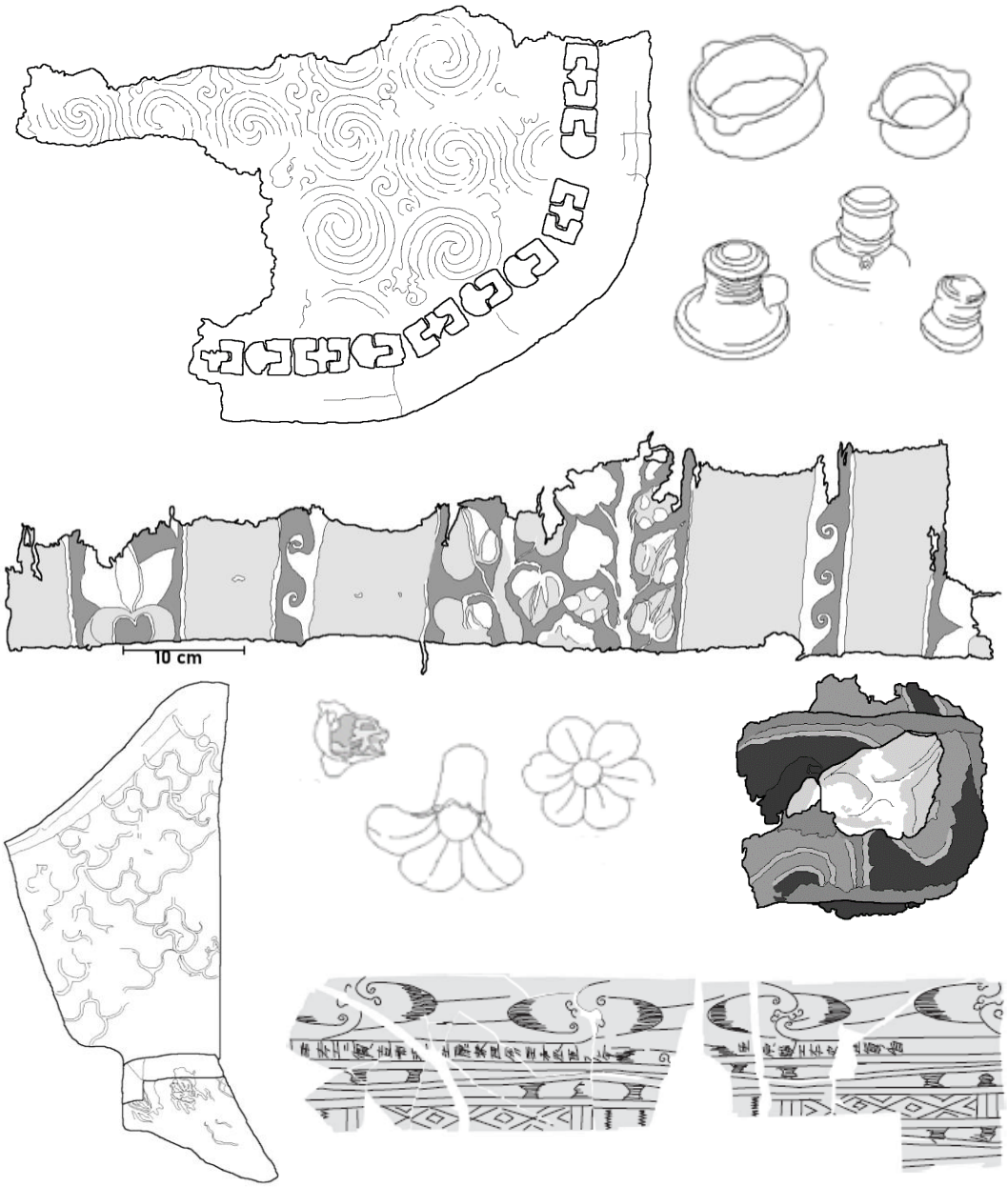
The Xiongnu and their connections beyond the Steppes

Discovering signs of complex connectivity within Xiongnu terrace tombs

N. J. Schuurman

01/07/2020



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Final version

Figure 1 (cover page): From left to right, drawing of the felt carpet form Noyon Uul (after Karpova *et al.* 2016, 20), drawings of iron bushings and axle caps from Gol Mod 2 (after Park *et al.* 2018, 1538), drawing of the tapestry form Noyon Uul (after Karpova *et al.* 2016, 20), drawing from the leggings & boot from Noyon Uul (after Karpova *et al.* 2016, 19), drawing of bronze ornaments from Gol Mod 2 (after Park *et al.* 2017, 791), drawing of a belt fragment from Noyon Uul (after Karpova *et al.* 2016, 21) and a reconstruction of the lacquer box from the Tsaraam Valley by Otani (2019) (Otani 2019, 2).

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CHAPTER 1: INTRODUCTION

The Xiongnu have long been regarded as barbaric horsemen that roamed the eastern Eurasian steppes, having little to no impact on world history. Even after they organised themselves to the point of being an empire (Miller and Brosseder 2017, 471), they are usually regarded as the unsophisticated neighbour. A neighbour that adopted their more complex elements from Chinese Qin and Han dynasties (Park *et al.* 2017, 1535; Psarras 2003, 56; Schmidt 2012, 103).

Such ideas about the Xiongnu are quite dated and in need of reconsideration, as these people seem to have had a structured and diverse culture of their own, just like any other group or culture (Miller and Brosseder 2017, 471; Schmidt 2012, 97). This diversity should not be regarded as such a strange occurrence, considering their nomadic lifestyle and the mobility that accompanies it. This mobility has most likely allowed them to come into contact with lots of different cultures, not only the Chinese. Furthermore, contact with the Chinese dynasties might be less of a one-way process as previously believed, as recent publications of Xiongnu burial mounds (kurgans) and their contents show that more complex processes were likely taking place on the steppes (Karpova *et al.* 2016, 22; Park *et al.* 2018, 1544-1545).

Using such publications, this thesis will present a focused study on various aspects regarding this wider role of Xiongnu culture and connectivity on the steppes. The theme of connectivity will not only be explored through the relations with the Chinese dynasties, but more foreign cultures that appeared across the continent will also be featured where possible. As such, the following main questions will form the basis of my more focused research in this thesis: To which degree was trade present between the Xiongnu and the cultures of the rest of the world? And more so, how is this reflected within their own culture? Was China such a dominant cultural force on the steppes as previously believed? Or did the Xiongnu manage to stand their own between the massive empires of the Romans to the west and the Chinese to the east? In order to approach these questions, this thesis will focus on a selection of case studies to look at various aspects pertaining to this wider role of Xiongnu culture and connectivity.

However, this thesis is faced with a number of limitations. Firstly, there is not enough time available in the bachelors to analyse all the contents of all the excavated burial mounds of the Xiongnu. And secondly, it is too difficult to comprise all that data in the size of a

bachelor's thesis. This calls for some nuances within the research questions, and for a smaller research frame. That is why this thesis will discuss these topics using various case studies in order to illustrate trade and its impact on the Xiongnu material culture. These case studies are, however, reliant on published articles of Xiongnu burial mounds and their contents, as the actual materials are not directly available for study.

These case studies each focus on different burial mounds from three different sites, in order to obtain a broader picture on Xiongnu despite the beforementioned limitations. The case studies all discuss burial mounds since, as the Xiongnu are a nomadic people, these are the largest and best-preserved remnants of the Xiongnu. Aside from three different mounds, a different group of materials will be discussed per case study, in order to not only illustrate that connectivity is wide spread within the Xiongnu polity, but also to demonstrate that it does not concern one specific group of objects.

However, for us to better understand the Xiongnu and their role within world history, we should first take a closer look at the phenomenon of globalization itself. Unfortunately, globalization is not something that is easy to define. There is no clear consensus on it within the academic community (Hodos 2017, 4), and there will likely never be one. Still, a term as complex as globalization can be helpful when discussing and describing interactions between cultures. But, before we get into that, we need to dissect 'globalization' itself. This is where chapter two of this thesis comes in.

Though first this introduction will provide short overviews of the sites used for the case studies and Xiongnu mounds in general, as well as a brief outline of the history of the Xiongnu. In the following chapter the beforementioned Globalization theory and how it can tie in nicely with this type of research (and Xiongnu culture in specific) will be discussed. Then chapter three will comprise of the three case studies, each discussing a different mound and a different group of materials. In chapter four, the discussion, the findings of the case studies will be discussed in combination with the theory featured in chapter two. Lastly, the final chapter will contain the conclusion of this thesis, which will be followed by an abstract.

Case study overview

As mentioned, the case studies cover three different burial mounds from three different sites: Noyon Uul and Gol Mod 2, located in Mongolia, and the Tsaraam Valley, located just over the border in Russia (Miller *et al.* 2006, 1; Miniaev and Sakharovskaia 2008, 71;

Polosmak *et al.* 2013, 103). All three of these sites are large cemeteries that contain a mix of various mound types and sizes (Brosseder 2009, 250; Shan 2012, 149). Such cemeteries are commonly found on slopes, far from a main river and usually organized in clusters of burials (Brosseder 2009, 249-250). Noyon Uul cemetery is known to be the biggest, spanning 1.750 ha., followed by both the Gol Mod cemeteries (Brosseder 2009, 250).

The burials found at such cemeteries can be categorized in multiple groups, but the case studies will all comprise of mounds belonging to the same group; the terrace tombs (Brosseder 2009, 249-250; Shan 2012, 149). Terrace tombs can be classified as belonging to the 'Early Phase' of burial types, which can be dated to the late 3rd century BCE to the mid-1st century CE (Shan 2012, 153). This time period corresponds nicely with the Xiongnu Empire, and it is often assumed that such tombs belong to the Xiongnu 'elite' (Brosseder 2009, 248; Shan 2012, 153). The mounds of terrace tombs are usually quite low and consist of either stones or earth and usually have a square design (Brosseder 2009, 258; Shan 2012, 153). Another noticeable feature of such mounds is the dromos that is oriented to the south and the low stone wall surrounding the whole structure (Shan 2012, 153). This dromos, however, does not seem to be strictly functional, as it usually does not reach the bottom of the burial chamber (Brosseder 2009, 257).

Furthermore, most of these terrace tombs are accompanied by satellite burials, as is also the case with mound 1 at Gol Mod 2 and mound 7 at the Tsaraam Valley (Brosseder 2009, 247; 250; Miller *et al.* 2006, 2; Miniaev and Sakharovskaia 2008, 72; Shan 2012, 153).

Figure 2: Map showing the locations of the sites Noyon Uul, Gol Mod 2, and the Tsaraam valley. After Shan (2012) and Brosseder (2009).

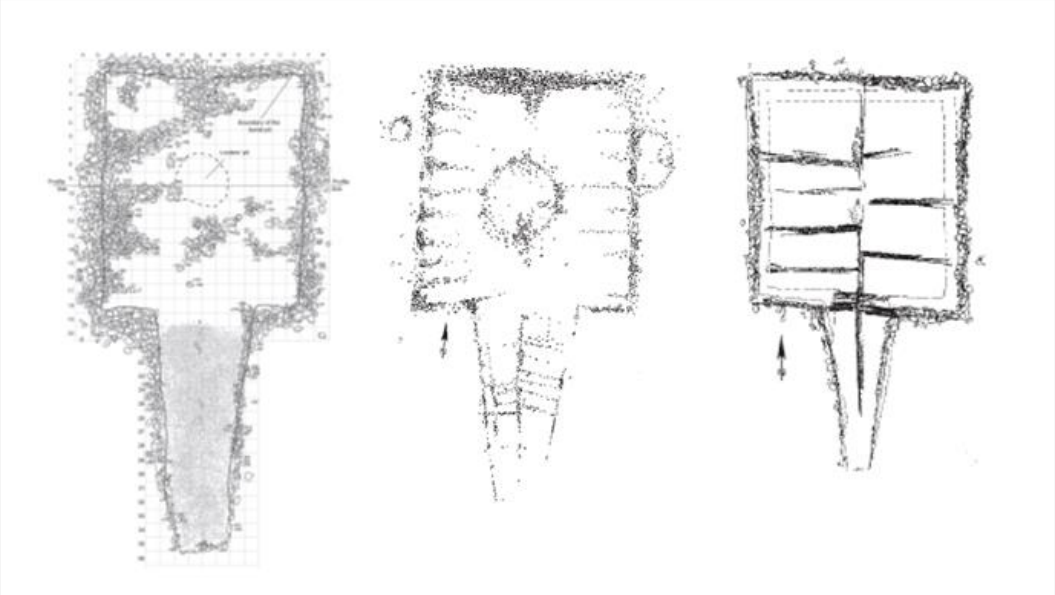

Figure 3: Drawings of the burial mounds used in this case study, from left to right: mound 22 of Noyon Uul (Polosmak *el al.* 2013, 105), mound 1 of Gol Mod 2 (Miller *et al.* 2006, 3) and mound 7 of the Tsaraam Valley (Miniaev & Sakharovskaia 2008, 74).

Below the surface, the pit is structured like an inverted pyramid, usually with steps, and can have varying depths between 8 to 18 metres (Brosseder 2009, 257; 261). At the bottom resides the burial chamber which usually consists of an outer and inner chamber in which the coffin is placed (Brosserder 2009, 263). This chamber is usually covered with a tight layer of stone, and often multiple layers of stone filling occur in the burial pit (Brosseder 2009, 257; 261). In between these stone layers are layers that can consist of pinecones, needles, brush and branches, logs and/or earth, which can contain animal sacrifices on the northern end (Brosseder 2009, 262-263). Sometimes there even seems to be a layer that has been purposefully set on fire before filling the pit completely (Brosseder 2009, 263).

Terrace tombs can, in turn, also be categorized into two groups based on their grave goods (Brosseder 2009, 263). The three terrace tombs featured in the case studies belong to group 1, which is mostly identified by the presence of a Chinese chariot within the pit (Brosseder 2009, 263). Another interesting feature of such tombs is the fact that most (or all) of the grave goods have been wrapped in textile (Brosseder 2009, 263). Furthermore, the coffin and the inner chamber can be decorated with silk or felt cloth (Shan 2012, 153). Lastly, among the usually large amount of grave goods such pots, arrowheads, horse gear, swords and ornamental goods, there are Chinese bronze mirror fragments present (Brosseder 2009, Shan 2012, 153). These mirror are fragmented on purpose and also often incomplete (Brosseder 2009, 262).

Brief historical overview of the Xiongnu

The Xiongnu roamed the Eurasian steppes form the 3rd century BCE to the 2nd century CE (Brosseder 2016, 1). In its largest form, the empire spanned from the Ordos to lake Baikal and from Manchuria to eastern Kazakhstan, but the Xiongnu heartland was mostly situated in northern central Mongolia and the southern region of Siberia (Brosseder 2016,1; Murl 2016, 71; Honeychurch 2014, 301). Aside from archaeological data that has been published on the Xiongnu, other useful sources on their empire are contemporary written sources (Brosseder 2016, 1). Even though the Xiongnu did not use a writing system themselves, their neighbours, the Qin and the Han dynasties, did document a lot (Psarras 2003, 60; Schmidt 2012, 2). Although these Chinese sources focus mostly on the history and geopolitics of their respective dynasties, there is still useful information to be found about the Xiongnu, since the Xiongnu Empire did have a significant influence on the developments within the Chinese empires (Brosseder 2016, 1).

The name 'Xiongnu' was mostly used by Chinese court scholars who recorded the interactions between both empires (Brosseder 2016, 1), but the term does not accurately describe who the Xiongnu are as a people (Brosseder 2016, 1; Honeychurch 2014, 301). The term rather describes the organisational and political unit of the Xiongnu more so than a people group that shares the same language and ethnic background (Brosseder 2016, 1; Honeychurch 2014, 301). The Xiongnu empire rather consisted of a variety of tribes that roamed the steppes and formed a political confederation (Brosseder 2016, 1; Schmidt 2012, 94). This also causes a lot of variety within Xiongnu material culture, which not only differs from era to era, but also from site to site (Psarras 2003, 101). This does not mean however, that the people that make up the Xiongnu Empire have nothing in common at all. As a whole, Xiongnu material culture is quite distinct from the Chinese Han dynasty, and also contains features that are different from material culture found with the peoples to the north of China, although these differences are more subtle (Psarras 2003, 101). The origin of the Xiongnu peoples is therefore also hard to determine (Brosseder 2016, 1; Schmidt 2012, 2).

The organisation of the nomadic empire reflects the organisation of the steppe polities before unification, albeit on a much larger scale (Honeychurch 2014, 303). The Xiongnu Empire was ruled by the elite that belonged one of the few royal lineages, with on top the supreme leader, the *'Shanyu'* or *'Chanyu'* (Brosseder 2016, 2; Honeychurch 2014, 301). Shanyu Modu (also spelled 'Modun' or 'Maodun') managed to conquer a lot of territory,

which marks the beginning of the substantial reach of the Xiongnu empire (Brosseder 2016, 2; Honeychurch 2014, 301; Psarras 2003, 74).

Although Chinese sources downplay the capabilities of the Xiongnu empire and so claimed on multiple occasions that the Xiongnu surrendered to them in defeat, this is all rather unlikely (Psarras 2003, 60). Multiple treaties have been established between the Xiongnu and the Chinese dynasties, which appear often in Chinese records framed as Xiongnu surrender (Psarras 2003, 58). Though the Chinese policy of *Heqin*, can barely be considered a bilateral treaty, as it was more a policy of appeasement, resulting in the Xiongnu receiving goods without much in exchange (and raids along the border did not seem to diminish much either) (Psarras 2003, 134).

The military might of the nomads was quite considerable, especially their cavalry (Psarras 2003, 61.) Despite the run ins with the Chinese empire(s), the Xiongnu people did seem to actively maintain their own cultural identity whilst also incorporating Chinese objects and design (Psarras 2003, 65).

CHAPTER 2: GLOBALIZATION THEORY AND THE STEPPES

To some people, globalization seems a strictly modern process, since the world has never been more connected than it is right now (Hodos 2017, 3; Jennings 2017, 12). Though it all depends on the definition you decide to give it. After all, does globalization necessarily need to concern the entire world? Or are there smaller scale connectivities that fall within 'globalization' even though they are not entirely global? To start off this discussion, let us take a look which features are commonly associated with globalization.

In a chapter by Justin Jennings globalization it is defined as "complex connectivity, a condition created by a dense network of intense interactions and interdependencies between disparate people brought together through the long-distance flow of goods, ideas and individuals" (Jennings 2017, 13). Though there are many different definitions, globalization seems to always describe complex processes of connectivity of some sort (Hodos 2017, 3; Knappett 2017, 29; Robertson 2017, 54). Complex connectivity, in turn, is usually described as involving intense interactions between different groups, creating dense networks between different regions, though its most interesting feature is its capacity to trigger social change (Knappett 2017, 29).

The social change that occurs varies every time, since there are millions of ways people and their cultures react to changes (Hodos 2017,4). This causes the changes to appear uneven to each other in scope, pace, and impact, amongst many other things (Hodos 2017, 4). Still, one can argue that the flows of people, products and ideas always bring a similar set of basic trends to the surface (Jennings 2017, 14). Such as the intensifying and broadening of (global) connections, the development of shared practises and values, but also a growing awareness of cultural differences (Feinmann 2017, 43; Hodos 2017, 5). The following eight overarching traits are identified by scholars in light of modern globalization, but they may be useful when attempting to identify past globalizations as well (Jennings 2017, 14). These traits are: Time-space compression, deterritorialization, standardization, unevenness, homogenization, cultural heterogeneity, re-embedding of local culture, and vulnerability (Jennings 2017, 14-15).

Time-space compression is a feature that pops up often when you take a dive into globalization theory. It describes the phenomenon that seems to shrink one's experience of time and space, due to the acceleration of long-distance economic, political, and social processes (Jennings 2017, 14). This definitely holds true when you look at the small world

the internet has created for us, but it also occurred in the past. For example, with the spread of new technologies or with the extension of a recording system (Jennings 2017, 14). Time-space compression does not always initiate positive effects. When a certain region or city has a bad harvest, or is at war, its influence can be felt in far-away places when the time and space is 'compressed' (Jennings 2017, 14).

Deterritorialization is a process that is somewhat linked with time-space compression, but its origin lies more with foreign influences rather than intensified long-distance connections (Jennings 2017, 14). Deterritorialization occurs when a place, usually a city, seems only connected to its surrounding region more due to its geographical location, rather than cultural similarities (Jennings 2017, 14). Residents of cosmopolitanized cities often seem to have more in common with people from other such cities far away, than with their ancestors or with people that live in the nearby countryside (Jennings 2017, 14).

The third trait is a more straightforward one: Standardization. This describes the development of (more) universal standards and ideas, which appears in order to simplify transactions and communications between different groups, and to appeal to a larger market (Jennings 2017, 14). This could be universal standards of measurements, pidgin languages or even the adoption of motives into local assemblages (Jennings 2017, 15).

The trait of unevenness relates to the differences in power between regions (Jennings 2017, 15). The cause of such imbalances is complex, but we can definitely observe, in the past, but also in our time, that some cities, regions or countries have a bigger influence on their world than other places (Jennings 2017, 15).

Homogenization sounds quite simple, but it is actually annoyingly complex. The basic idea is that intensive connections between places comes with an increase in shared, or widely similar, practises, products, and views (Jennings 2017, 15). Another term for this phenomenon is 'hybridization', which is defined by Tamar Hodos as "the ways in which forms become separated from existing practises and recombine with new forms in new practises" (Hodos 2017, 5). To many, this may seem as a rather obvious trait of globalization, or any type of complex connectivity for that matter, but it is actually more nuanced. First of all, it is quite bold to assume that cultures are completely homogenous before they have had any contact with others, which hybridization sometimes seems to imply a little (Hodos 2017, 5). Furthermore, we should not forget that there is some local, or even individual, agency involved as well (Robertson 2017, 55). There will always be some variations present within a group that is perceived as reasonably homogenous, all the while individuals can still identify themselves, and be identified, as belonging to the defined culture (Hodos 2017,

6). Also, with hybridization we should not view practises or products as being recombined in a clear fifty-fifty kind of way, since new influences or products will usually be subjected to adaptation, translation, mutation and/ or interpretation (Jennings 2017, 15). There is also process of indigenization, where the local culture adopts foreign features or products, but adapts them in order to match their own practises, beliefs, or resources better (Jennings 2017, 15). This process is also commonly described with the modern buzzword 'glocalization': The local adaptation of global practises and products (Hodos 2017, 6). Though this process may seem homogenizing, it actually causes more variation between cultures at the same time (Jennings 2017, 6).

And that leads us to our sixth trait: Cultural heterogeneity. Despite homogenization being a defining feature of globalization, cultural variation actually increases during periods of intensified connectivity (Jennings 2017, 15). This is because the homogenizing process causes for different cultural adaptations, or rather, translations, to appear (Jennings 2017, 15). And all these new formed (sub)cultures are far from static as well, as they keep changing and evolving as new ideas and products are added or fall out of favour (Jennings 2017, 15). So, it seems that cultural convergence cannot exist without cultural differentialism, and that there is almost a kind of balance between the shared and the varied practises (Hodos 2017, 5).

Though, this is not a strictly unconscious process, which brings us to the second to last trait of globalization, as proposed by Jennings: The re-embedding of local culture. People are not just passive gears of the globalization processes; they are all individuals with their own agency. As briefly mentioned before, globalization processes bring forth a growing awareness of cultural differences (Hodos 2017, 5). Often, but not necessarily, during periods where communities experience negative effects of quick cultural changes caused by increased flows of ideas, objects and people, people will attempt to seek out and re-establish local practises and traditions (Jennings 2017, 15). It is a conscious push against an over-powering influence. These re-established traditions, albeit a reinvented or recast version, are tricky to recognize in an archaeological context (Jennings 2017, 15). Because it is hard to tell by material culture alone if influences from the outside were rejected or just hardly present at all (Jennings 2017, 15).

The final trait is called vulnerability, which describes the disadvantage of strongly connected networks (Jennings 2017, 16). Big events on one node of the network can have negative effects for all the regions involved, due to an increased interdependence which cannot be easily disbanded if need be (Jennings 2017, 16). When important nodes falter, be it due

famine, conflict or disaster of any kind, a large globalized network will likely split up into smaller, more workable networks.

All these traits can occur, and they often do, everywhere where there is a form of connection between communities. But the combination of all of these eight traits really sets apart 'casual' non-local connections and complex connectivity, like globalization (Jennings 2017, 16).

One thing might have caught your attention about these eight traits: There is no feature that marks 'globalization' as a process that is purely global. So, if globalization does not envelop the entire globe, why even call it globalization? It almost has a more linguistic reason rather than sociological one, since the word feels more dynamic than a proposed substitute 'Networkization', which feels more static, and has not really caught on (Knappett 2017, 30). Globalization seems to convey a more fluid form of cultural connections, as it allows us to see past civilizational histories that emphasize boundaries and boundedness (Knappett 2017, 29). It expresses the notion that not everything necessarily *needs* to be connected entirely, but that everything *could* be connected (Knappett 2017, 29). So, it seems to also challenge the idea that there is a main core of influence that influences peripheries (Knappett 2017, 29). Tamar Hodos puts it best: It describes wider inter-regional changes within a conceptual 'world' (Hodos 2017, 4).

We must not forget that these features, although applicable to past globalizations (Jennings 2017, 14), are based on modern globalization observations. How will we identify these features archaeologically? There are many issues that come up, especially when there are no historical records to accompany the archaeological material (Jennings 2017, 14).

First off, a lot of trade must have comprised of perishable materials which will not appear in the archaeological record, and even if you would happen to have historical sources that record the flow of trade, there will still be stuff flowing through informal channels (Jennings 2017, 14).

Secondly, modern techniques such as DNA- and isotope analysis, although useful, will only allow us to take a small peek at human movement (or movement of flora and fauna for that matter), but it will not inform us on the scale or intensity (Jennings 2017, 14). And lastly there is the common problem in archaeology of differential preservation and the lack of coverage (Jennings 2017, 14).

A way in which we can identify past globalization by combining evidence that shows an increased flow of products and people, and evidence for the multitude of cultural changes that are caused by long-distance connections (Jennings 2017, 14).

Alright, as we have now figured out which features to look for, and the kind of traces we can see in the archaeological record, there is still another element that might need to be taken into consideration. The previously discussed traits are based on today's society, which not only means that it is based on our time and its technologies, but also that these features are primarily based on sedentary communities. This begs the following question: Is there a difference between nomadic and sedentary societies when it comes to globalisation and its effects? Brosseder and Miller, in their article about global networks on the Iron age Eurasian Steppes, pointed out that the nomads on the Eurasian steppes are usually put aside when Silk Roads connectivity or 'archaic Globalization' is being discussed, and that focus is generally put on the large empires and their goods (Brosseder and Miller 2018, 17). Though those goods likely transverse the continent through nomadic communities as well.

When looking back on the features that indicate some semblance of globalisation or complex connectivity, almost all eight of them seem to be perfectly applicable to cultures with a nomadic background. The only trait that might present a slight issue is deterritorialization, as the places nomadic people inhabit are rather dynamic. Still, it is not impossible to imagine that some bands of nomads which have more contact with 'others' have more in common with each other, than bands of nomads that preferred keep to themselves. Though this is more speculation than solid fact, it could be a possibility.

In any case, just as every other group of people, nomads are influenced by, and influence the world around them, and engage with it (Honeychurch 2014, 286). Honeychurch (2014) argues that such interactions are crucial to the ways in which nomadic groups build polities and express complex organization (Honeychurch 2014, 286). Furthermore, he demonstrates that nomadic groups are not dependent on their sedentary neighbours and that they are actually innovative on their own when it comes to political organization (Honeychurch 2014, 311). Even though political processes among nomadic groups may have a different foundation, the basic organizational challenge of maintaining a substantial polity spanning multiple groups and asymmetric relationships can be found in every polity (Honeychurch 2014, 311).

So, if we accept that nomadic societies are comparable with sedentary based polities, as Honeychurch argued, then we should be able to apply globalisation theory to nomad polities such as the Xiongnu.

Now that a more solid theoretical base, which is also applicable to the Xiongnu (and other nomadic peoples for that matter), has been established, it is possible to analyse their material culture in the frame of globalisation. This is especially important as the Xiongnu did not use a script, causing there to be no written sources describing Xiongnu life and their contacts form 'outside'. For this reason, the case studies concern materials that have the potential to display the beforementioned traits of globalization.

CHAPTER 3: CASE STUDIES

3.1 THE TEXTILES OF NOYON UUL (MOUND 22)

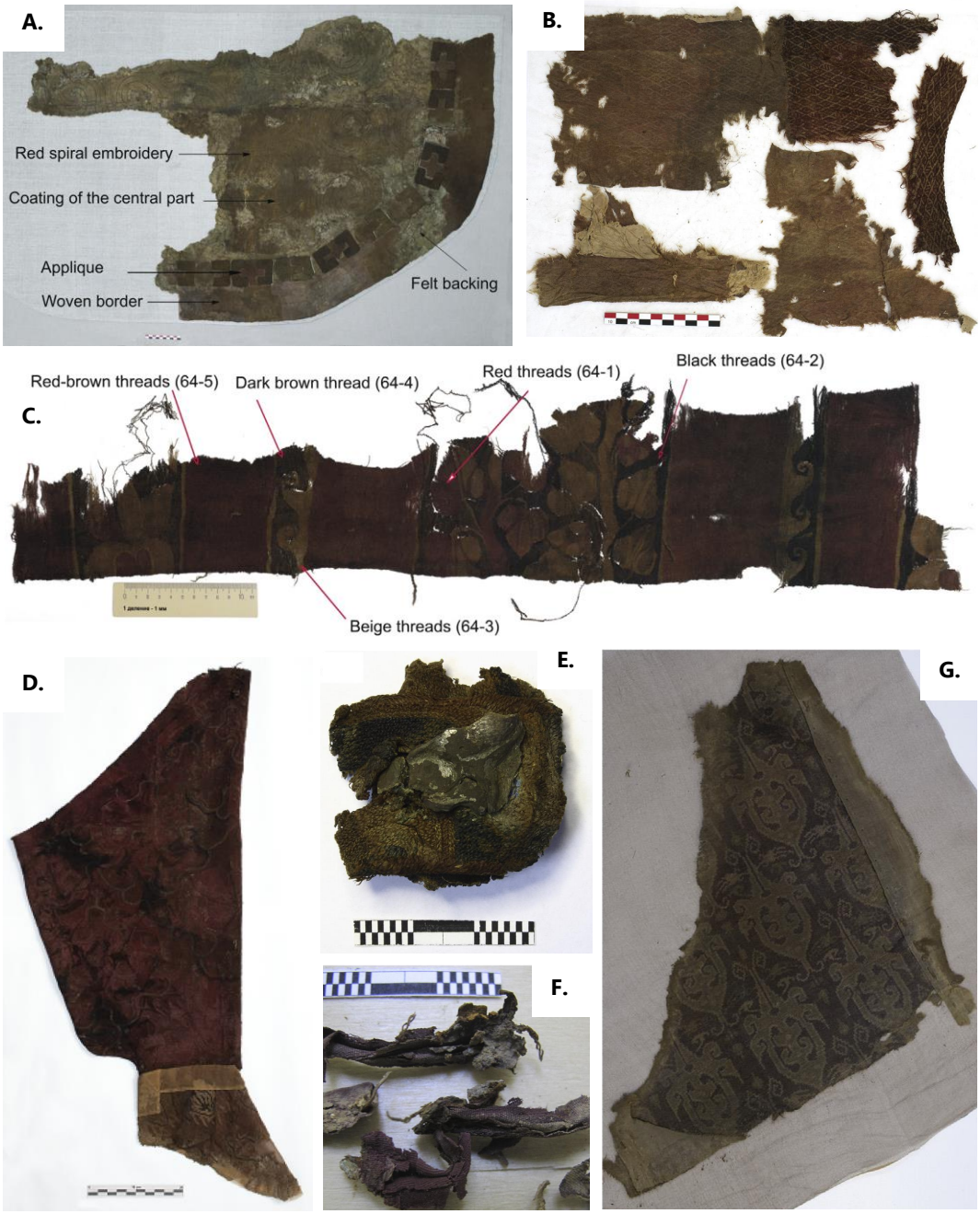

Figure 4:
A. Felt carpet, **B.** Silk fabric with a geometric pattern, **C.** Tapestry fragment with elaborate design, **D.** Embroidered leggings and boot, **E.** Piece of a silk belt, **F.** Fragments of a silk ribbon, **G.** Silk fabric with ornamental pattern; all from mound 22, Noyon Uul. (Karpova *et al.* 2016).

3.1.1 Description

The pieces of textile pictured in the seven images of figure 4 are all from the same burial in Noyon Uul, which can be dated to the late first century BCE to the first century CE (Miniaev and Elikhina 2009, 28).

The piece of textile in figure 4A is clearly damaged and incomplete, but, aside from its original shape, a good deal has been preserved. However, the colours have been muddled, resulting in a yellowy beige colour in the centre and a muddy brown on the border.

This border has best been preserved along the upper right quarter and is about 10 to 15 centimetres in width. There seems to be no intricate embroidery present on this this border, but there might be some seams following the curve of the edge, about 2 to 3 centimetres from the actual edge of the piece, but it is unclear if this seam runs along the entire border. This might not be the only seam on the border. Every 20 centimetres or so, there is a possible seam that runs from the edge towards the centre, their direction perpendicular to the seam following the edge. These seams are only really visible in the upper right part on the border.

The border and the main piece of the textile is separated by a brim of some kind of patterned appliqué. The pattern consists of two main shapes (which in turn, are made up of two or more shapes), that appear in an alternating pattern. However, this alternating pattern is broken in the lower right corner where two of the same shapes appear next to each other.

First, the rectangular shape that is darker in colour. The colour may be best described as a muddy, dark reddish-brown colour, moving toward a (bit muddled) shade of burgundy. This rectangle is made up of three shapes: Two angular C-shapes, one of which is mirrored, and a plus-shape in the middle. It all fits together like a puzzle that forms a rectangle. The colour of the plus is noticeably lighter than the muddled burgundy of the rest of the rectangle, but other than that it shares the same reddish-brown tone.

The other appliqué shape, the one that appears twice in the corner, consists two shapes. One of which is also an angular C-shape. The other shape can be described as a filled in half-circle, with a small square attached to the straight side of the half-circle. This square piece fits nicely within the angular C-shape, forming a rectangle with a rounded side. The colour of this appliqué is quite similar with the rest of the textile: a muddled yellowy beige or brown shade. Where it was quite noticeable that the plusses were lighter that the C-shapes with the previous appliqué, here it is not that clear if the half-circles are purposely

lighter in tone. Some are, some have the same colour as the C-shape, and some are darker than the angular C's.

In contrast to the border, the centre part of the textile piece does display some more intricate embroidery. It displays some kind of motif consisting of large spirals that may be connected to each other by wavy lines running vertically between the large spirals. Though it is hard to distinguish if these wavy lines truly connect to the spirals. Either way, the spirals are ordered neatly next to and above each
other. The spirals on the same horizontal line turn in the same direction, but this alternates per row, creating an alternating vertical pattern.

The pieces of similarly decorated textile in Fig. 4B might have formed one bigger piece, but it has been fragmented to the point that that is no longer certain. Still, the pattern and some colours seem to have been preserved quite well. Especially the pieces in the upper right corner show a clear motif and more saturated colours.

The main colour of the textile has, in the upper right corner at least, a dark brown shade, with a bit of a red undertone. However, the main colour is of most of the textile is a muddled brown, with an almost olive-green undertone. The pattern that is visible on most parts of this fabric displays a light beige colour. This beige is actually quite similar in tone on both the more saturated parts as well as on the more faded fragments.

The motif that is visible consists of a pattern of small rhombuses or diamonds that is created by intersecting diagonal lines that run across the textile. Inside these rhombuses are shapes as well: Either three parallel vertical lines, or a smaller rhombus or diamond shape. It seems that these different fillings of the rhombuses are ordered in a pattern. Each row of rhombuses containing three lines is followed by three rows of rhombuses filled with a smaller diamond.

The next piece pictured in Figure 4C is a fragment with a rather elaborate design (Fig.4C). There are five vertical bands containing a design against a dark brown or burgundy background.

The first band on the left is approximately 10 centimetres wide and is bordered by two lines which are about 0,5 centimetres thick. These borders display a lighter colour, though it is muddled, it looks like a yellowy-beige colour. The band itself has a very dark shade, inching toward black. The design within this black is incomplete due to fragmentation, but at the bottom part there seems to be a depiction of something that may be a fruit (like an apricot

or a peach perhaps) that has been cut in half vertically. However, the bottom half of this fruit is missing since the textile ends this picture halfway. The outer layer of this alleged fruit has a similar colour as the borders of this band, though on the edge around its core this colour turns even lighter. The core itself has a dark brown or red shade, similar to that of the rest of the textile. Above this fruit-like object there are three other leaf-like shapes, oriented vertically. These have a colour that is comparable to the fruit, though the outer edges display a more greenish-grey undertone.

The next band to the right is narrower than the previous one, as it is approximately 4 centimetres, and it seems to contain a more stylised and repetitive pattern. This time, the whole band has that yellowy-beige colour, and the design has a solid dark brown to black colour. The design is best described as stylised waves that roll from the top to the bottom and are connected to each other at the base. The top of the wave curls inward like a spiral. Due to the textile being incomplete, only two and a half wave are visible.

The next band to the right is a very large one and contains a very elaborate design. It is approximately 20 centimetres wide, and also features a narrow yellowy-beige coloured edge on both sides. The background colour of the design is the same dark brown shade that appears in the previous bands. The design features two wavy, branch-like lines (about 2 centimetres in thickness) that run parallel to the band itself and are practically evenly spaced. On either side of those two lines are heart-shaped figures in beige and muddled red (left) or greyish-green (right) and can remind one a bit of ivy leaves or the like.

The next band to the right is similar to the second one, with the only difference being that the orientation of the wave pattern is mirrored.

The final band all the way to the right has been damaged the most, so the overall design is a bit unclear. It seems that it might be about 4 centimetres wide, with beige as base colour, just like the two bands with the wave pattern. The pattern in dark brown can also be described as a wave, albeit very different in form compared to the previous ones. This 'wave' is more triangular or pointy in shape, though only one is visible, so there is no telling if the 'waves' continue.

The piece of textile in Fig.4D has preserved quite well and seems to have maintained most of its original shape. Its shape resembles a wide boot shape with an angled top.

There also seems to be a horzontal L-shaped strip of textile placed where the upper part transistions to the lower 'foot' part, separating the two. This strip seems to be a bit transparent, and has a light beige colour.

The rest of the textile has a very intricate design. The overall colour of the pice is a muddled burgundy, with some patches of dark brown here and there. The burgundy colour is lighter in shade in some places as well, though it is unclear if these colour differences are part of the design of if they came to be due to its conservation conditions.
What is clearly part of the design however, are the beige coloured lines that appear all over the textile, though they are the clearerst on the upper part. These lines are curvy and wavy, but they do not seem to criss-cross each other at random. Rather, they connect and merge at certain points, forming rounded cloud-like shapes.
The bottom part of this piece looks very similar to the rest, but after taking a closer look the burgundy colour seems more brown-toned, and the curvy pattern in beige does not continue. There are, however, smaller black lines that seem to form curvy flame-like shapes. Within one of these 'flames' some light beige threads have been preserved. This light beige shape might hint at some kind of stylised flower print, but it is quite unclear.

These following fragments, pictured in Fig.4E and F, are the ones that have not been preserved all too well and/ or have not been restored (yet). The fragments in figure 4E do not show any patterns or designs and are only a couple of centimetres long. Most parts show a faded out burgundy colour, though one bit in the top right seems to show some sort of yellow colour.
The fragment in figure 4F however, does show a more elaborate design, and added to that, there is still a solid piece of material present in the middle as well. This material in the middle looks to be incomplete, but there is some curvy design still vaguely visible, as well as some silver and brown colours.
The second thing that is very noticeable at first glance is the very dark coloured section (looks black but it seems to have some blue or green-ish undertones) that runs from the upper left, bends down, and continues in the lower right corner. This section is about 3 centimetres thick and is bordered by a seam that has a muddled yellow colour.
In the lower left corner is another section which is also bordered by a similar yellow seam. The colour of this section is also a muddled yellow, but its darker than the previous yellow colour. Within this section is another section that has a hemispherical shape, which also has a similar seam running along its border. This hemisphere also has a yellow colour, though this time it seems somewhat lighter in shade, and displays some green undertones.
There is smaller hemisphere within this yellow one, with, again, a yellowy seam. Though this time the hemisphere has the same dark colour as the curved section from before.

In between these sections and in the upper right corner the fabric has a dark yellow or almost orange colour.

The final piece of fabric in figure 4G has also not been preserved fully, but the design on the textile on the other hand is still very clearly visible. The base colour of this piece of fabric is a shade of brown, while the design displays beige colour with lighter tinted edges.
The pattern consists of a repeated abstract shape, which is ordered in neat rows. The main abstract shape might be best described as fig-like, with a triangular shaped top that ends in two curls. On the base of the triangular top are two thicker curls on either side, facing downwards. The lower ones of these curls have a spike that also points down.
The core of the 'fig' is hollow apart from another abstract shape that sits within this space. This shape consists of a thick vertical line that is crossed by two curved horizontal shapes. At each intersection there seems to be a lighter coloured dot. Similar dots also appear in a group of three at the base of the 'fig'.
There are many smaller abstract shapes in between the larger ones, such as the teardrop shapes above and below the 'figs', the inward facing curls on either side of the upper part of the 'figs', and the strange flame like shapes on either side of the top part.

3.1.2 Analysis & Interpretation

Karpova *et al.* (2016) were able reconstruct most of the original colours and materials of these textile finds. Pigments used in these dyes are either plant-based or from insects and can provide some information on the origin of the used dyestuffs (Karpova *et al.* 2016, 17, 19). First, the materials and their origin of these textiles will be discussed, while the colours and patterns will be discussed separately per object in order to provide a clearer picture.

Used materials and their origin (wool and silk)

Material analysis was done using a Scanning Electron Microscope (SEM) and an Energy Dispersive X-ray Spectrometer (EDS) by Karpova *et al.* (2016) (Karpova *et al.* 2016, 16). From this analysis it could be inferred that the textiles were made of either wool or silk (though there is one case where the two are combined) (Karpova *et al.* 2016, 17-18).
The textiles with the geometric and ornamental print are made of silk, as well as the fragments of the ribbon, the belt, and the embroidery on the boot (Karpova *et al.* 2016, 17). The silk found in these textiles all have a similar and consistent diameter (10-11 μm),

indicating that the silk was produced from domesticated silkworm (Karpova *et al.* 2016, 18). Though multiple cultures have produced silk fabrics, the domesticated silkworm, *Bombyx mori*, was only grown and used in ancient China at the time (Langford 2009, 56). The Chinese seem to have been involved in sericulture (the cultivation of silkworms to produce silk) from 4000 BCE onwards, which consequently resulted in their refined process of unwinding and degumming the double filaments of the silk, allowing them to obtain such fine threads (Langford 2009, 56). Therefore, looking at its fineness and consistency, it is highly likely that the silks from these textiles were produced in China.

As stated before, silk is not the only type of fabric used among this assemblage of textiles. Woollen threads can be identified within the felt carpet, the tapestry, the fabric of the leggings and its felt coating in varying thicknesses (Karpova *et al.* 2016, 18). The fabric of the leggings and the base of the felt carpet along with its spiral embroidery contained the finest threads of wool (13-25 µm) (Karpova *et al.* 2016, 18). However, it was not possible to determine the origin of the used wools with the methods that were used.

The felt carpet

This carpet is made up out of several different fabrics: the base consists of a piece of thin felt, which is covered by a woven coating in the centre and finely woven fabric on the borders (Karpova *et al.* 2016, 20). The appliqué is made out of pieces of felt and is sewn on, while the embroidered spirals in the middle are made out of a fine woollen thread (Karpova *et al.* 2016, 21). Karpova *et al.* (2016) managed to analyse the remaining dyes that were once used to create this carpet, which prompted some interesting data.

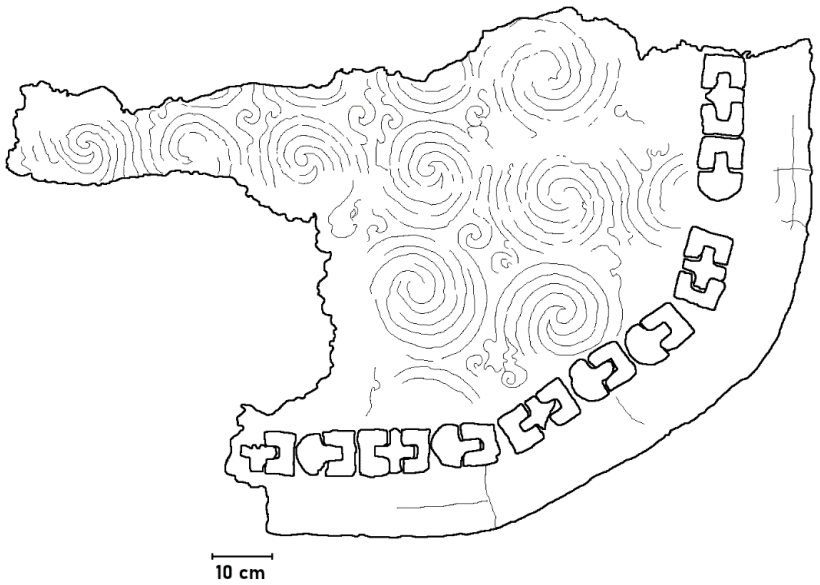

Figure 5: Schematic drawing of the felt carpet found in mound 22. After Karpova *et al.* 2016.

First off, they found the (likely) original colours of the carpet: The beige coloured woven fabric in the middle once probably displayed a blue colour and the spirals embroidered upon were likely red, creating a bright contrast. The felt base was likely not dyed at all (Karpova *et al.* 2016, 21). The woven fabric on the border of the garment was also dyed a shade of red, but due to the chemical make-up of that specific red dye it was not possible to determine exactly which pigments were used (Karpova *et al.* 2016, 21). Whereas it was possible to determine the likely dyestuff for the red dye on the woollen embroidery threads, due to the presence of kermesic and carminic acids (Karpova *et al.* 2016, 21). Its chemical make-up implies that the scales of two different species of insects were used to create the red dye: *Kermes vermilio* Planchon and *Porphyrophora* sp. (Karpova *et al.* 2016, 21).
This is where it gets very interesting, since it has been reported that *Kermes vermilio* Planchon and cochineal seems to only have been distributed in the Mediterranean area (Karpova *et al.* 2016, 21). This can imply that the threads used for the embroidery on this carpet originated from the Mediterranean, or that at least the dye originated from there (Karpova *et al.* 2016, 21).

Interestingly, the design of this carpet, with its spiral embroidery and appliqué border, might have a more local connection. There are textiles that have been preserved within another kurgan at the Noyon Uul cemetery, within mound 6 (Kulikov *et al.* 2010, 63). This mound contained a felt carpet with a similar appliqué border and spiral embroidery pattern (figure 6). Though the original colours of this carpet have yet to be determined, Kulikov *et al.* (2010) suggests that it is likely that the dyes were applied to the manufactured cloth itself rather than to its threads (Kulikov *et al.* 2010, 65). If the felt carpet from mound 22

Figure 6:
Fragment of a felt carpet from Noyon Uul mound 6 (Kulikov *et al.* 2010, 64)

was produced using a similar process, it supports the hypothesis that the red dye used on that carpet has a foreign origin (perhaps Mediterranean).

Even so, the fact that two similar carpets turn up in Xiongnu mounds does not necessarily mean they are locally made. However, this carpet fragment from mound 6 contains more than the appliqué border and the spiral embroidery. The lower left and centre display a whole 'new' section containing patterns and appliqué. This appliqué consists of two main subjects: the tree-like shapes (left and right) and two joined animals (centre). These animals closely resemble imagery of animal predation, a feature common in Xiongnu art (Psarras 2003, 75, 101, 102). Though it is true that imagery of animal predation or animal on animal violence in such a style appears in multiple cultures across the Eurasian steppe, it is most commonly associated with the Xiongnu (Psarras 2003, 101, 111, 117). Furthermore, the combination of animals (be it in a predation scene or two mirrored animals) with trees, which could represent trees of life, is common iconography across the Eurasian steppes as well (Psarras 2003, 117).

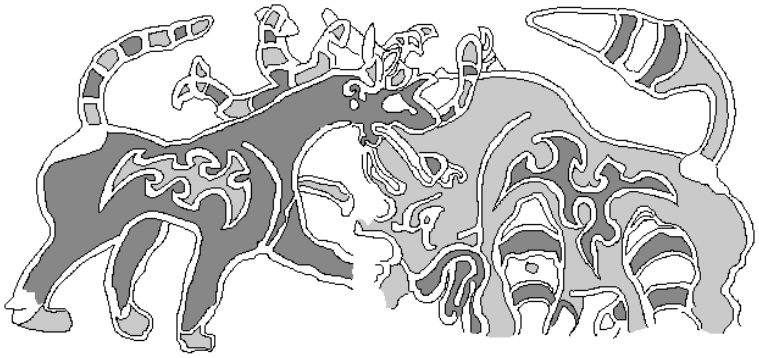

Figure 7:
Schematic drawing of the animal appliqué of the felt carpet from mound 6, Noyon Uul (Kulikov *et al.* 2010).
The animal on the right could be identified as a bull or another kind of bovine, the animal on the left is harder to identify, but judging from its tail and feet it might be some kind of feline.

Although there is no proof that such animal and tree appliqués were present on the fragment from mound 22, the similarity of the spiral embroidery and appliqué border between the two carpets suggest that they both follow a similar style. As the carpet of mound 6 displays Xiongnu, or at least steppe, features, it is plausible that the design of both carpets incorporate local Xiongnu iconography.

Thus, this carpet of mound 22 contains local stylistic features while also containing red dye of a foreign origin, which shows us that the Xiongnu did not only trade in foreign goods, but also incorporated foreign ingredients into their own material culture. This point will be further discussed later in this thesis.

Geometric patterned silk cloth (coat)

This fabric was woven out of silk threads and was likely part of the decoration of an ornate coat (Karpova *et al.* 2016, 21). The background that has now turned brown is presumably made with blue threads dyed with indigotin, while the rhombuses were made out of undyed silk threads, which would have given it a white or yellowish colour (Karpova *et al.* 2016, 21). No pigments other than indigotin were identified on this piece of fabric, which sadly does not help us any further when determining the origin of (parts of) this textile (Karpova *et al.* 2016, 21).

As stated before in this chapter, this silk is likely produced in Han workshops. Tough it is unknown as of yet if the silk was dyed blue there as well, or at a later time. Furthermore, the rhombus design does not immediately point to a clear culture or style.

There is one small hint, however, on which we might be able to build upon. In his article about ancient Chinese silk, Kuhn mentions that various lozenge (rhombus) and diamond patterns were popular on patterned silk from Shang until Western-Han times (Kuhn 1995, 81). Although it has to be noted that such Chinese diamond patterns often contain an extra 'zig-zag' in their rhombuses, something which the silk from Noyon Uul is lacking (Kuhn 1995, 81-82). What is also interesting to note is that one of the oldest Chinese patterned silk textiles which was found in a burial in Ukraine (Panticapeum, modern Kerch), displayed lozenge pattern similar to Han silks (Langford 2009, 57). Though this data does not prove that the pattern on this silk cloth form Noyon Uul is inherently Chinese at all (as it is also not hard to come up with such a straightforward pattern independently), it is still interesting to point out this possible connection. Just as the fact that a Han Chinese patterned silk was discovered in a burial in Ukraine, which presumably does not have all that much to do with this silk fabric in particular, but it does nicely illustrate the distance Eurasian trade can cover.

Tapestry

This tapestry consists of canvas with multiple decorated bands that are woven into it using tapestry technique (Karpova *et al.* 2016, 20). It is decorated beautifully and was, though it

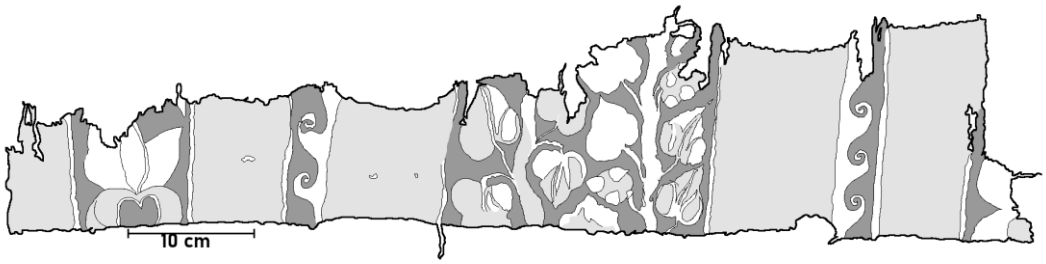

Figure 8:
Schematic drawing of the tapestry fragment from mound 22, after Karpova *et al.* 2016.

still rather is, very colourful. Traces of colours such as red, purple, blue, green, and white were identified on the textile (Karpova *et al.* 2016, 20).

The heart shaped leaves on the wavy branch possibly resemble twining ivy, though the leaves that now display a red colour were originally a shade of purple (Karpova *et al.* 2016, 20). The beige threads on this tapestry contain small amounts of indigotin, so they were likely a shade of blue (Karpova *et al.* 2016, 20). The rolling wave patterns on both sides seem to be black and white (beige) at first, but they actually used to be quite colourful as well. The beige would have been blue, and the dark brown was likely a green shade since a combination of tannis and indigotin were used (Karpova *et al.* 2016, 20).

The black threads in that are present within the floral designs were likely also a shade of green, even though it is also possible for it to have been a blue-black colour, depending if iron madder was used, which is rather unlikely (Karpova *et al.* 2016, 20). So most black or dark brown colours on this tapestry were actually different shades of green.

The red threads of the cloth tapestry fabric were likely red in the past as well, as it appears to be mostly coloured with laccaic acids (Karpova *et al.* 2016, 20). These acids were commonly produced by scale insects of the genus *Kerria*, which inhabit South and East Asia (Karpova *et al.* 2016, 19-20). However, the now muddy red-brown thread of the tapestry was also dyed red, but with another, less stable, dye composition (Karpova *et al.* 2016, 20). This composition consisted of plant and insect dyes, but instead of *Kerria* insects, insects of the genus *Kermes* (specifically the species *K. vermilio* Planchon) were used, as indicated by the presence of kermesic acid (Karpova *et al.* 2016, 20). These insects live predominantly in the Mediterranean and the Near East (Karpova *et al.* 2016, 20). The compounds from plants are alizarin and purpurin, which can both be found in the roots of the European madder *Rubia Tinctorum* L. (Karpova *et al.* 2016, 20).

The large variety of dyes used for this colourful tapestry might suggest that the dyeing was done by experienced craftsmen which extensive knowledge (Karpova *et al.* 2016, 20). This

indicates that the dyeing of the threads and the producing of the tapestry itself were probably done in the Mediterranean manufactures, specifically the Syrian ones, since the expertise and the materials needed were present there (Karpova *et al.* 2016, 20). The fact that there are similarities in materials (wool), dyes, weaving methods and designs as well as the proximity in time between the manufacture of textiles in ancient Palmyra and the time the tapestry has been placed in the Xiongnu burial supports this (Karpova *et al.* 2016, 20).
Furthermore, research on textiles from the cities of Palmyra and Dura-Europos in Syria revealed possible evidence for the presence of lac-dye and the other dyes their workshops, and workshops around the Mediterranean (Karpova *et al.* 2016, 20). Interestingly, woollen fabrics were discovered that were dyed with similar dyes in a barrow of the preceding Pazyryk culture in the Altai mountains, though these did not contain lac-dye. This suggests that these fabrics may also have been (partly) manufactured in the Mediterranean (Karpova *et al.* 2016, 20). Though the raw materials for the dyes were very likely coming from the Mediterranean, this does not necessarily indicate that the threads and fabrics were dyed there as well (Karpova *et al.* 2016, 20).
However, when one looks to the design with the rolling waves and the twining ivy, one cannot help to think about the Mediterranean. Though this point does not hold that much basis, as it is not possible to back this up as of yet.

Embroidered legging & boot

These leggings with boots attached to them is made out of different kinds of fabrics and dyes (Karpova *et al.* 2016, 18). Both the leggings and the coating fabric of the boot are made out of fine wool, and both would have displayed a red colour originally, but after dye analysis it came up that there are different red dyes on the leggings an boot (Karpova *et al.* 2016, 18-19). The dye on the leggings consists of alizarin, purpurin and laccaic acids. Though it is not possible to determine the specific type of madder that was used to obtain the alizarin and purpurin, the laccaic acids are again from the insect genus *Kerria* (Karpova *et al.* 2016, 19). The red dye of the boot coating contains alizarin and carminic acid, with a significantly higher amount of alizarin (Karpova *et al.* 2016, 19). These high amounts of alizarin and the absence of purpurin suggest the use of Chay root for this dye (Karpova *et al.* 2016, 19). Chay root (*Oldenlandia umbellate* L.) is native to India, Java, and Burma (Karpova *et al.* 2016, 19). The carminic acid found in this dye originates from insects of the *Porphyrophora* genus, which live in Central Asia, as well as in the Caucasus, Nepal, the Mediterranean and South Africa (Karpova *et al.* 2016, 19).

The embroidery pattern is made out of silk threads, and were presumably coloured blue (Karpova *et al.* 2016, 19). The thick woollen thread that was used for the seaming of the silk edges of the pattern, contains traces of indigotin, pointing towards a light blue colour (Karpova *et al.* 2016, 19). It was not possible to determine the compounds of the used indigo dyes, but one can assume that the source of the indigo might be *Polygorum tinctorum* Ait. or *Indigofera tinctorial* L. since these plants grow in India and Central Asia and they have been used and cultivated in China since ancient times for the production of indigo dyes (Karpova *et al.* 2016, 19).

The pattern of the embroidery (pictured more clearly in figure 9), though beautiful, is a little unclear. It may resemble twining plants or curvy clouds. The boot still shows some embroidery that looks like a stylised floral pattern. Perhaps the whole of the textile was covered in such a print, but this is still uncertain. Therefore, no particular style can be attributed to this legging and boot.

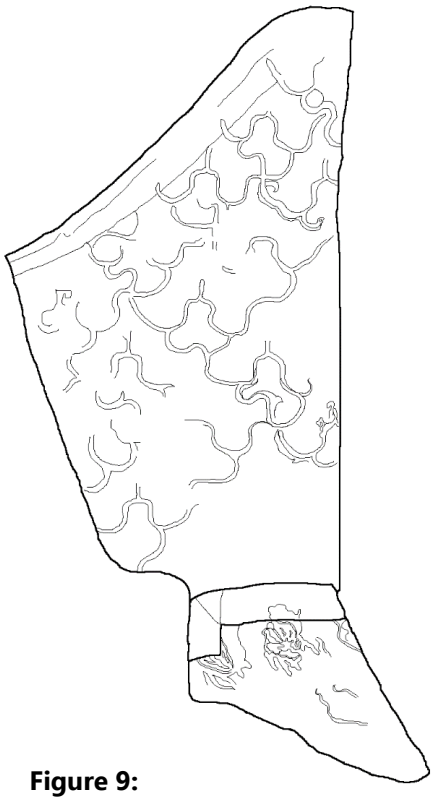

Figure 9:
Schematic drawing of the legging and boot from mound 22, after Karpova *et al.* 2016.

Fragment of a silk embroidered belt

The fragment in figure 4E (and figure 10) was part of a belt and is covered with silk embroidery (Karpova *et al.* 2016, 22). This belt displayed only two colours originally (blue and red), but it was only possible to determine the dye-stuffs of the blue threads of the embroidery and the base, which were dyed blue using indigotin and indirubin (Karpova *et al.* 2016, 22). Even though the embroidery threads are still quite clearly visible, it is unclear what was actually depicted

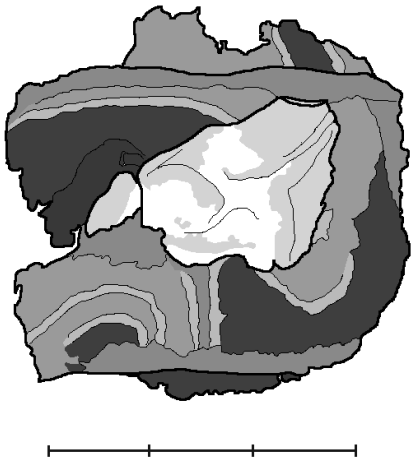

Figure 10:
Schematic drawing of the belt fragment from mound 22, after Karpova *et al.* 2016.

on this belt, since the piece is so small. The left-over piece of buckle (or some other form of belt ornamentation) does not give us any clues about the style of the belt either.

Fragments of a silk ribbon

Although the fragments of figure 4F have not preserved very well, Karpova *et al.* (2016) were able to analyse its dye. The high purpurin content (and the relatively low amount of alizarin) present in the dye indicates that the Han-made silk was probably dyed with Indian madder *Rubia cordifolia* L., which was specifically grown in the Han silk dyeing manufactures (Karpova *et al.* 2016, 22). This, together with the Han produced silk of this fabric, places its likely origin in China.

These red coloured fragments were part of a silk ribbon wrapped around the spokes of a chariot umbrella (Karpova *et al.* 2016, 22). Such ornaments were very common on umbrellas of Han chariots, one of which was also present within this burial mound (Polosmak *et al.* 2013, 110; Karpova *et al.* 2016, 22).

Ornamental patterned silk cloth

This silk fabric (figure 4G and 11) contains a woven abstract pattern, which is hard to describe (Karpova *et al.* 2016, 21). Karpova *et al.* (2016) suggests the that pattern features "hooks in the form of styalized birds", but I have a hard time identifying any birds within this pattern. It might depict a more floral pattern instead. The design likely displayed only two colours: A blue background colour, and white or 'natural' silk colour for the ornamental pattern itself (Karpova *et al.* 2016, 21). It is unknow as of yet what the chemical make-up was of the blue dye.

A similar piece of fabric was found within another burial on the site of Noyon Uul, where is was used as decoration for a case that contained a braid of horsehair, which might suggest that this piece of textile was originally used in a similar fashion (Karpova *et al.* 2016, 21).

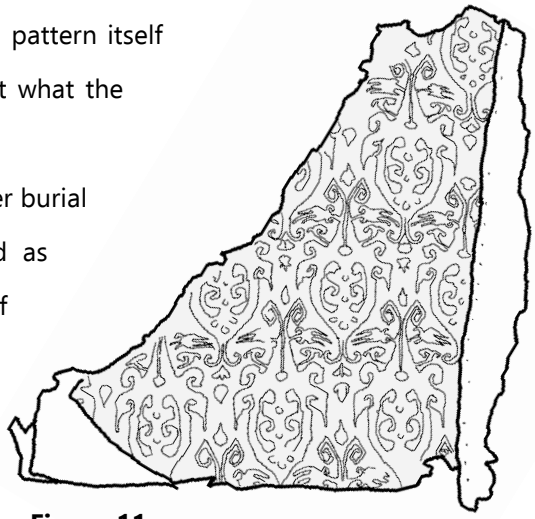

Figure 11:
Schematic drawing of the ornamentally patterned silk cloth from mound 22, after Karpova *et al.* 2016.

3.1.3 Conclusion

This assemblage of textile finds from Noyon Uul's mound 22 allowed us to get a glimpse of the complex processes that were actually taking place on the steppes in regards of trade and globalization. As we could see, the materials that were used to produce these textiles do not all stem from the same place. Silk was clearly coming out of China, which is not that big of a surprise considering that China has always been regarded as the main outside influence on the Xiongnu. What we also see is that there are materials present with a much more distant origin, such as the tapestry, which might have a Palmyrene background. Moreover, there might be a local product, the felt carpet, that contains dye of foreign origin which illustrates that there are more complex processes taking place on the steppes. Such processes will be further discussed in chapter 4.

3.2 METAL OBJECTS OF GOL MOD 2 (MOUND 1)

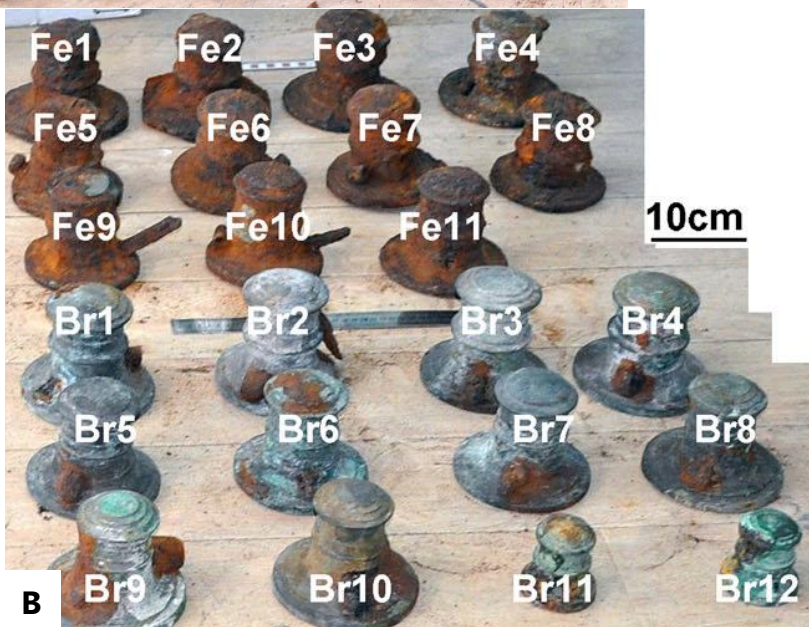

Figure 12:
A. Collection of iron bushings/ plain bearings, scale is based on L21 in this picture.
B. Collection of axle caps (cast iron and bronze), scale is based on Fe11 in this picture.
C. Collection of bronze ornaments, scale is based on number 12 in this picture. Number 21 was photographed separately.
All objects were excavated from the mound 1/ tomb 1 at Gol Mod 2 cemetery. (Park *et al.* 2017; Park *et al.* 2018).

3.2.1 Description

All of these metal objects pictured in figure 12 were recovered from the same burial mound, which has been carbon dated to 109 BCE – 75 CE (Park *et al.* 2018, 1535).

In Fig. 12A a collection of 51 metal rings is pictured. The rings can be categorized into two groups based on a difference in diameter. The biggest group, pictured at the bottom (numbered S1 to S27), are the smaller rings with a diameter of about 8 centimetres. The other group displays a larger diameter of approximately 12 centimetres. Both groups of rings have a similar thickness (about 0.5 centimetres) and height (about 5 centimetres), though there are some slight variations.

Most of the larger rings seem to have three equally spaced, rounded protrusions on either the top or bottom, which appear to be as thick as the rings itself and protrudes for about a centimetre. The smaller rings display a similar feature, though instead of three, there are only two protrusions.

Another thing to note is that some of the rings (for example L23 and S4) show a straight, vertical split from top to bottom.

Overall, all the rings show a unique set of colours mostly comprised of variations of grey and orange.

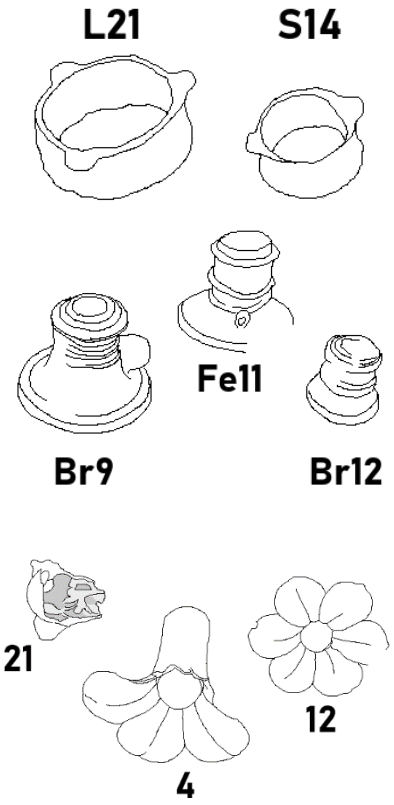

Figure 13: Schematic drawings of objects from figure 3 (L21, S14, Br9, Fe11, Br12, 21, 4 & 12), after Park *et al.* 2017 and Park *et al.* 2018.

These metal objects shown in Fig. 12B are all similar in size, except for two items in the lower right corner (Br11 and Br12). These smaller objects have a cylindrical shape that slopes to a wider diameter at the bottom (approximately 5 centimetres). On top sits a wider circle out of the same material (about 4 centimetres in diameter), which is a bit convex and has two or more grooves following the circular shape. On the middle of the cylinder sits a rim of about 0.5 centimetres in thickness that seems to be bordered by a groove as well.

Both objects display a unique set of colours consisting of greys, blue-greens, yellow shades, and orange browns.

The overall shape of the other 21 objects is comparable to the shape of the previous two, but there are a couple of differences, aside from its size, to be noted. Firstly, the base is much more sloped and therefore considerably larger. It has a diameter of approximately 12 centimetres.

Secondly, the grooves are clearer and/ or further apart from each other. The circular top contains wider grooves forming a more stepped look compared to the top of the smaller ones and the grooves around the middle rims are further away from the middle rim, creating a wide band.

Lastly, most of the larger ones have a protrusion on the sloped base. Some of them hardly stick out (for example Br4), while on others it is a couple of centimetres long (for example Fe9).

Though each of the larger objects has a distinct colour combination, there are clearly two main groups in regard to colouring. The first group consists of 11 items and are mostly dark grey with large orange brown spots. The second group consists of 10 items and has similar colours to the smaller two objects: Their main colour being a (light) grey with spots of green-blue and orange brown.

Most of the metal objects in Fig.12C seem broken in varying degrees. Number 12, 16 and 20 seem the most complete and are approximately 18 centimetres wide. In the centre of the objects there sits a convex circle (4 centimetres), which is enclosed by six convex tear-shaped petals (about 7 centimetres) with a groove down the middle. Nevertheless, most of these objects seem to mis at least one of these 'petals', while number 21 is almost completely destroyed. However, number 21 does show us that the inside of the object is hollow.

Though not visible at number 12 and 16, the other objects have and cylindrical extension in the back, so we can assume that it is likely present there as well. This extension might be a little over 10 centimetres in length judging from number 5, 4 and 7.

All 21 of these have their own unique set of colours, though most contain varying shades grey and spots of blue green and/or orange brown. Number 6, however, shows a different colour from the rest. It can best be described a dull rose-gold colour.

3.2.2 Analysis & Interpretation

All of these metal objects are associated with two-wheeled Chinese style chariots (Park *et al.* 2017, 789; Park *et al.* 2018, 1538). Judging from the amount of metal parts, at least a dozen two-wheeled carriages were interred in the tomb, although only one seems to have been buried while fully assembled (Park *et al.* 2018, 1538). Such chariots are generally considered to be given to Xiongnu aristocrats as a tribute, something which is usually used as evidence for strong political and economic interactions between the Xiongnu and Han Dynasty (Park *et al.* 2017, 789). Because of this, the origin of these chariots are usually attributed to Han dynasty workshops, but judging from the frequent appearance of such chariots in Xiongnu burials, it seems rather unlikely that the Xiongnu communities depended entirely on imports for such a large quantity of objects (Park *et al.* 2017, 782; 789; Park *et al.* 2018, 1536). Park *et al.* (2010; 2017; 2018) decided to analyse the metal objects from the Chinese style chariots of Gol Mod 2 in order to investigate if the Xiongnu indeed did depend entirely on China as a supply for chariots.

Iron bushings

All of the bushings (Fig. 3A) are made out of iron (Park *et al.* 2018, 1539). Before in-depth analysis of the iron itself, one feature on the surface of these bushings already reveals interesting information. These bushings, except for one it seems (S13), have a 'split sleeve' (Park *et al.* 2018, 1539). This indicates that the iron was made into shape by forging rather than casting, which is a distinctly different production technique than the cast-iron traditions that have long been established in China (Park *et al.* 2010, 2689; Park *et al.* 2018, 1537; 1539; 1544). Evidence was also found that these bushings underwent a carburization treatment on near-surface areas (Park *et al.* 2018, 1543) This, and the presence of non-metallic slag inclusions make it clear that they were produced out of low carbon iron which was forged into shape and then carburized: A process that is quite distinctive for a bloomery-based iron tradition, which has been present within Mongolia long before the establishment of the Xiongnu polity (Park *et al.* 2010, 2696; Park *et al.* 2018, 1544).

Iron and bronze axle caps

Although most of the bushings were forged using a long-established technique present Mongolia, the axle caps (Fig.3B, Fe1-Fe11) and bushing S13 were cast instead of forged, which, at first glance, seems to point to Chinese manufacture (Park *et al.* 2018, 1539; 1544). However, cast iron was also occasionally used by Xiongnu communities, albeit on a very

small scale, and so far only for wheel components of chariots (Park *et al.* 2018, 1537). A couple of these iron cast axle caps (specifically Fe4, Fe7, Fe9 and Fe11) contain bronze patches, which are actually repairs that were made in order to fix cavities caused by casting defects (Park *et al.* 2018, 1542). Furthermore, though not clearly visible form the picture, the cast iron axle caps feature parting lines, indicating a bivalve moulding process (Park *et al.* 2018, 1539). These features indicate that the cast iron axle caps were likely produced in an environment where there was limited experience in regard to iron casting (Park *et al.* 2018, 1539).

On the other hand, the bronze axle caps (Fig.3B, Br1-Br12) were also produced through casting, but showed no defects or parting lines, suggesting that they were made using either lost-wax or investment casting technique (Park *et al.* 2018, 1539). This suggests that the people making these bronze caps possessed a certain proficiency in bronze casting (Park *et al.* 2018, 1539). Could this imply that these bronze axle caps and ornaments are Chinese imports? Perhaps, though iron arsenide particles (speiss) were detected within the bronze of these caps (Park *et al.* 2018, 1543). The appearance of speiss particles only occurs in copper alloys that contain high levels of arsenic (Park *et al.* 2018, 1543). This, in turn, implies that the axle caps were made within a bronze tradition where arsenic is used as its main alloying element, as opposed to lead and tin (Park *et al.* 2018, 1543). However, we will get back to this discovery later, since only some of the excavated axle caps are made out of bronze.

Bronze flower ornaments

The floral ornaments (figure 12C), which likely decorated the parasol on top of the chariot, are made out of bronze as well (Park *et al.* 2017, 790). Some of the flowers show also remnants of a thin gold layer (figure 12C, number 1, 2, 9, 11, 18, 19 and 20, to be specific) which indicates that at least seven of them were gilded (Park *et al.* 2017, 792). The design of these ornaments, a six-petaled flower attached to a hollow stem, is common in China as a chariot umbrella decoration, which signifies Chinese influence, or maybe even manufacture (Park *et al.* 2017, 792). However, Park *et al.* (2017) did take an in depth look at the chemical make-up of the bronze used for these ornaments and revealed that all of them contained significant levels of arsenic (Park *et al.* 2017, 792). Though the arsenic appears in varying quantities, it is definitely the primary alloying material in all of them (Park *et al.* 2017, 795).

The objects can be organized into three groups based on this difference in arsenic content: high, medium, and low (Park *et al.* 2017, 795). The high and medium groups suggest that there were at least two arsenical copper alloys used for bronze production, while the group with the low arsenic content contains a noticeable amount of lead and tin, albeit not very high (Park *et al.* 2017, 794). It is unclear however, if the addition of lead and tin was fully intentional, though the differences in arsenic levels imply that they tried to reinforce low arsenic material with lead and tin (although the presence of tin is likely accidental) (Park *et al.* 2017, 794).

The use of arsenic and the more experimental combination with lead and tin contrast the Qin and Han tradition of using generous amounts of tin and lead as main alloying elements (Park *et al.* 2017, 790; 796). This arsenic tradition, which is also observed within the bronze axle caps discussed earlier, is a manufacturing technique that has long been established in pre-Xiongnu Mongolia as attested by bronze finds at the site of Baga Gazariin Chuluu (Park *et al.* 2017, 790; Park *et al.* 2018; 1537). The Xiongnu continue to follow this tradition, possibly caused by the low amount of tin available to them in their environment (Park *et al.* 2017, 790; Park *et al.* 2018, 1543).

This indicates that the bronze parts of this chariot were Xiongnu made instead of being a Chinese manufacture. The iron bushings and axle caps were likely also manufactured by the Xiongnu, judging from the used manufacturing technique. Even the bronze repair patches on the iron axle caps share a similar chemical make up to the bronze caps, suggesting that the iron and the bronze caps were probably produced in close association (Park *et al.* 2018, 1543).

So, it is quite clear that external design of the chariot is definitely based on the original Chinese product, but it is also highly likely that the metal parts of it are actually produced on the steppes. It is not the first and sole example of Xiongnu and Qin-Han design and manufacture techniques mixing. Chinese imitations made out of steppe style alloys have appeared before, as well as traditional steppe objects cast with Qin and Han alloy recipes (Park *et al.* 2017, 790).

3.2.3 Conclusion

Compiling all these observations regarding these metal parts, a preliminary interpretation could be made regarding the trade dynamics between the Xiongnu and the Chinese dynasties. The fact that the Xiongnu produced material that has been traditionally regarded

as exclusively Chinese, indicates a more complex relationship between the Xiongnu and the Chinese, as it shows us that the Xiongnu do not simply adopt foreign material. They produced the metal for the chariots with their own techniques and integrated the (partly) locally produced, but Chinese looking, chariot it in their burial rite.

This leads us to believe that the overall dynamics between the Xiongnu polity and the rest of the world seems more dynamic than previously believed. These findings and their implications will be explored further in the discussion chapter of this thesis.

3.3 LACQUER BOX FROM TSARAAM VALLEY (MOUND 7)

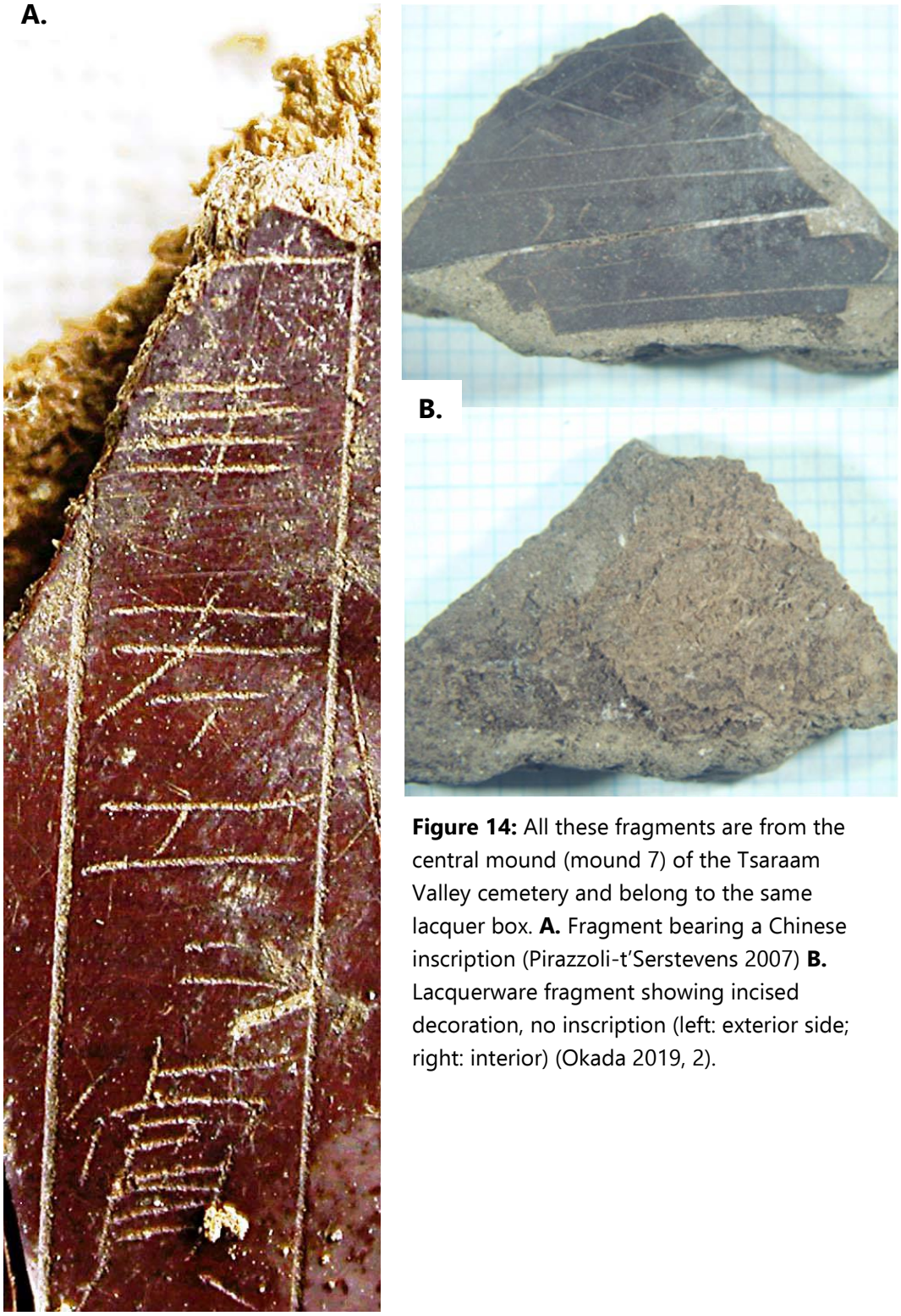

Figure 14: All these fragments are from the central mound (mound 7) of the Tsaraam Valley cemetery and belong to the same lacquer box. **A.** Fragment bearing a Chinese inscription (Pirazzoli-t'Serstevens 2007) **B.** Lacquerware fragment showing incised decoration, no inscription (left: exterior side; right: interior) (Okada 2019, 2).

3.3.1 Description

The burial mound these fragments were retrieved from can be dated to the period of 30 – 120 CE with the use of carbon dating (Miniaev and Sarharovskaia 2007, 54).

In figure 14A a rather elongated fragment is pictured, though not all the edges of the fragment are visible in this picture. The surface of this fragment has a reddish brown or burgundy colour, while the material underneath this coloured layer displays a light beige colour. This beige material looks a bit rough or grainy, whereas the surface layer is relatively smooth looking.

On this surface are a number of visible lines or scratches, two of which are vertical lines running parallel to each other. The other clear scratches reside in between those lines, seemingly forming at least 4 groups of connected lines, which are oriented vertically and horizontally, as well as diagonally.

There are also other scratches present on the surface, but those seem less deep or wider than the other, and so look more accidental that the other ones.

Figure 14B consists of two pictures. The left one showing the exterior side of a fragment, while the right one shows the interior side of the same fragment. This fragment has a triangular shape and shows damage on all its sides.

The interior side looks very rough and seems to have a beige colour with some little white specs here and there. The exterior surface contains a smooth looking layer with a brown burgundy colour. This layer seems to sit upon a beige base. This base is similar to the beige appearance of the backside, though it looks to be smoothened more. There is also a large horizontal crack in the burgundy layer, splitting this layer into two unequal parts.

The burgundy layer on the exterior side contains some kind of decoration as well. This decoration is mostly horizontally oriented and starts at the top with a wide strip (a little over 0,5 cm wide) containing a geometric pattern. This pattern consists of connected rhombuses with smaller rhombuses inside. These rhombuses seem to be accompanied by a zig-zag line beneath it, though this line is not continuous as it is cut off by the next horizontal line.

The next strip is smaller, only about 0,2 cm thick, and does not seem to contain any other decoration.

Following this smaller strip is another wider one (also about 0,5 cm), which looks empty at first glance, but actually contains something that could be considered as a decoration. A little off-centre are two short, curved lines, mirroring each other, forming a rounded

hourglass shape. However, the rest of this strip is empty, so it is not clear if this is part of a pattern or just a standalone shape.

Beneath this wide strip are two thinner strips of which the upper one is wider (approximately 0,3 cm), though the bottom one, which looks hardly 0,2 cm thick, is incomplete due to damage to the fragment. Both of these of these strips do not seem to contain any decoration.

3.3.2 Analysis & Interpretation

Both of these fragments belong to the same object: a lacquer box bearing a Chinese inscription (Okada 2019, 1; Otani 2019, 1; Pirazzoli-t'Serstevens 2007, 56). It was found crushed by the wooden beams of the tomb structure and by pressure of the soil in the main mound (mound 7) at a depth of 17 meters (Otani 2019, 2; Pirazzoli-t'Serstevens 2007, 56). Therefore, the exact dimensions of the object are unknown (Otani 2019, 2; Pirazzoli-t'Serstevens 2007, 56). However, some of the contents of the box suggest that this might be a Chinese cosmetic box (*'Lian'*) (Otani 2019, 2). These contents include: Two wooden combs, a bronze mirror fragment, a mica fragment, a birchbark container, iron needles and a wooden needle box (Otani 2019, 2; Pirazzoli-t'Serstevens 2007, 56).

The box is covered with brown lacquer, its decoration consists of some red painted lines and (mostly) of incised lines likely carved with fine needles (Otani 2019, 2; Pirazzoli-t'Serstevens 2007, 56). This carving technique, known as *zhui hua*, seems to have its first appearance during the early Han period (Otani 2019, 2). Otani (2019) was able to match up most of the fragments found in mound 7 (sadly not all of these fragments have published photographs), which resulted in a clear drawing showcasing the ornamentation on the box (see figure 15). The decoration that is in the upper part of the drawing by Otani (2019) does

Figure 15: Drawing made by Otani (2019) based on all the fragments found within mound 7 of the Tsaraam Valley cemetery (Otani 2019, 2)

not seem to be present on the fragments shown in figure 14, but such a design is known as '*yun qi wen*' or, rolling cloud (Otani 2019, 3).

The (partial) inscription featured in figure 14A, does continue further, and is placed in between to incised parallel lines (Pirazzoli-t'Serstevens 2007, 56). A total of 29 Chinese characters are present in the reconstruction of Otani (2019), which are divided into two groups by a little section of decoration. These two groups do however seem to form one sentence, though the first couple of characters of this sentence are missing (Otani 2019, 3; Pirazzoli-t'Serstevens 2007, 56). Such a division is a bit strange, as it has not been seen on any other lacquerware of this style or time (Otani 2019, 3; Pirazzoli-t'Serstevens 2007, 56). Chinese inscriptions on such lacquerware often follow a certain 'formula' that starts with stating the regnal title and the year it was made in, followed by the workshop and the functions and names of the officials involved in the production, who either made, manged or inspected the object (Otani 2019, 4-5; Pirazzoli-t'Serstevens 2007, 57). This inscription, however, contains more than that. The names of the people mentioned in this inscription are preceded by the character for *'chen'* (your servant), which is exclusively used in inscriptions on products that were exclusively meant for imperial use (Pirazzoli-t'Serstevens 2007, 57). Normally, inscriptions on objects meant for imperial use would start the sentence with *'chenyu'* (for use by the emperor) as well, to further indicate its special destination, but due to beginning of the inscription being missing we do not know if that were the case here (Pirazzoli-t'Serstevens 2007, 57). However, the third to seventh character might refer to *Kaogong*, an imperial workshop located in the Han capital of Chang'an (Okada 2019, 1; Otani 2019, 4; Pirazzoli-t'Serstevens 2007, 567). So, it is very likely that this lacquer box was produced for imperial use.

Though there is more to it, since the imperial workshops of Chang'an (*Kaogong* and *Gonggong*) are known to produce slightly lesser products in quality as well as in quantity compared to the imperial workshops located in Sichuan (Pirazzoli-t'Serstevens 2007, 57). These products from the Chang'an imperial workshops are often included in diplomatic gifts (Pirazzoli-t'Serstevens 2007, 57). Furthermore, the decoration style and the formulation of the inscription (aside from the ornamentation that interrupts the sentence) seems to match with the Chang'an imperial workshop's style as well (Pirazzoli-t'Serstevens 2007, 57). So, production date aside, we have obtained a clear idea on where the box was made and how it might have ended up with the Xiongnu instead of with the emperor.

There is however more evidence supporting the conclusion that this lacquer box was made in an imperial workshop, as Okada (2019) has taken a sample from the fragment pictured in figure 14B in order to analyse the make-up of the lacquerware. Using a scanning electron microscope and energy dispersive x-ray spectrometry it was revealed that the lacquerware contained scorched and powdered animal bone, as well as some colourless minerals, but most interestingly, it was also revealed that the lacquer was reinforced with a layer of silk (Okada 2019, 1, 4). Lacquerware is most commonly reinforced with a layer of ramie, linen, or hemp, not silk (Okada 2019, 4). Silk, being a very valuable textile, was most often reserved for people of high status or the very rich (Langford 2009, 56), so the fact that it was used in this object, again, indicates that this lacquerware box was intended for Han imperial purposes (Okada 2019, 4).

Sadly, the actual date of production is unknown since those characters are missing. Still, there are some clues that help estimate its year of production.

Such is the beforementioned character *'chen'* (your servant), appearing on goods produced for imperial uses, as this practise did not seem to have occurred before 16 BCE (Otani 2019,10). Furthermore, in the inscription found on this lacquer box, the distinction is made between "made" (*zao*), "managed" (*zhu)* and "inspected" (*xing*) (Pirazzoli-t'Serstevens 2007, 58). Such a distinction was not present before the period of 37-27 BCE, moreover, during the period of 9-23 CE (Wang Mang rule) the character *'zhu'* (managed) was replaced by the character *'zhang'* (Pirazzoli-t'Serstevens 2007, 58). Though during the later Han period, the character *'zhu'* came back in use, the style and ornamentation of the box indicates a date prior to Wang Mang and later Han (Pirazzoli-t'Serstevens 2007, 58). The style of this box namely reflects another lacquered box' style, which could be dated to 4 CE (Pirazzoli-t'Serstevens 2007, 58). Interestingly, a similar motif has also been seen on a box dated to 43 BCE (Pirazzoli-t'Serstevens 2007, 58), though such a date does not correspond with the occurrence of *'chen'* (your servant) on the Tsaraam box. Lastly, the use of the term *'ling shi'* to describe a type of official, seems to have started in 5 BCE, but does not appear on our lacquer box (Otani 2019, 10).

This gives us a possible (likely) timeframe of 27-16 BCE for the production of the lacquer box. This is not, however, the date of the mound itself, but at least a *terminus post quem* (Pirazzoli-t'Serstevens 2007, 58). We have to keep in mind that objects such as this box could have been kept for a while before it ended up as a grave good, which is something that might be the case here, as carbon dated samples suggest that the mound was created

somewhere between 30-120 CE, a timeframe significantly later than the one inferred by the lacquer box (Miniaev and Sarharovskaia 2007, 54; Pirazzoli-t'Serstevens 2007, 58).

Interesting to mention is that in one of the accompanying satellite burials of the central mound (mound 7) of Tsaraam, a fragment of lacquerware was discovered as well (Pirazzoli-t'Serstevens 2007, 58). This piece of lacquerware could be dated between 8 BCE - 4 CE, however, it was likely produced in one of the imperial workshops in Sichuan, rather than in Chang'an (Pirazzoli-t'Serstevens 2007, 58).

3.3.3 Conclusion

All in all, we can state with quite some certainty that this lacquer box was produced in one of the imperial workshops in Chang'an, known as *Kaogong*. This is not only based on the inscription, but also on the style of decoration and the use of silk as a reinforcement. The fact that this piece was made with imperial purposes in mind supports the idea that the Xiongnu received diplomatic gifts from the Han court, which matches with the treaties between the Xiongnu and the Chinese mentioned in the introduction.

CHAPTER 4: DISCUSSION

Within the chapter discussing theory it was mentioned that there are two ways to demonstrate the presence of globalisation processes: Either prove the existence of an increase in the flow of products and people, or find evidence for the multitude of cultural changes that occur under the influence of long-distance connections. The former is hard to grasp with archaeological material of three mounds, as they do not indicate the movement of people or goods. However, the relatively small amount of data gathered here does help us investigate the possible cultural changes that may have occurred through long-distance connections.

Case study 1: The textiles of Noyon Uul mound 22

Firstly, the large assemblage of textile finds found within one of the of Noyon Uul alone already presents an interesting take on the idea that the Xiongnu were dependent on the Chinese dynasties when it comes to trade across the continent. Sure, it is very likely that all the silk, where present in the materials, was produced in China, at first glance reinforcing the importance of relations with the Chinese. However, a deeper analysis on the material and dyes sheds light on more dynamic relationships and processes.

First off, in the case of the Chinese manufactured silk, it is not immediately clear if the final product made with this is silk is of Chinese manufacture, as it could be manufactured elsewhere with Chinese silk as one of the raw materials. This especially holds up when the used dyestuffs, when they were able to be determined, are not explicitly from China (as is the case for the boot, which contained red pigments that could be found in more western regions). Still, one can argue that China used foreign dyestuffs to dye their silks, and since the designs of the silk fabrics do not give away their origin, it is still a possibility that such silks were of complete Chinese manufacture. This seems to illustrate that the Xiongnu were dependent on the Chinese for their silks, as was the common idea. However, it is important to note that even though these silks are from China, we must not forget that they are incorporated into Xiongnu burial practises. This indicates that at least they meant something for the people within the Xiongnu communities.

A nice example of this is the ornamentally patterned silk fabric, even though the origin of its design and dyes could not be determined. The context of this piece of silk within mound 22 is unclear, but a similar piece of fabric was found in a different mound on the same

cemetery (Noyon Uul). In this other mound, it was wrapped around a case that contained a braid of horsehair. We can assume that this silk fabric in mound 22 could have been used in a similar manner. At least the silk of this piece was highly likely produced in China. Now, we cannot say for sure if the complete object was manufactured there as well, as there are too many features unknown (dye, design), but it is possible that the fabric ended up with the Xiongnu as a completed piece. If this were case, then a foreign product would have been in use for a local burial practice. When relating this to the theory discussed in chapter two, it can be seen as a feature of globalisation, as a foreign object has been adopted into local cultural practises.

If it was not fully a Chinese manufacture, then it becomes even more interesting, as that would imply that foreign material (in this case Chinese silk) was used for a product that had some form of importance within the local burial practises. This would indicate that the Xiongnu did not simply adopt material form the Chinese, but that they incorporated foreign elements in their own local products.

Another object from this mound that illustrates this idea with more certainty in the felt carpet with the appliqué. This carpet seems to have a local steppe design, but the red dye or threads used for the embroidery has a foreign origin which could be placed in the Mediterranean area.

It does not matter all that much if the threads were dyed there and then traded towards the east, or if the dye itself travelled across the continent. Both options indicate that some more complex processes are taking place, instead of the straightforward idea of simply trading complete goods. Going back again to the ideas on globalization and its features, this (as well as the ornamentally patterned silk) is an example of a combination of local and foreign elements, which can be described as hybridization. Though this may not seem as hybridization, as it is not a striking combination of cultures. But, as discussed before, hybridization does not necessarily entail a 50/50 combination of styles. It broadly concerns the adoption of foreign material into their own products or practises. One could also call this particular use of foreign material indigenization, which describes the adoption and adaptation of foreign products to better suit the local practises. In any case, one must acknowledge that in order to produce this carpet, contact with other cultures is imperative.

Another object from this assemblage is also a little ambiguous, but worthy of mention: The leggings and boot. The wool used in this piece has, again, no determinable origin, and the

silk in the embroidery threads are, again, of Chinese manufacture. The pigments used for the dyes generally can be found all over Asia (though it depends on the pigment where exactly in Asia). Some of these plants containing these pigments are known to be grown in China for the purpose of creating dyes, for example *Polygorum tinctorum* Ait. and *Indigofera tinctorial* L. for indigo dye. So, there is again a chance that the whole product is from China or that part of the raw material stem from there. Some of the pigments used in the dye can be found in East or Central Asia as well (such as the insects of the *Porphyrophora* genus), so those might be local as well, though they do not have to be. In any case, at least the silk is foreign, which makes it (just as the ornamentally patterned silk) a case of either an entirely foreign product in local context, or a product with multiple origins. Sadly, the design and the other material reveal (as of yet) clear origin, so this all we can say about it for now.

Something that is less ambiguous is the colourful tapestry. This tapestry already looks quite foreign when one glances over it, as it has a rather Mediterranean looking design. Though there is no solid proof that the pattern originated from the Mediterranean, the dyes and the weaving technique suggest that it has likely been produced in Syria, or in Palmyra to be exact. This shows us that the Xiongnu do not only incorporate Chinese style artifacts in their assemblage, but also include objects from other, more far-away places. One can still argue that the tapestry ended up with the Xiongnu through trade with the Chinese, instead of directly. Nonetheless, pieces such as this do show that the Xiongnu were certainly trading one way or the other, and that they were likely not passive barbarians that simply Sinicized because of overwhelming influence of the Chinese dynasties.

Though there are some objects that have a completely Chinese origin, such as the silk ribbon. The material, dye, and the context it was found in, all point to Chinese manufacture. These ribbons used to decorate a parasol of a Han style chariot; a find commonly found within large Xiongnu burial mounds. So, the context alone suggests Chinese origin, though there is more that supports this. The silk is again from China, and the dye is highly likely Chinese as well, as its main ingredient, Indian madder (*Rubia cordifolia* L.), was specifically grown in the Han silk dyeing manufactures. This all indicates that we are dealing with a clear Chinese import (even though the next case study presents some interesting data regarding such Han chariots these ribbons are associated with). Han style chariots that contain ribbons such as these are an important component of many large Xiongnu terrace

tombs, a burial practice that the Xiongnu likely adopted from the Chinese. Which might indicate that this is not a simple case of importing nice looking chariots with ribbons from the neighbours, but an adoption of (some of) the practises that come with it. So, in this case, the Xiongnu did exhibit some Chinese traits.

Combining all this, we should all be able to agree that something more complex is taking place regarding the textile tradition of the Xiongnu. Which can be interpreted as one of the common features seen in cultures under the influence of globalizing processes. All in all, the variety of the backgrounds of these textile finds might be a good indicator of how much is actually going on across the steppes. The Xiongnu did adopt some Chinese features, as indicated by the silk ribbons, but also used foreign products from other places in their burials, as was the case with the tapestry. Furthermore, (seemingly) local products are shown to contain materials with different origin than the steppes, illustrating that the Xiongnu did not passively obtained goods.

Case study 2: The metal finds of Gol Mod 2 mound 1

Now, for the second case study. All of the metal parts discussed belong to an aforementioned Han style chariot (but from another cemetery and mound). The chariot itself follows the Han style, and can be identified as a Han chariot at first glance. So, it often attributed to tribute that the Han needed to pay the Xiongnu, which included such chariots. Though with the chariots appearing in such large numbers as they do in Xiongnu burials, the Chinese must have given them a lot of chariots in order to supply all these Xiongnu burials. However, upon closer inspection of the metal components of the chariot found within mound 1 of Gol Mod 2 cemetery, it actually is not an 100% Chinese object. The axle caps, bushings and bronze flower ornaments are produced using steppe metal traditions. Which may have been done in order to meet the demand for such chariots by the Xiongnu. Be that as it may, it is certainly a fine example of another case where local and foreign features mix. Though this time it is the other way around if you compare it with the textile finds of Noyon Uul. Here, the style and design of the end product is based on the original Han Chinese idea of a chariot, but the production methods and materials (in the very least the metal parts) are local.

As the style of these metal objects seem to be purely Chinese, it shows us that the Xiongnu took the over the Chinese design into their own, in this case, burial practices. These chariots

seemed to have attained enough important to Xiongnu culture that they have adopted them fully into their own material culture and started to produce them themselves.

This local production might also have been caused by apparent the high demand for such chariots, and the lack of lead and tin in the Xiongnu landscape. In any case, it is interesting to see that Chinese style chariots have gained a considerable importance in the Xiongnu burial assemblage the least.

Though it is also important to note that we do not know how many 'Han chariots' that have been found in the Xiongnu burial contexts actually contain locally produced metals. Maybe the chariot of mound 1 of Gol Mod 2 is one of the rare cases where this has occurred, or maybe this was a common practise on the steppes. Locally made or not, it is certain that such chariots played an important role in Xiongnu society.

Case study 3: The lacquer box of Tsaraam Valley mound 7

The final case study might not appear as interesting in terms of hybridization or any other feature associated with complex connectivity. But it is still an important part of the whole picture regarding connectivity on the steppes, which this thesis has tried to illustrate. As such, the presence of Chinese goods, which were likely produced with diplomatic purposes in mind, in Xiongnu context is not surprising considering the multiple treaties that have passed between the both of them.

This lacquer box has been integrated as a grave good in the Xiongnu burial practices, which indicates an incorporation of foreign material into local practices. Furthermore, if you look at the dating of the box (8 BCE – 4 CE) and the dating of the mound (30 – 120 CE), there is a considerable difference in time between the two of at least 26 years. Which implies that the object was either kept in China for a while before being distributed to the Xiongnu as a tribute, or, it was kept with the Xiongnu for a while until it was buried with someone in the mound. In the case of the latter, the lacquer box would not have only been incorporated into burial rites, but also might have been a part of Xiongnu life.

All in all, this case studies shows us that it is also important to observe that, aside from the complex things happening regarding the textiles and the metal, the assumption that Chinese goods ended up Xiongnu due to local politics rather than globalization is not wrong. It also happens concurrently with other more complex processes in regard to trade, which in turn complicates things even more.

The bigger picture

Although the case studies consist of a relatively small sample, they give a good impression of the dynamic processes that actually take place on the steppes. The textile finds and the metal chariot components show us that foreign material was incorporated in local items, or the other way around, that local production methods were used to create objects in a foreign style. Both these discoveries illustrate that the Xiongnu had a more dynamic role in regard to trade and foreign materials than previously assumed. These intermingled objects remind us of some of the features often associated with globalisation processes, as components with different origins are combined resulting in new products, hinting to some form of hybridization or indigenization.

Even the objects displaying one cultural origin are important in order to sketch an accurate picture of trade and its cultural effects within the Xiongnu polity. The lacquer box and the incorporation of Chinese looking items, signify that such items likely held an important place within Xiongnu culture, so much so, that the Xiongnu started to produce such items using their own methods. Furthermore, it is important to note that not only Chinese materials ended up within Xiongnu mounds. The tapestry with its (likely) Mediterranean origins shows that objects from other places that are foreign to the Xiongnu held enough status or importance to be incorporated into their burial practises. While there is only one very clear example of this within the assemblages of these three case studies, the fact that are more materials that could have come from the west present within some of the other textiles show that there likely has been some type of contact with other cultures than the Chinese.

All in all, these three case studies show that Xiongnu burials have great potential in terms of helping us understand trade and other cultural processes on the steppes. That said, there is plenty more to be discovered, as these case studies only involve three mounds, and only one material group per mound. So, it might not 'tick' all the boxes regarding the common features of globalization, but it does have the potential to bring certain aspects of complex connectivity to light.

CHAPTER 5: CONCLUSION

Finally, it is time to discuss the results of the case studies in relation to the big questions that were raised in the introduction of this thesis. The materials that were analysed from Noyon Uul (mound 22, textile), Gol Mod 2 (mound 1, metals) and Tsaraam Valley (mound 7, lacquerware) helped us to get a little closer toward answering them.

'To which degree was trade present between the Xiongnu and the cultures of the rest of the world?'

The actual degree of trade that was present between the Xiongnu and other cultures is hard to determine concretely using three case studies. However, these case studies do show that there is a considerable number of foreign products within Xiongnu mounds (whole objects and raw materials), which implies that such products or materials were integrated into Xiongnu culture in some way. So, the exact degree of trade present is unknown as of yet, but it is safe to say that the Xiongnu polity were pretty familiar with foreign products. And not only with products from nearby cultures, such as the Chinese, but also with materials stemming from far-away places such as the Mediterranean.

'And more so, how is this reflected within their own culture?'

The foreign materials retrieved from the burial mounds consisted out of entire objects as well as materials incorporated into (more) local objects. Foreign objects seem to have been used together local burial practices, which might signify the cultural significance of such objects to Xiongnu peoples. Even though there are foreign objects within Xiongnu mounds, it is not an overwhelming presence. The most interesting cultural process that has occurred as a (probable) result of trade is the occurrence of objects that contain a combination of local and foreign features.

'Was China such a dominant cultural force on the steppes as previously believed? Or did the Xiongnu manage to stand their own between the massive empires of the Romans to the west and the Chinese to the east?'

It is true that most of the foreign objects uncovered from the studied mounds had Chinese roots. Which is not a very strange discovery, as the two exist relatively close to each other and had multiple treaties though time involving goods. That being said, the inclusion of Han chariots in Xiongnu burial rites in an interesting feature to point out, as it looks to be

a Chinese practise that has been incorporated into local burial practices. However, the Xiongnu did not simply adopt the practice, but they have made it their own by producing such chariots themselves. So, even though they seem to use a lot of Chinese silks and other products, they do not seem to copy Chinese culture completely. As the silks seem to have been used in local context, and the chariots were produced with materials that suited the Xiongnu better.

Furthermore, though foreign objects are certainly present, and some Chinese features have been adopted in some way, the steppe culture of the Xiongnu seems to still be very much present. Local (looking) products were certainly used withing the mounds, and, though not thoroughly discussed, all three of the studied mounds fit the description of a typical Xiongnu mound perfectly.

ABSTRACT

The Xiongnu have long been disregarded, thinking that they played no active part within world history. This thesis aims therefore to shed light on Xiongnu trade and its cultural impact on their culture by means of three detailed case studies, which are placed against a theoretical background that involves globalization theory. These case studies focus on one material group (textile, metal or lacquerware) and a burial mound from a different cemetery each (Noyon Uul, Gol Mod 2, Tsaraam Valley), in order to approach the following big questions: To which degree was trade present between the Xiongnu and other cultures and how that is reflected in their material culture? How large an influence are the Chinese dynasties on Xiongnu culture? Did the local Xiongnu culture remain standing despite influences from the outside?

The first case study, following a chapter discussing globalization theory and its application itself, examines textile finds from mound 22 of Noyon Uul. The designs, materials and dyes will be analysed, resulting in data that reveals foreign origin of whole objects or some of the raw materials. The second case study comprises of an analysis of the metal finds found within mound 1 of the Gol Mod 2 cemetery. These metal finds all stem from Han style chariots, though the production techniques of the metal (iron and bronze) show that these chariot components were likely locally made by Xiongnu peoples instead. Lastly, the third case study concerns a lacquer box retrieved from mound 7 of the Tsaraam Valley. This lacquer box bears a Chinese inscription and shows other signs of being a product made with diplomatic purposes in mind as well.

The chapter following the case studies discusses what implications the findings of the case studies actually have in regard to globalisation and trade. The textiles and the metal finds reveal that foreign elements have been adopted and sometimes have been adapted to fit Xiongnu culture better. The lacquer box reinforces the idea that the Xiongnu received goods from the Chinese in accordance with treaties between the two empires.

Though the overall scale of this research is rather small, it provides a nice picture of how dynamic trade on the steppes likely has been, which contrasts the old notion that the Xiongnu were passive barbarians that slowly Sinicized.

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