maritime routes, but its narrowest part, the area of the Isthmus of Kra, seems to have been a "stepping stone" which connected the maritime networks from the Gulf of Bengal and the Gulf of Thailand with transpeninsular land-crossings. The archaeological evidence from sites on the western and eastern coast in the Isthmus region brought to light an astounding

array of objects imported from distant regions, dating from the centuries around the turn of the millenia and originating predominantly from South Asia, but also from Han period China and the early Roman Empire." (Borell 2014, 7-8). The evidence from insular Indonesia is somewhat more tentative, but does also reveal the occurrence of Roman and Han Chinese finds together, implying at least a meeting point of these trade wares. From these nodes along the sea routes of the ancient Silk Road network the items likely arrived in Han China through southeastern coastal sites like Oc Éo, whence they may have made their way further inland (Borell 2014, 9).

Global connectivity

A pattern that might immediately jump out from the above case studies, is that the finds mentioned here mostly were not found in inner China, but rather in surrounding regions and the fringes of the Han Chinese Empire. This is, in the instance of this thesis, the result of a lack of available published material. However, it may just as well also be a result of a lack of penetration of these traded materials further into Han China. At present it is impossible to say based on archaeological material how these commodities were incorporated into Han society, though the presence of the fabrics, for example, in extremely rich tombs of the Xiongnu (Yetts 1926, 168) might indicate their high value and lead to the assumption that they must also have been reserved for the rich and elite in Han China. Surely the price of them would have been unaffordable to the common people, yet we cannot assume that their value to the Xiongnu meant they were also highly prized by the Han. The Han do appear to have been greatly fascinated by the sea silk of the Roman Empire, as well as the asbestos cloth which was cleaned by throwing it into a fire, and which Han sources erroneously interpret as an organic material from the fur of the salamander-rat (Schafer 1963 in Hill 2009, 281). We must not forget, however, that not all materials mentioned in the ancient written sources can be identified with certainty. As the introduction and state of the research chapters show, ample attention has been given to translation, and it has been used extensively to create today's picture of ancient Silk Road trade to and from China especially. Yet there are still many discussions and uncertainties concerning the definitions and names of

products in the Chinese sources. We are dealing here with foreign goods after all, and the names given to them in the Chinese records relied heavily on creativity and adaptability of sounds and characters. The more unfamiliar a product is to the people receiving it, the more their names for it may differ from the original. Further archaeological research could provide a valuable contribution to such discussions when combined with the ancient written sources.

5. Conclusion

At the beginning of this thesis, a single research question was formulated that the above thesis was meant to answer: 'What can we learn of the nature of the contact between Han China and the Roman Empire from the material remains of their exchange?'

To answer this main research question, the following subquestions were posed:

- What kind of objects were exchanged between Han China and the Roman Empire?
- To what extent did objects travel between Han China and the Roman Empire?
- What patterns emerge from the archaeology of this exchange about wider connectivity?
- How does that change our knowledge of the contact between Han China and the Roman Empire?

The aim was to provide the first steps toward closing a gap in the academic discourse of the ancient Silk Road network, by letting material remains from the Roman Empire found in Han China take a more central role as compared to the ancient written sources. This thesis was meant to substantiate and contribute to the knowledge of exchange between the Roman Empire and Han China given to us by those ancient written sources, which have so far been the main source for academic and public understanding, and to enrich the current discourse regarding the ancient Silk Road network by setting a precedent for bottom-up research into the nature of the relationship between the Roman Empire and Han China, with China as its focal point.

This was done by first providing a historical overview of the most relevant developments during the period in question, with a focus on the history of Han China, as this was thought to be generally less familiar to most western scholars. Ample reference was made to contemporary developments in and around the Roman Empire, to provide an integrated frame of reference for the data to follow. As part of the aim of this thesis was to highlight the need for further research and

publication on this topic, and since it is important in answering the last of the subquestions to know what the current state of knowledge is before being able to understand how the current thesis contributes to it, the second chapter provided a brief and concise overview of the current state of research on this topic specifically, as well as the topic of ancient Silk Road trade more broadly. The third chapter presented the case studies of Roman finds from within and *en route* to Han China. This chapter, owing to the limited length of the thesis and limited access to resources of the author, was not meant to provide a complete comprehensive overview of all such finds to exist, but rather to show the most informative and well-researched finds to date. The discussion chapter then sought to demonstrate how even this limited collection of finds could inform our broader knowledge of the eastern part of the ancient Silk Road network and the trade contacts that allowed Roman finds to travel all this distance to the other global superpower at the time.

What kind of objects were exchanged between Han China and the Roman Empire?

The list of objects that were supposedly traded from the Roman Empire to Han China as mentioned in the ancient historical sources is extensive, and includes many types not included in this thesis. Such items as the 'fighting cocks', 'kingfisher feathers', or 'night-shining pearls' are unlikely to ever be found in archaeological contexts, due to their easily degradable nature or the ambiguity of their description. For others, such as the gems and intaglios, metal ware other than gold, and possible human remains, the available archaeological sources were simply too few to be able to devote a case study to them. It should not be assumed, however, that the case studies of glass, coins, and cloth presented here represent the most abundant or important trade items on this network. The choice reflects the available data and level of preservation first and foremost. Nor can it be ruled out that other types of material not mentioned in the ancient written sources were traded as well. Nevertheless, some tentative conclusions can be made based on the knowledge that these items were some of the ones that people along the ancient Silk Road network were willing to pay for, to the extent that they were able to reach some of the farthest corners of the network from the Roman Empire.

To what extent did objects travel between Han China and the Roman Empire?

While it remains almost impossible to say with certainty to what extent trade ware from the Roman Empire reached Han China, owing to a lack of known finds from deeper within the country, some indicators allow us to carefully surmise that it must not have been an abundant amount. The knowledge of Roman products and people would likely have been more accurate had Roman traders been a regular presence in Chinese ports, yet the fact that the recorded knowledge was at times both surprisingly detailed and accurate must indicate that interviews were conducted with people who had direct knowledge of the Roman Empire. The relative abundance of Roman and Han Chinese finds occurring together from areas surrounding Han China on both the maritime and land-based trade routes does indicate a high degree of intermediary trading taking place.

What patterns emerge from the archaeology of this exchange about wider connectivity?

Though the fragmented nature of the evidence presented here makes it dangerous to attempt to draw large scale conclusions, some patterns do emerge from the case studies when combined with the ancient written sources. From the ancient sources we can glean that mutual awareness remained low, with many fundamental misconceptions and little firm knowledge about the other.[46] Yet as mentioned above, some knowledge was surprisingly detailed, showing the dynamic nature of their contact, and of the items and knowledge passed along. Indeed, if a single most important pattern is to be identified based on the case studies presented above, it is of the truly dynamic nature of exchange during this period of trade between the Roman Empire and Han China, and indeed the entire network between them. The presence of these finds in and around Han China, and the combinations of stylistic elements and finds from different cultures that traded as part of the ancient Silk Road network show this.

[46] The misunderstanding about the production methods of sea silk and asbestos cloth mentioned earlier are but two of many examples.

How does that change our knowledge of the contact between Han China and the Roman Empire?

For some, the above may have shown that the trade was not as direct or extensive as they had once thought. Most modern Silk Roads studies, and by extension also more general historical overview works, tend to base themselves upon outdated material and sources, which have not been theoretically (re-)interpreted in more recent years. This, combined with a lack of new material or re-examinations of the known material has allowed exaggerations and misinterpretations to have a ripple-effect into the current academic and popular knowledge of the topic. It is easy to imagine how such errors enter, maintain, and further inform the academic discourse, especially when, like the 16-coin hoard from Shanxi, no originals or photographs survive and no further finds exist or are looked for. As Good also mentions, many of these finds were excavated in the 19th and early 20th centuries, and many of the tombs had been extensively looted (Good 1995, 962). This places limitations on the research that can be done, and the conclusions that can be made. In some ways this thesis has thus fallen into the same trap as many previous Silk Roads scholars, in that a lack of available material remains has forced somewhat of a reliance on the written record to draw insightful and valuable conclusions. While contributing to western scholarship in having placed the focal point on China, having cast a critical reflecting eye on the research so far done, and having brought together both archaeological remains and ancient written sources to inform a discussion about wider theoretical implications for global connectivity and exchange, where an absence of material remains occurs there must either be more excavation or, if this is not possible financially or politically (as was the case here), a reliance on written sources. In this latter case, the objective preference must be given to sources of a contemporary nature to the archaeological finds. We should count ourselves very lucky indeed to have such a rich and thorough record handed to us by various Chinese scholars, both on state commission and of an independent nature. Problems occur where such rich collections of contemporary written history erase our desire, indeed our need for corroboration by independently analysed

archaeological sources and bottom-up research. This, the present thesis has brought to light and worked to rectify.

What can we learn of the nature of the contact between Han China and the Roman Empire from the material remains of their exchange?

The nature of the trade between the Roman Empire and Han China is much more complex than the simple narrative that is often put forward in the margins of larger studies into Silk Road trade, and a better understanding of its complexity proves invaluable to understanding the nature of the ancient Silk Road network, and by extension our knowledge of human interaction and global connectivity in the past. Using the archaeological record, and working to expand the available, known, and studied archaeological material that relates to this topic in order to deepen the knowledge already provided by the extensive yet biased ancient written records is of great importance, as this is a so far understudied subject and therefore provides a prime opportunity to expand our knowledge. Thus, perhaps the most pressing lesson to be learned is that of the need for further research into this topic.

Further research

If there is one thing this thesis has made clear, it is that there is a need for further research into the material remains of this long-distance trade between the Roman Empire and Han China to substantiate conclusions that have so far been based almost solely on ancient written sources and outdated analyses.

A category of finds that is abundantly mentioned in the ancient texts and also seems to have a fairly solid archaeological basis, but which could not be incorporated into the present thesis, is gems and intaglios. Though often not at the forefront of works concerning the trade between the Roman Empire and Han China, some do appear to have been found at several of the sites mentioned in this thesis, with a remarkable level of preservation on some. As gems are also amply mentioned in the ancient written sources as products from *Da Qin*, this category provides one seemingly viable direction for further research. Further excavation is also likely to turn up further finds of this nature, and a re-examination of previously excavated finds appears highly necessary.

What is clear is that while many researchers appear to think there is an abundance of finds from the Mediterranean found in Han China, the primary sources are either not mentioned or in Chinese. It remains the case that the enthusiasm with which many western Silk Road scholars refer to the scale of trade between the Roman Empire and Han China does not match the widely available archaeological material at present, and is often based on continuous references to outdated and never re-evaluated sources.

6. Abstract

This paper provides a preliminary critical review of current academia as it regards contact between the Roman Empire and Han imperial China, during roughly the 3rd century B.C.E. until the 3rd century C.E., with the purpose of re-evaluating currently accepted facts on the basis of archaeological case studies. Archaeological case studies on the topics of Roman glass, coins, and cloth found in or *en route* to Han China were examined against a background of ancient written sources and modern academic writing on the topic of the ancient Silk Road network and contact between the Roman Empire and Han China.

The results show Roman glass items found together with locally produced glass from coastal sites in southeast China and the Xinjiang area. Quite a few metal pendants imitating Roman coins were found in sites along the coasts of Thailand and Vietnam, particularly the Isthmus of Khra. A genuine Roman coin used as a pendant in a similar fashion was also found in Pangkung Paruk on the island of Bali. Cloth from Xiongnu tombs displaying both Hellenic and Han Chinese style elements was also found in the Xinjiang area.

These finds shed light on the nature of interaction between the Roman Empire and Han China, and the objects that made the entire journey in all likelihood more often than people did. Most importantly, they contribute to the larger framework of exchange and interaction along the Silk Road network, and fill in some blanks in an often-neglected region of this topic. The need for further (re-)examination of such finds is evident.

Bibliography

Books and articles

Adshead, S.A.M., 1961. Dragon and Eagle: A Comparison of the Roman and Chinese Empires. *Journal of Southeast Asian History* 2(3), 11-22.

http://dx.doi.org/10.1017/S021778110000034X

Adshead, S.A.M., 2000. *China in World History.* London: Macmillan Press LTD.

Alcock, S.E. and R. Osborne (eds), 2012. *Classical Archaeology.* Malden (MA): Blackwell Publishing Ltd.

American Journal of Numismatics, and Bulletin of the American Numismatic andArchaeological Society, 1886. Roman Coins Found in China. *American Numismatic Society* 20(3), 60-62.

An, J., 1984. Early Chinese Glassware. *The Oriental Ceramic Society Translations* 12, 1-45. Translated by M. Henderson, 1987.

An, J., 2002. When Glass Was Treasured in China, in A.L. Juliano and J.A. Lerner (eds), *Nomads, Traders and Holy Men Along China's Silk Road.* Turnhout (BE): Brepols, 79-94.

Ball, W., 2016. *Rome in the East.* London & New York (NY): Routledge.

Benjamin, C., 2018. *Empires of Ancient Eurasia: The First Silk Roads Era, 100 BCE – 250 CE.* Cambridge: Cambridge University Press.

Borell, B., 2008. The Early Byzantine Lamp from Pong Tuk. *Journal of the Siam Society* 96, 1-26.

Borell, B., 2009. Han Period Glass Vessels from the Gulf of Tonking Region: Aspects of their Technology, in D. Ignatiadou and A. Antonaras (eds), *Annales du 18e Congrès de l'Association Internationale pour l'Histoire du Verre.* Thessaloniki, 491-496.

Borell, B., 2010. Trade and Glass Vessels Along the Maritime Silk Road, in B. Zorn and A. Hilgner (eds), *Glass Along the Silk Road from 200 BC to AD 1000*. Mainz: Verlag des Römisch-Germanischen Zentralmuseums, 127-142.

Borell, B., 2012. The Han Period Glass Dish from Lao Cai, Northern Vietnam. *Journal of Indo-Pacific Archaeology* 32 (2012), 70-77.

Borell, B., 2014. The Power of Images – Coin Portraits of Roman Emperors on Jewellery Pendants in Early Southeast Asia. *Zeitschrift für Archäologie Außereuropäischer Kulturen* 6, 7-43.

Borell, B., 2017. Gold Coins from Khlong Thom. *Journal of the Siam Society* 105, 151-177.

Borell, B., 2019. A Roman Gold Coin Found in Peninsular Thailand, in B. Pongpanich and S. Thinapong (eds), *Suvarnabhumi: The Golden Land*. Bangkok: GISTDA and BIA, 57-66.

Bueno, A., 2016. Roman Views of the Chinese in Antiquity. *Sino-Platonic Papers* 261, 1-21.

Bushell, S.W., 1886. Ancient Roman Coins from Shansi. *Journal of the Peking Oriental Society* 1(2), 17-28.

Calo, A., P. Bellwood, J. Lankton, A. Reinecke, R. Agung Bawono and B. Prasetyo, 2020. Trans-Asiatic exchange of glass, gold and bronze: analysis of finds from the late prehistoric Pangkung Paruk site, Bali. *Antiquity* 94 (373), 110–126.

https://doi.org/10.15184/aqy.2019.199

Capon, E. and W. MacQuitty, 1973. *Princes of Jade.* New York (NY): E.P. Dutton & Co. Inc.

Coedès, G., 1910. *Textes d'auters grecs et latins relatifs a L'Extreme Orient*. New York: Ares Publishers (1977 edition).

Crook, J., A. Lintott and E. Rawson (eds), 1994. *The Cambridge ancient history Vol. 9: The last age of the Roman Republic, 146-43 BC*. Cambridge: Cambridge University Press.

https://doi.org/10.1017/CHOL9780521256032

Edwards, R.A., 2009. Federalism and the Balance of Power China's Han and Tang Dynasties and the Roman Empire. *Pacific Economic Review* 14(1), 1–21.

https://doi.org/10.1111/j.1468-0106.2009.00430

Ferguson, J., 1978. China and Rome. *Aufstieg und Niedergang der Römischen Welt* 2(9), 581-603.

Gates, C., 2003. *Ancient Cities: The Archaeology of Urban Life in the Ancient Near East and Egypt, Greece, and Rome.* London: Routledge.

Good, I., 1995. On the question of silk in pre-Han Eurasia. *Antiquity* 69(266), 959-968.

https://doi.org/10.1017/S0003598X00082491

Good, I., 2002. The Archaeology of Early Silk. *Textile Society of America Symposium Proceedings* 518, 7-15.

Hansen, V., 2012. *The Silk Road: A New History.* New York (NY): Oxford University Press.

Hansen, V., 2015. *The Open Empire: A History of China to 1800*. New York (NY) & London: W.W. Norton & Company.

Hill, J.E., 2009. *Through the jade gate to Rome: a study of the silk routes during the Later Han Dynasty 1st to 2nd centuries CE: an annotated translation of the chronicle on the 'Western Regions' in the Hou Hanshu.* Charleston (SC): BookSurge Publishing.

Hirth, F., 1885. *China and the Roman Orient: Researches into their Ancient and Mediaeval Relations as Represented in Old Chinese Records*. Shanghai & Hong Kong: Paragon Book Reprint Corporation.

Hoppál, K., 2015. Contextualizing the comparative perceptions of Rome and China through written sources and archaeological data. *Dissertationes Archaeologicae* 3(3), 285-301.

https://doi.org/10.17204/dissarch.2015.285

Huang, S., Z. Xiong and C. Zhao, 2014. On the greenish-blue glazed pottery jug unearthed from the Eastern Han tombs at Liaowei in Hepu County, Guangxi. *Chinese Archaeology* 14(2014), 182-188.

https://doi.org/10.1515/char-2014-0020

Hui, V.T., 2005. *War and State Formation in Ancient China and Early Modern Europe.* New York (NY): Cambridge University Press.

Juliano, A. and J. Lerner (eds), 2002. *Nomads, Traders and Holy Men Along China's Silk Road.* Turnhout: Brepols Publishers.

Karpova, E., V. Vasiliev, V. Mamatyuk, N. Polosmak, and L. Kundo, 2016. Xiongnu burial complex: A study of ancient textiles from the 22nd Noin-Ula barrow (Mongolia, first century AD). *Journal of Archaeological Science* 70(2016), 15-22.

Leslie, D.D. and K.H.J. Gardiner, 1996. *The Roman Empire in Chinese Sources*. Rome: Bardi.

Li, Q., 2015. Roman Coins Discovered in China and their Research. *Eirene Studia Graeca et Latina* 1(2), 279–299.

Lieberman, S., 1953. *Contact between Rome and China.* ProQuest Dissertations Publishing.

Liu, X., 2010. *The Silk Road in world history.* Oxford: Oxford University Press.

Malleret, L., 1962. *L'arche´ologie du delta du Me´kong. III: La culture du Fou-Nan.* Paris: E´cole Française d'Extrême-Orient.

Mair, V.H., (ed), 2010. *Secrets of the Silk Road: An Exhibition of Discoveries from the Xinjiang Uyghur Autonomous Region, China.* Santa Ana (CA): Bowers Museum.

McLaughlin, R., 2010. *Rome and the Distant East: trade routes to the Ancient Lands of Arabia, India and China.* London: Continuum.

McLaughlin, R., 2016. *The Roman Empire and the Silk Routes.* Barnsley (YSS): Pen and Sword History.

Mutschler, F. and A. Mittag, 2008. *Conceiving the Empire: China and Rome Compared.* Oxford (OXF): Oxford University Press.

Ostrovsky, M., 2007. *X = Arctg X: The Hyperbola of the World Order.* Lenham (MD): University Press of America.

Picard, C., 1955. La Lampe alexandrine de P'ong Tuk (Siam). *Artibus Asiae* 18(2), 137-149.

Pulleybank, E.G., 1999. Review: The Roman Empire as Known to Han China. *Journal of the American Oriental Society* 119(1), 71-79.

Raschke, M.G.., 1978. New Studies in Roman Commerce with the East. *Aufstieg und Niedergang der Römischen Welt* 2(9), 604-1378.

Roberts, J.A.G., 2003. The Fall of the Roman and Chinese Empires Compared, in J.A.G. Roberts (ed), *The Complete History of China.* Stroud: Sutton Publishing, 63-64.

Scarre, C. (ed), 2013. *The Human Past.* London (UK): Thames & Hudson Ltd.

Scheidel, W. (ed), 2009. *Rome and China: Comparative Perspectives on Ancient World Empires.* Oxford (UK): Oxford University Press.

Smagur, E. and K. Hanus, 2012. *Kattigara of Claudius Ptolemy and Óc Eo: the issue of trade between the Roman Empire and Funan.* Cracow: Institute of Archaeology, Jagiellonian University.

Stein, M.A., 1907. *Ancient Khotan. Detailed Report of Archaeological Explorations in Chinese Turkestan.* Oxford: Clarendon Press/Oxford University Press.

Taagepera, R., 1979. Size and Duration of Empires: Growth-Decline Curves, 600 B.C. to 600 A.D. *Social Science History* 3 (3/4), 115–138. https://doi.org/10.1017/s014555320002294x

Tchernia, A., 1995. Moussons et monnaies: les voies du commerce entre le monde gréco-romain et l'Inde. *Annales* 50(5), 991-1009.

Tchernia, A., 2011. *Les Romains et le commerce.* Naples: Publications du Centre Jean Bérard.

Thorley, J., 1971. The Silk Trade between China and the Roman Empire at Its Height, 'Circa' A. D. 90-130. *Greece & Rome* 18(1), 71-80.

Wang, G., 1959. The Nanhai Trade. A Study of the Early History of Chinese Trade in the South China Sea. *Journal of the Malaysian Branch of the Royal Asiatic Society* 31(2), 1–135.

Warneck, E.S., 2012. Representations of Tocharians in Buddhist Paintings. *Sino-Platonic Papers* 228, 156-201.

Wen, R., Z. Zhao, J. Ma and J. Wang, 2016. Scientific Analysis of the Glass Beads Unearthed From Tomb M1 at the Xigou Site in Barköl Kazakh Autonomous County, Hami Prefecture, Xinjiang Uygur Autonomous Region. *Chinese Cultural Relics* 3(4), 371-377.

Xia, N., 1959. The Eastern Roman Solidus Unearthed in Dizhangwan Village in Xianyang (咸阳底张湾出土的东罗马金币). *Archaeology* 25, 67–73. (In Chinese)

Xiong, Z., 2014. The Hepu Han tombs and the maritime Silk Road of the Han Dynasty. *Antiquity* 88 (2014): 1229–1243.

https://doi.org/10.1017/S0003598X0011542X\

Yetts, W.P., 1926. Discoveries of the Kozlóv Expedition. *The Burlington Magazine for Connoisseurs* 48(277), 168-185.

Young, G.K., 2001. *Rome's Eastern Trade: International Commerce and Imperial Policy, 31 BC – AD 305.* New York (NY) and London: Routledge.

Yule, H., 1915. *Cathay and the Way Thither. Being a Collection of Medieval Notices of China.* London: Hakluyt Society.

Zhang, C., 2017. Summary of Comparative Study of China in Qin-Han Dynasty and Roman Empire. *Tangdu Journal* 33(5), 109-113. (In Chinese)

Żuchowska, M., 2015. "Roman Textiles" in the *Hou Han Shu.* A 5th Century Chinese Vision *Versus* Roman Reality. *Anabis Studia Classica et Orientalia* 6(2015), 216-309.

Online sources

https://chinese.gratis/tools/chinesecalligraphy/, accessed on 25-06-2020.

Dirlik, A., 2015. *Born in Translation: "China" in the Making of "Zhongguo".* Boudary2, 1. http://www.boundary2.org/2015/07/born-in-translation-china-in-the-making-of-zhongguo/, accessed on 23-02-2020.

Hill, J.E., 2004. *The Peoples of the West from the Weilue 魏略 by Yu Huan 魚豢: A Third Century Chinese Account Composed between 239 and 265 CE Quoted in* zhuan *30 of the* Sanguozhi *Published 429 CE Draft English Translation.* https://depts.washington.edu/silkroad/texts/weilue/weilue.html, accessed 30-04-2020.

https://www.rmo.nl/tentoonstellingen/tijdelijke-tentoonstellingen/romeinen-langs-de-rijn/, accessed on 17-06-2020.

Scheidel, W. (ed), 2005-2014. *The Stanford Ancient Chinese and Mediterranean Empires Comparative History Project (ACME).* http://web.stanford.edu/~scheidel/acme.htm, accessed on 30-04-2020.

Ancient sources

Anonymous, *Periplus Maris Erythraei*. Translated by L. Casson. Princeton, NJ: Princeton University Press, 1989.

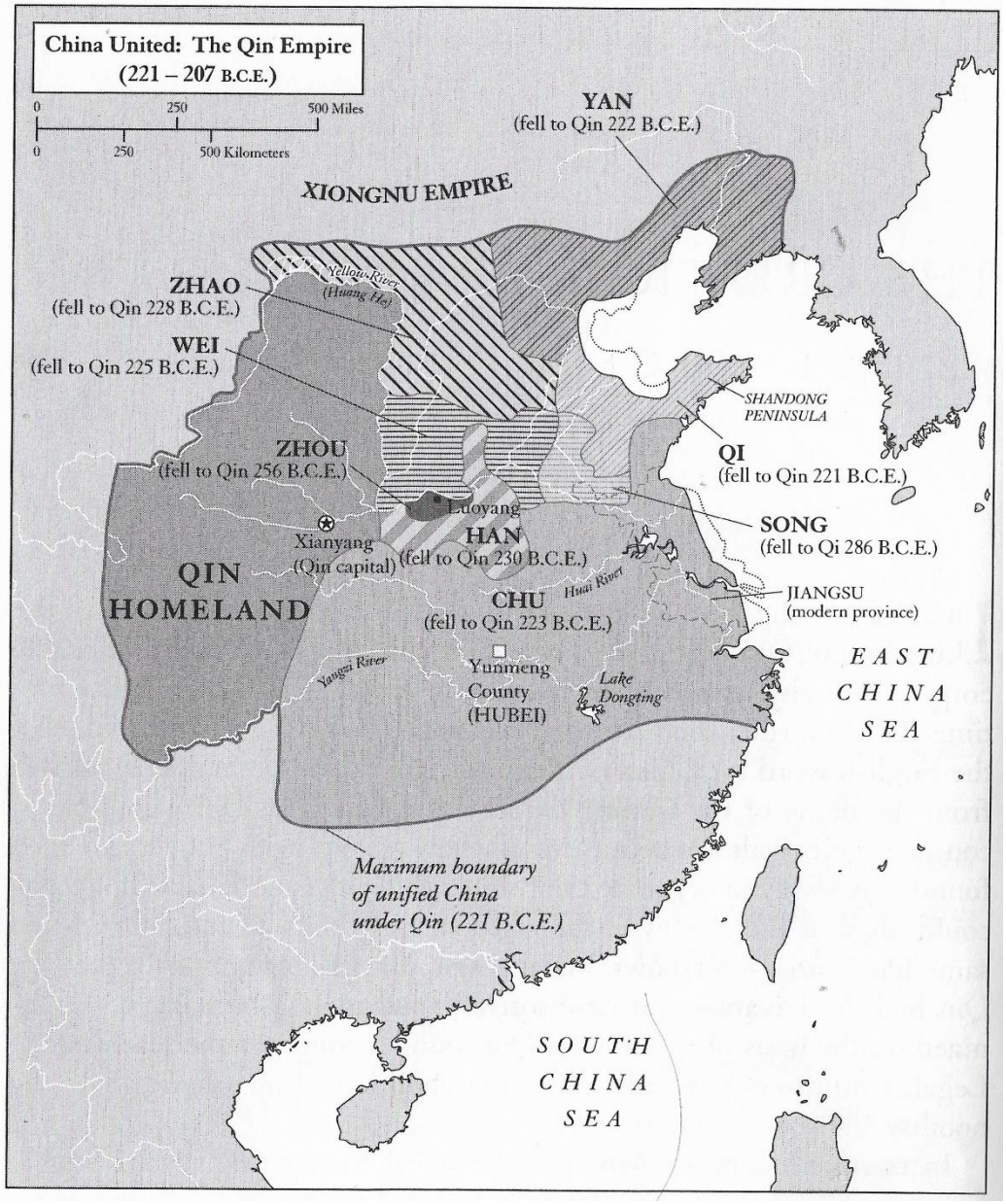
Gaius Plinius Caecilius Secundus maior, *Naturalis Historia*. Translated by H. Rackham. Cambridge, MA: Harvard University Press (Loeb Classical Library), 1938.

Pan Ku, *Hanshu.* Translated by H.H. Dubs. Baltimore, MD: Waverly Press, Inc., 1938-1955.

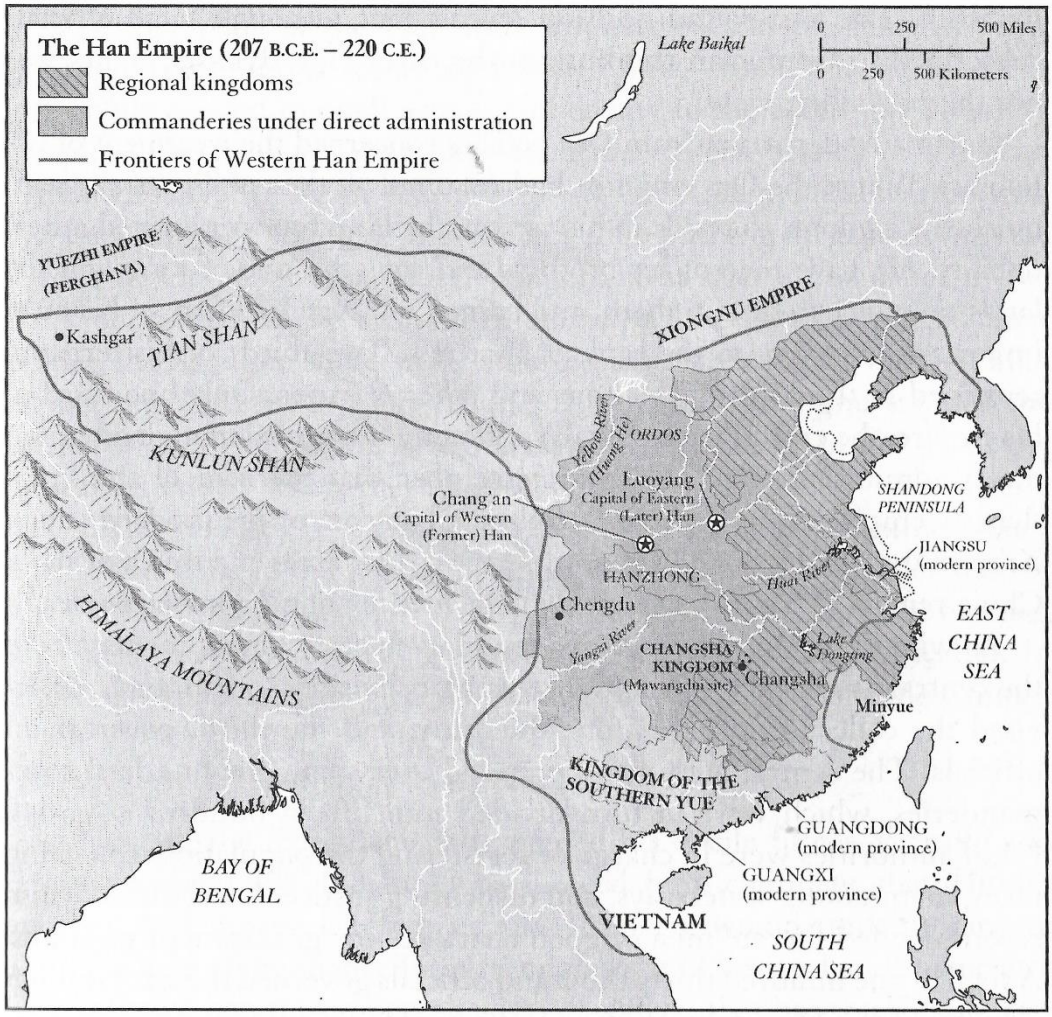
List of figures and appendices

Figures

Appendix A: Territorial maps of Chinese dynasties

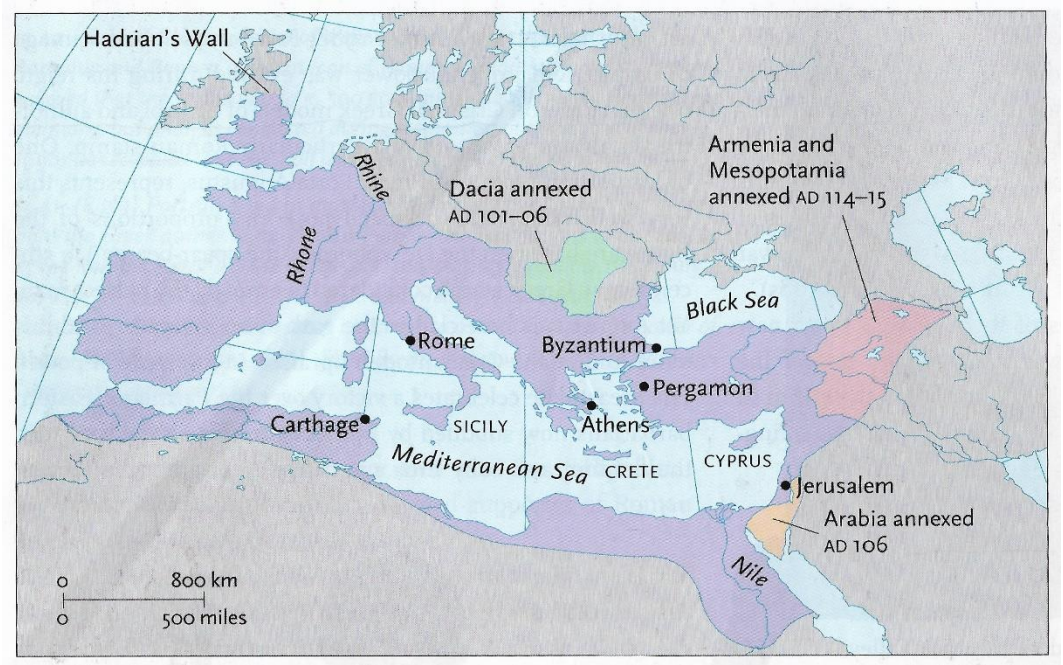


The extent of the Qin Empire at its largest (Hansen 2015, 92).



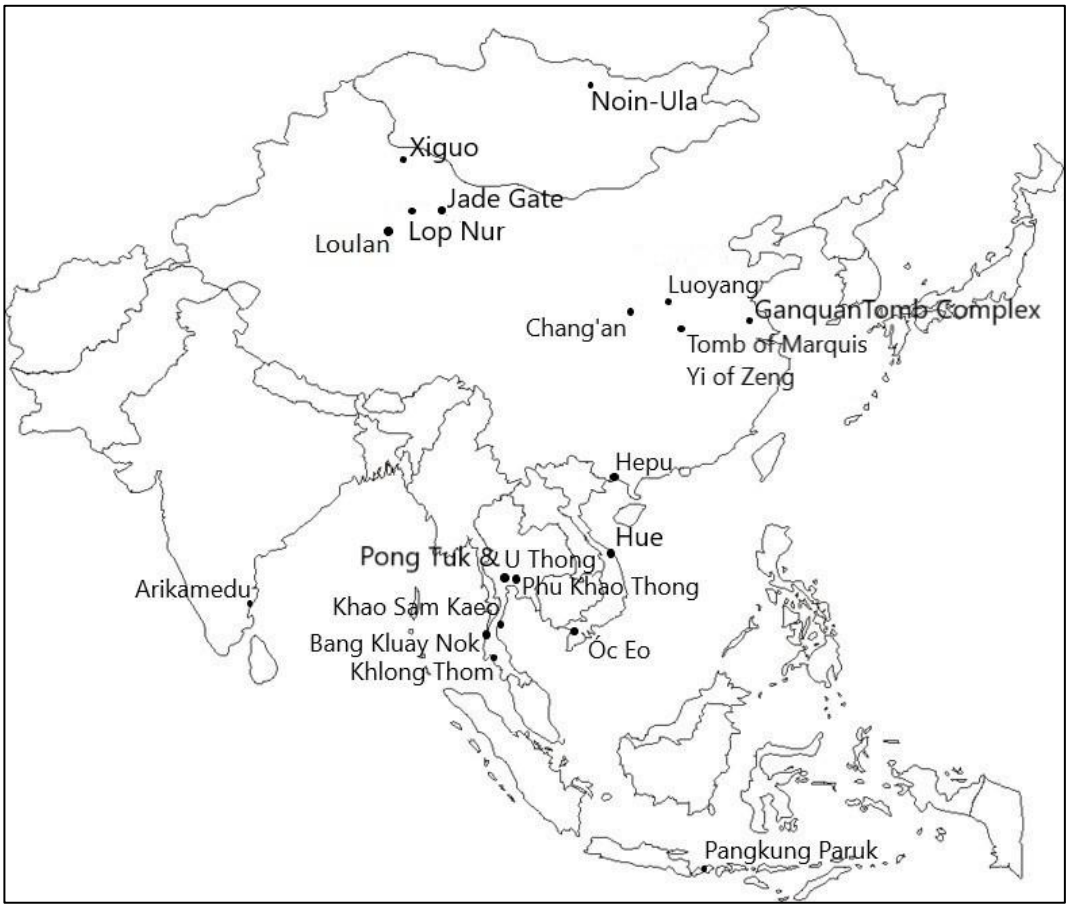
The extent of the Han Empire at its largest (Hansen 2015, 107).

Appendix B: Territorial map of Roman Empire



The Roman Empire at its largest extent, early 1st millennium C.E. (Scarre 2013, 506).

Appendix C: Map of Asian sites referred to in the text



Approximate locations of the sites named in the text (image by the author).