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Egypt beyond representation : materials and materiality of Aegyptiaca Romana

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1. Understanding stone in the Roman world I: provenance, style, and workmanship

1.1 STONES IN PRE-MODERN SOCIETIES

Stones or, in geological terms, rocks, can be defined as naturally occurring solid aggregates of one or more minerals or mineraloids. As rocks make up the solid outer layer of the earth, encounters between stones and mankind go back to the very moment the first humans set foot on the earth. Relations between human beings and stones have always been significant. Indeed, it can even be argued that stone has played a substantial role in the evolution of modern man. Throughout the Stone Age, it was man's recognition and appreciation of the physical properties of stones that led them to use stones as raw material for a variety of tools, which resulted in mankind's definitive advantage over other species. This may have started more than 2,000,000 years ago in Ethiopia, where eroded surface material was worked into usable tools. Much later, approximately 100,000 years ago, the first known systematic extraction of stones took place in South Africa.[113] As knowledge of the intrinsic qualities of stones and technology improved over time and some products proved more successful than others, the demand for certain types of stones and stone tools likewise accumulated. Appreciated for their technological capabilities and/or specific cultural values – like wealth and power, resulting from their limited availability and thus attesting to the owner's access to scarce and remote networks – stone materials and objects have been significant since the earliest times.

1.1.1 Egypt

Stone has played a central role throughout Egyptian history.[114] The use of stone for architectural and sculptural purposes seems to have commenced soon after the foundation of a unified Egyptian state and the concomitant rise of elites in the late 4th millennium BC. Early examples include stone masonry and stone grave goods, especially funerary vessels, from Early Dynastic elite tombs at Abydos and Saqqara (ca. 3000-2649 BC).[115] The demand for stones sharply increased with the construction of the large royal funerary complexes of the Old Kingdom, which culminated during the Fourth Dynasty (ca. 2613-2494 BC) with the construction of the large pyramids at Giza. Large monolithic blocks were preferably quarried close to the river Nile in order to minimise the distance of land transport. However, several varieties of coloured stones were obtained from remote areas in the Eastern Desert, with individual quarries located at least 100-200 kilometres away from the Nile. Once the stones reached the river, they were transported by ship to their intended place of use. Depictions on the walls of Hatshepsut's mortuary temple at Deir el-Bahari (Thebes, 18th Dynasty, ca. mid-15th century BC) show the transportation of two obelisks from the quarries near Aswan to the temple complex at Karnak and demonstrate that Egypt already mastered the transport of large, voluminous monoliths over long distances early on.[116] Egyptian stones were also valued highly by the elites of ancient pre-Roman Eastern Mediterranean societies, as evident from the preserved diplomatic correspondence between Egypt and Western Asiatic states of the 14th-13th centuries BC, in which the exchange of Egyptian stones is an important topic.[117] As a result, a tradition of using stones for both architectural and sculptural purposes came into being in Egypt early on, which included a wide range of different materials.

113. The raw material would normally be procured from working eroded deposits of stone or the collection of loose pebbles. See Waelkens (1992) 5.
114. It has been argued that the modern image of ancient Egypt is over-dominated by stone because of its favourable preservation conditions. Other materials, such as metals (especially copper and gold), wood, ivory and bone, may have been equally important but either have disappeared or have been recycled. See Baines (2000) 29-30.
115. The use of stone for both architectural and sculptural purposes may even have begun in the late Predynastic period, although the dating is not entirely clear: see Aston *et al*. (2000) 42. On stone vessels see Aston (1994), Lucas – Harris (1962) 421-428.
116. See Clarke and Engelbach (1930) 34-45 and fig. 39.
117. Cf. Baines (2000) 30.

1.1.2 The Near East

Relative to Egypt, the relationships between stone quarries and customers seem to have been more direct in the ancient Near East. Naturally occurring blocks of limestone were used locally as early as 6000 BC in the fortification wall of the village of Maghzaliya in northern Iraq. Much later, in the 2nd millennium BC, local limestone was used for the construction of the monumental architecture of the Hittite capital, the city of Hattuša.[118] Other varieties of stones that occurred naturally within the boundaries of the Hittite Empire were quarried as well, but, like limestone, these were mainly used locally or transported over comparatively small distances. However, the Hittite Empire also actively imported stones from outside Anatolia, not least from Egypt.[119] The direct quarry-customer relationship that had characterised the Hittite engagements with stones remained essentially the same under the Assyrian Empire in the 1st millennium BC. The core area of the Empire had its own local, workable stones, in particular limestone and alabaster, which could meet the demands for architectural and sculptural purposes. Additionally, the Assyrians imported (coloured) stones from conquered territories to use for architectural reliefs. The rationale behind this choice may have been both practical (intrinsic qualities of the materials) and propagandistic (visible testimony to the expanding Assyrian power).[120] Finally, a series of reliefs from Sennacherib's royal palace in Niniveh (ca. 700 BC) shows the process of quarrying, prefabrication, and transport of a large monolithic statue from the quarries near Balatai to the imperial palace at Nineveh, some 40 kilometres away, which demonstrates that the Assyrians, like the Egyptians, were capable of transporting loads of stones over considerable distances if necessary.[121]

118. Waelkens (1992) 11-12; cf. ibid. (1990a).
119. As evident from administrative texts from Hattuša: see Klengel (2009) 102-103. Moreover, at the start of the 2nd millennium BC, the Sumerian city of Ur (Ur III) traded products like textile, wool, and oil, for copper and stone from Magan in present day Oman: Larsen (2009) 8. Textual sources also mention that the taking of diorite was listed as an important goal of military expeditions under Sargon of Akkad, and thus indicate that this material was highly valued in the late 3rd millennium BC.
120. Raede (1990) 46-47.
121. The reliefs are now best known from drawings that were made upon their excavation in 1849 by Henri Layard: see Raede (1990) 48-52 and figs. 2-11.

1.1.3 The Greek world

The history of the use of white marble in the Aegean goes back to the Middle Neolithic period (ca. 5000 BC) at least, when the stone was used for the production of anthropomorphic figures in areas where it naturally occurred.[122] Apart from the local use of marble, evidence from Franchthi Cave in the southern Greek Argolid suggests that the long-distance trade and oversees transportation of marble commenced already in late Neolithic times.[123] An intensification of the use of and trade in marble can be observed during the Aegean Early Bronze Age (ca. 3rd millennium BC), when a flourishing trade of marble artefacts from the Cycladic islands emerged, including the characteristic figurines and vessels.[124] The marble used for these objects was most probably obtained from weathered surface beds and loose pebbles. Systematic exploitation of stone quarries seems to have commenced with the development of Minoan monumental palace architecture and the concomitant increased demand for stone construction material on Crete in the early 2nd millennium BC. This practice was followed in the 15th century BC on the Greek mainland, when large quantities of stone were needed for Mycenaean tholos-tombs and defensive structures.[125] From the 8th century BC onwards, a sharp increase of the demand for white marble for both architectural and sculptural purposes can be observed; this period is characterised by what may be called a commercialisation of marble engagements. Yet, the Greek quarry system seems to have essentially remained small and local in scope. The demand for stones was typically met by local sources. However, fine qualities of white marble were occasionally transported over large distances. For

122. See Waelkens (1990b), ibid. (1992) 7.
123. Isotopical analysis of the marble of artefacts from this site, where marble does not occur locally, suggests Peloponnesian and Cycladic (Naxos) sources; see Herz (1992) 188.
124. Examples of so-called Cycladic art have been found in mainland Greece, western Anatolia, and Egypt; see Herz (1992) 189-190 with additional bibliography. On the localisation of prehistoric Cycladic marble quarries, see Tambakopoulos and Maniatis (2012).
125. On Minoan stone quarrying see Waelkens (1992) 7-11 and Papageorgakis et al. (1992), both with further bibliographical references. On Mycenaean stone extraction see Ward-Perkins (1992a) 19, who mentions examples of *serpentino* from the quarries at Krokees and *rosso antico* from the Mani Peninsula; cf. Waelkens (1990b) 56.

example, Athens imported white marble from remote suppliers, such as the islands of Naxos, Paros and Chios, and Ephesus in Ionia, for its large-scale building program of the 5th and 4th centuries BC.[126] In addition, Parian marble appears to have been preferred for the production of important statues.[127] Yet, these are the exceptions that prove the general rule, namely, that the relationship between stone quarries and customers in the Greek world was and remained essentially direct.[128]

1.1.4 The Hellenistic world

The use of stone for architectural and sculptural purposes had been well-known for the areas and periods discussed thus far, although significant differences exist between their respective engagements with stone. Egypt had a long history of long-distance transport of stones, whereas it was common practice to use the nearest source of good quality stone in Near Eastern and Greek societies. However, for monumental constructions, stone was occasionally transported over considerable distances in the Near Eastern and Greek worlds, too. And even though the relationship between quarry and customer was relatively direct – namely, Egyptian society could meet its demand for stones from its own wealthy sources, and the Greek world essentially made use of stones that occurred throughout the Greek world – stone had also been an 'international' commodity from an early period onwards. However, the gradual development towards an international long-distance trade of stones did not emerge until the Hellenistic period. The demand for stones sharply increased with the rise and installation of Hellenistic kingdoms. Large quantities of stones were needed to build capital cities, such as Alexandria and Pergamon, and the wealthy patrons from these Hellenistic metropoleis readily invested in the procurement of stones from the most distant quarries.[129] As a result of this increasing demand and intensification, new sources were added to the already known suppliers of stone materials. The last three centuries BC, it seems, witnessed an increase in the scale and 'international' character of stone trade. This situation undoubtedly reflects the importance of stone materials in the increasingly connective Hellenistic world. Soon Rome would emerge as the new leading power in this world, and Roman engagements with stone would eclipse everything the world had seen before.

1.1.5 The Roman world

"Synnada is not a large city […] and beyond it is Docimaea, a village, and also the quarry of 'Synnadic' marble […] At first this quarry yielded only stones of small size, but on account of the present extravagance of the Romans great monolithic pillars are taken from it […] so that, although the transportation of such heavy burdens to the sea is difficult, still, both pillars and slabs, remarkable for their size and beauty, are conveyed to Rome".[130]

Writing around the start of the 1st century AD, the Greek geographer Strabo aptly captures the changes that Roman rule brought to a modest Phrygian city called Synnada and the nearby village Dokimeion. Thus a previously hardly known and remote settlement situated in west-central Anatolia could develop into an important Roman centre because of its location near stone-producing quarries. The stone type that these quarries produced had already been used before the Roman period, but, as Strabo describes, this was by no means comparable to its use in the Roman period.[131] This passage is just one among several examples where ancient writers allude to the phenomenon of the Roman stone trade. Although the Mediterranean world already had a history of stone use and trade, as the previous sections have shown, the first centuries AD witnessed a redefinition of all previously existing human-stone engagements. The sheer scale of stone procurement, the large distances over which stones were transported, plus the organisation and infrastructure needed to make all of this happen are just some aspects that indicate how Roman quarry-customer relationships came to differ significantly from those of earlier periods.

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126. It has been suggested that Parian marble was initially preferred over local, good-quality marble from Mount Pentelikon because the sculptural potential of Pentelic marble was not yet appreciated: Herz and Wenner (1981) 17.
127. Mielsch (1985) 12, Herz (1992) 190, and Bradley (2006) 10.
128. Ward-Perkins (1992a) 20-21; cf. ibid. (1992b) 61-63, Waelkens *et al*. (1988), Waelkens (1990b) 56-61.
129. Ward-Perkins (1992a) 21.
130. Strabo, *Geography* 12.8.14 (translation H.L. Jones); cf. Appendix B.
131. This is the so-called *pavonazzetto*, which had been used for sculptural purposes since the 2nd century BC: Mielsch (1985) 59.

John Bryan Ward-Perkins was a pioneer in the study of the Roman stone trade, who worked on the reconstruction of the Roman stone trade between 1951 and 1980, and his work remains fundamental to the discipline.[132] Building on earlier work that had resulted in the idea of an organised Imperial Roman quarry and trade system of decorative stones,[133] Ward-Perkins argued that the increased demand for decorative stones in the 1st and 2nd centuries AD resulted in profound reorganisations of the system of stone production and supply. Consequently, from the mid-2nd century onwards, this system took on a semi-industrial character based on bulk production and stockpiling of stones in the importing centres, plus standardisation and prefabrication at the quarries. This model contains an excellent discussion of the concept of provenance, although implicitly, and therein lies its importance for the purpose of the present study. Therefore, the following sections discuss Ward-Perkins' model, with particular focus on the possible relationships between (the origins of) raw materials, craftsmen, and carving traditions.[134]

1.2 ROME'S MARBLE YARDS: BLUEPRINTS OF THE ROMAN WORLD?

The most fundamental innovation of the Roman stone trade, according to Ward-Perkins, was a completely new quarry-customer relationship "based upon bulk-production at the quarries and upon stock-piling both at the quarries and in […] the importing cities".[135] This

132. Ward-Perkins (1951) is generally considered as the defining article on the Roman stone trade; cf. Russell (2013a) 1-2. Several of Ward-Perkins' papers on this topic were re-printed in 1992 with updated comments and notes: *Marble in Antiquity* (1992). Even though Ward-Perkins' model has been refined by subsequent scholarship, it largely remains its fundamental interpretive framework up until today. Studies that build on Ward-Perkins' work include, among others: Dodge (1991) with reviews of some important studies of the late 1980s; and Peacock (1994), who discusses the contribution of publications on the Roman stone trade from the early 1990s. Other scholars that have dealt with particular aspects of Ward-Perkins' model include, in particular, M. Waelkens, J. Clayton Fant, and P. Pensabene; their extensive lists of publications include important contributions, such as Waelkens (1982), (1985), (1990b); Fant (1989), (1993), (2001); Pensabene (1994), (1998), (2002) and (2012). Studies that should also be mentioned in this respect include Jongstra (1995), Maischberger (1997), Clarke (2008), Hirt (2010), as well as the recent work of Ben Russell, most notably Russell (2013a).

133. Crucial in this respect are the excavations directed by Visconti near the Aventine Hill in Rome between 1868 and 1870, during which the Emporium, one of Rome's marble yards, was discovered. These campaigns yielded large quantities of decorative stones of all sorts, in different shapes, sizes, stages of workmanship, and frequently inscribed with quarry marks, which first gave rise to ideas of a centrally governed system. On Visconti's excavations, cf. *infra*, n. 138. General interest in the stones of Antiquity goes back to the late 16th century at least, when the Medici family established the 'Opificio delle Pietre Dure' in Florence, a workshop specialised in inlaid stonework. The stonecutters reused antique materials on a large scale for their projects, as the *scalpellini*, the stone masons of Renaissance Rome, did in Rome. From the 17th to 19th centuries, ancient stones were also popular souvenirs for travellers who returned from their Grand Tours, and several renowned collections of antique stones were created during this period. One of these belonged to the Italian lawyer Faustino Corsi (1771-1846), who, in contrast to his predecessors whose interest had mainly been in the aesthetic aspect of stones, set out to determine the geological sources of the stones in his collection. With this aim, he studied the writings of ancient authors and arranged his collection according to geological principles, and thereby took a more scientific approach. The methodological considerations laid out in Corsi's main work on the ancient stones of Rome, *Delle pietre antiche* (third and final edition in 1845: Corsi 1845), remained the principal reference for the study of Rome's ancient stones for more than a century. Corsi's collection, which contained some 900 specimens of ancient Roman stones plus stone samples from contemporary Italian quarries and non-Italian sources, was sold in 1827 to Oxford, and can be accessed online at http://www.oum.ox.ac.uk/corsi/. On the history of the reuse of antique stones see especially Gnoli (1988) 95-100; cf. Cooke and Price (2002) 415 and Price (2007) 12-13; Mariottini (2004) gives a diachronic overview of the history of collecting antique stones.

134. The editors of Ward-Perkins' papers already recognised the importance of Ward-Perkins' model in discussing possible relationships between quarry, shipper, and customer: Ward-Perkins (1992b) 61 n. 1.

135. Ward-Perkins (1980) 325; cf. ibid. (1992b) 63. The theory of bulk-production and stockpiling of stones in major cities has met with various scholarly responses. It was largely confirmed in studies like Dodge (1991) 36, Pensabene (1994) 335 and (2002) 29, Lazzarini (2010) 489; see also Maischberger (1997, 159), who concludes that "die Ergebnisse der topographischen Untersuchung zu den Marmorlagern in Rom und Umgebung [bestätigen] grundsätzlich die von J.B. Ward-Perkins formulierte These, daß die Lagerhaltung die Folge einer nicht an konkreter Nachfrage orientierten Massenproduktion in den Steinbrüchen sei"). However, critical voices can be heard in particular in the work of Clayton Fant. Based on the observation of quality deficiencies in several of the stone leftovers at Portus, Fant (1992, 116-117) has made a case that at least a part of the leftovers consisted of rejects. Building on this argument, and extending it to the blocks that have been recovered from the Emporium, he challenged the idea of immense stockpiles itself more recently: Fant (2001) 177-196; cf. Ward-Perkins (1992b) 64 n. 14. The recent work of Russell builds on Fant's theory and concerning Rome's marble yards (2013a, 237) the author concludes that "The Portus and Emporium assemblages, in sum, might more

characteristic becomes particularly evident when we look at the marble yards in the Roman world. These were stone repositories with stocks held locally that could meet ordinary stone requirements. Rome had at least two large stone repositories.[136] One of these was located at the old commercial river harbour of the city, known as the Emporium, on the eastern banks of the river Tiber below the Aventine Hill, while the other one was situated at Rome's maritime port of Portus.[137] No exact numbers of the unused stones that have been excavated at these sites are known, due to incomplete documentation. However, estimates run easily into hundreds or even thousands of specimens for the Emporium alone, which indicates that Rome's marble yards must have been substantial institutions indeed.[138]

In order to get an idea of the availability of decorative stones in Rome, I conducted a survey of the stone types from the marble yards at the Emporium and Portus.[139] As Table 2.1.1 shows, at least 26 different types were present from sources that spanned the Roman Empire from the east to the west.[140] Hence, besides three Italian stone types, the depots comprised materials from (often remote) sites in the east, including the Egyptian Eastern Desert, west-central Anatolia, mainland Greece and several Greek islands, and from sites in present-day Tunisia and Algeria, and Spain in the west. A comparison of these stone types with the most important decorative stones of the Roman world shows that the material make-up in Rome's marble yards can be considered as a good cross-section of the most sought-after stones in the Roman world. With due allowance for the chronology of the two sites discussed, several of these materials must have been simultaneously available.[141] Based on this, the stone

plausibly be interpreted as the remains of dumps or discards, similar in composition to the unintentional accumulations we find at the quarries, than as the remnants of carefully managed stockpiles". It is clear that no consensus has yet been reached on the understanding of this aspect of the Roman stone trade.

136. The evidence from Rome has been studied in most detail and will be considered here. According to Ward-Perkins, other storage facilities for stone existed in cities like Alexandria, Athens, Ephesos, and Utica. For the available evidence, see Ward-Perkins (1992b) 64 (Ostia), 69 (Emporium), 74-75 (marble yards other than Rome).

137. Based on a detailed study of the available evidence from these storage facilities, Martin Maischberger concludes that the Emporium was Rome's first and main depot for stone throughout the 1st century AD. The facility at Portus was opened as a result of the increased demand for decorative stones throughout the late 1st and early 2nd centuries AD. It would gradually take over the role of Rome's main marble-yard and was the only one that remained in function into Late Antiquity. See Maischberger (1997) 50-51 and 77-82 for Portus and the Emporium, respectively; cf. Fant (2001), Pensabene (1994). For recent work on the harbour constructions at Portus, carried out in the context of the Roman Ports Project under direction of Simon Keay, see esp. Keay *et al*. (2005), Keay and Paroli (2011), Keay (2012). Additional evidence from the Campus Martius suggests activity in this area of stone workshops, where stones were temporarily stored for specific construction projects. These workshops have been associated with the fire in 80 AD that damaged large parts of the Campus Martius and which gave the impetus to large-scale (re-) construction works under Domitian (81-96 AD): Maischberger (1997) 158, cf. Fant (2001) 186, De Angelis d'Ossat *et al*. (2015) 103-104. A much smaller Late Antique storage for semi-finished architectural fragments of Thasian marble was found in the temple of the Fabri Navales in Ostia: see Herrmann and Barbin (1993) 99-103; cf. Jongstra (1995) 43.

138. Maischberger's study includes 339 documented specimens found at Portus since 1840; other studies that have dealt with the same material have come to different numbers. See also Fant (1992) 117, Pensabene (1994) 422-423 and the update published by Pensabene and Bruno (1998) 22 = Fant (2001) 169 = Pensabene (2002) 28. Estimates of stones that have been recovered from the Emporium easily surpass the number of a thousand for just the campaigns that P.E. Visconti undertook by order of Pope Pius XII between 1868-1870; Maischberger comes to a rough estimate of 1250-1400 large blocks, but this number pales in comparison to the number of small fragments that were found: the find of ca. 30,000 small stone fragments is reported for November 1869 alone: Maischberger (1997) 71-75; cf. Bruzza (1870), Fant (1992) 118, ibid. (2001) 188. Lastly, some 270 specimens have been collected from the Campus Martius: see Maischberger (1997) 142-143.

139. Regardless whether the stone leftovers from Rome are the remains of carefully managed marble yards or dumps of rejected stones, they provide a rough index of what once must have been present in the largest of all importing centres.

140. The following data were used: Emporium: Pellegrini (1868) 151, Bruzza (1870), Maischberger (1997) 74-75, cf. Fant (2001) 188-189; Portus: Pensabene and Bruno (1998) 22 = Fant (2001) 188 = Pensabene (2002) 28. I have only considered the presence/availability of stone varieties in Rome's marble yards and not, as others have, quantified these data for reasons of representativeness (for which see also Maischberger 1997, 47 and Fant 2001, 169 n. 19). In line with this section's main aim, that is, to give a first idea of the extent of connectivity in the Roman world in terms of the availability of stone types, I have solely focused on availability, although of course the distribution pattern of certain types of stone also depended on other variables. For the same reason, I have not differentiated between the different object types (e.g., columns, slabs) that were stored. For a discussion on the distribution of stone see Russell (2013a) 143-146 with additional bibliography.

141. Whereas distribution maps of particular stone types illustrate the large distances over which stones were transported and present a strong visual image of the large scale of this phenomenon, they are not particularly informative about the presence and

Table 2.1.1. Presence of stone types and their sources in Rome's marble yards.

Source		Stone type	Site	
			Emporium	Portus
Egypt	Wadi Umm Esh	*serpentina moschinata*		x
	Wadi Umm Wikala/Wadi Semna	*granito verde della sedia*	x	
	Mons Porphyrites	Imperial porphyry	x	
	Various (e.g., Hatnub, Wadi Gerrawi)	travertine		x
Turkey	Íscehisar	*pavonazzetto*	x	x
	Vezirhan	*breccia corallina*	x	
	Marmara Adası	Prokonnesian marble		x
	Cigri Dag	*granito violetto*		x
	Sigacik	*africano*	x	x
		bigio africanato		x
Greece	Chios	*portasanta*	x	x
	Thasos	Thasian marble		x
	Skyros	*breccia di Settebasi*	x	x
	Paros	Parian marble	x	x
	Karystos	*cipollino*	x	x
	Eretria	*fior di pesco*	x	x
	Mount Pentelikon	Pentelic marble		x
	Larissa	*verde antico*	x	x
	Krokees	*serpentino*	x	
	Mani Peninsula	*rosso antico*	x	
Italy	Montagnola Senese	*breccia dorata*		x
	Monte Capanne (Elba Island)	*granito dell'Elba*		x
	Carrara	Luna marble	x	x
Spain	Tortosa	*broccatello di Spagna*	x	
Algeria	Bou Hanifia	*alabastro a pecorella*		x
Tunisia	Chemtou	*giallo antico*	x	x
Various sources		*nero antico*	x	
		bigio antico	x	x
Unknown		*alabastro listato*		x
		jasper	x	
		spato fluore (rock crystal)	x	
		unspecified alabaster	x	
		unspecified breccia	x	
		unspecified granites	x	
		unspecified white marble	x	x

repositories from Rome represent a "unique material 'map' of the Roman empire".[142]

Therefore, if an analysis of the distribution of stone types from across the Empire offers insight into the extent of connectivity in the Roman period, as has been recently argued, then a study of Rome's unused stones unmistakably shows that the city was very much part of that conneced world.[143] Moreover, the fact that these stones were not yet carved into finished objects but remained available as raw and partly-worked materials already indicates that the relationships between the geological source of stones and finished stone artefacts was not necessarily straightforward.

1.3 MARBLE IN THE CARGO: ROMAN SHIPWRECKS

In assessing Rome's marble yards, I have explored the receiving end of the Roman stone trade. This subsequent section moves to an earlier stage in the sequence, namely, the stage that leads from solid bedrock to finished stone product: stones in transit. This allows us to assess the Roman stone trade 'in operation' and to see how stone producing quarries dispatched their goods. Prefabrication, as defined in Ward-Perkins' reconstruction of the Roman stone trade, is a key concept for this.[144]

The evidence from Roman shipwrecks with cargoes of stone materials constitutes the most notable body of archaeological evidence for the Roman stone trade in operation.[145] Interestingly, it offers a unique insight into the different stages of workmanship of stone objects during transport; that is, between the stone producing quarries and the place of destination, which directly affects the question where objects were made.[146] Roman shipwrecks with stone cargoes demonstrate, first and foremost, that there was no such thing as a typical Roman stone cargo.[147] Apart from a large variation of stone types, cargo loads, and object types that were transported, objects could be dispatched at all possible stages of finishing. Rough blocks, roughed-out, half-worked, nearly-finished, and completely finished products of stone have been recovered from shipwreck sites.[148] Moreover, objects in different stages of finishing could be part of the same cargo.[149] Although there appear to be certain correlations between materials, object types, and the degree of finish that was given to objects before transport, several exceptions show that these relationships should not be understood as strictly defined rules.[150] For instance, it is usually thought that

availability of stone types at a certain time and place within the Roman Empire. For distribution maps of popular stones in the Roman world see Lazzarini (2004) and (2009), and Lazzarini – Sangati (2004). Lazzarini compiled distribution maps of both primary (i.e. Roman/Byzantine period) and secondary (i.e. medieval or later) uses of 28 commonly used (coloured) stone varieties in the provinces of the Roman Empire on the basis of more than 6,000 records from 377 sites. For recent criticism on such traditional distribution maps, see Russell (2013a) 144.

142. Schneider (2001) 7.

143. Russell (2013a) 6.

144. "Columns, for example, were regularly quarried to standard multiples of the Roman foot; and the prefabrication of such bulky objects as sarcophagi, presumably introduced in the first place in order to reduce transport costs, in course of time led to specialisation, with certain quarries producing certain particular shapes, and in some cases even certain particular designs, specifically to the order of certain particular markets": Ward-Perkins (1980) 325; cf. ibid. (1992b) 63.

145. For the most up-to-date overviews of Roman shipwrecks with stone cargoes, with reviews of older literature and further bibliography, see Russell (2012), (2013a) 112-140, and (2013b); the latter paper collects evidence for 96 (potential) shipwrecks with stone cargoes datable between the 2nd century BC and the 7th century AD. Parker (1992) should still be considered as a standard reference for Mediterranean shipwrecks in general; see also Maischberger (1997) 25-31.

146. Of course, a distinction must be made between shipwrecks with freshly quarried stone materials that were in transit between quarry and destination, and those with reused objects aboard – for instance, the Mahdia shipwreck that is thought to have sunk in the 1st century BC is considered to have transported already finished and centuries-old Greek sculptures for Late Republican Italian senators: Parker (1992) 262 no. 621.

147. This is one of the main arguments in Russell (2012).

148. Widely acclaimed and sought-after stone types, such as fine white marbles and exotic coloured stones, occur next to stones of local and regional importance. Furthermore, cargoes varied greatly in terms of size, and typically included architectural elements (e.g., columns and capitals), sarcophagi, statues, roughly squared blocks, or a mixture of the aforementioned object types. On the issue of finished versus unfinished products of stone see Rockwell (1990a).

149. Examples of ships with stone cargoes with different stages of finishing aboard include the shipwrecks of Torre Sgarrata (2nd-3rd century AD: Parker 1992, 429-430 no. 1163; Isola delle Correnti (3rd-4th century AD: Parker 1992, 219 no. 522), Capo Taormina (Roman period: Parker 1992, 125 no. 256).

150. The quarries at Prokonnesos and Dokimeion, for instance, seem to have developed strategies for finishing their products at the quarries and to deliver (nearly) finished products to their customers, in contrast to numerous other quarries. The alleged specialisation of the Dokimeian quarries has been understood as

statues were either carved at the place of destination from a rough block or that they were transported in roughed-out form.[151] However, while this practice makes sense from a practical viewpoint – transportation was not without risks, hence the more refined the object, the more prone to damage it was – this does not mean that freshly quarried sculptures were not transported in a (nearly) finished state, as, for example, a statue of Eros and Psyche recovered from the Punto Scifo A shipwreck demonstrates.[152]

The above has shown that a selection of the available repertoire of stone types travelled throughout the Roman Empire. Evidence from Rome's marble yards made it clear that this city had (contemporaneous) access to a variety of the most sought-after stones. The fact that these materials are unused, moreover, provides a first indication of a possible geographical division of Roman sculptural processes. An assessment of Roman shipwrecks with stone cargoes further supports this hypothesis. Stone materials could move around as raw materials, awaiting further manufacturing at the intended place of destination. Although certain patterns can be observed between materials, object types, and the degree of prefabrication, there do not appear to have been fixed rules. The evidence instead suggests that different practices existed side by side, and that there were several possibilities within the boundaries of the participating actors. That means that the production process of stone artefacts could be geographically divided between quarry location and place of destination. This complicates an assessment of the question where in the connected Roman world a given stone artefact was manufactured. Hence, as the *where* question is difficult to assess in principle, our next question should be to evaluate the so-called *social* aspect of provenance: *who* made stone artefacts?

1.4 ITINERANT CRAFTSMEN

"It is always easier to move a carver than it is to move a carving. Human beings do not weigh 2.7 tons per cubic meter and can move by themselves; they are generally less fragile than finely carved details in stone"

Rockwell (1993) 98

When discussing who made Roman stone artefacts, craftsmanship is a key concept. It is understood here as the totality of skills and techniques in a particular craft, in this case the craft of stone working. While essentially immaterial, it is materialised when practised to concrete matter. In other words, craftsmanship needs a practitioner in order to materialise, and it is to these practitioners that we will turn here.[153] Rather than providing an in-depth overview of carvers in the Roman world, which is beyond the scope of this study, this section emphasises itinerant carvers in order to assess aspects of *social* provenance, namely, where and by whom stone sculptures were carved.[154]

It is well-known that carvers travelled widely in Antiquity. A recent study demonstrates that of 212 sculptors that were active between the 7th and late 5th

an intentional strategy for increasing the profit margins of their products. The quarries' relatively unfavourable geographical position in inland Turkey implied high (overland) transportation costs, and these costs considerably reduced the profit margins of producing and shipping roughed-out products and made it difficult to compete against more favourably located quarries. To avoid this problem, the quarries shifted their focus to a different sector of the market, the local elites of Asia Minor, by specialising in the production of finished high-end products. See Waelkens (1982) 124-127, esp. 125, ibid. (1990b) 69; cf. Bartoli (2008) 179. See now also, with a note of caution, Russell (2013a) 278-281. For the shipment of nearly finished Prokonnesian sarcophagi see Wiegartz (1974) 348-357, *contra* Ward-Perkins (1956).

151. Dodge (1991) 37. Two half-finished sculptures were found among the cargo of a ship that wrecked on the Black Sea coast of Turkey off Şile: the bust of a woman (perhaps of Trajanic date) and a 4.5 m high colossal statue of a cuirassed emperor: see Mellink (1973) 191, Asgari (1978) 480, Beykan (1988) 127. For a discussion on the date of the Şile shipwreck see also Russell (2013a) 322.

152. For the Punto Scifo A shipwreck that sank near Croton, southern Italy in the early 3rd century AD, see Bartoli (2008); the statue of Eros and Psyche is discussed on 128-130 and 261-262. More examples of (nearly) finished statues from shipwrecks are cited in Russell (2012) 536, (2013a) 336-337, and (2013b) 353, although it is not always clear whether the relevant statues were newly quarried or not. On the question of *where* statues were produced, cf. Russell (2013a) 315, 329-330, and 336-338.

153. I will not explore this topic here; on the concept of making, and the interrelationships and interaction between practitioner and matter, see Ingold (2013).

154. As such, the following discussion elaborates on another characteristic of Ward-Perkins' model of the Roman stone trade, namely, the presence of specialised workmen overseas, "so that the customer could, if he wished, not only order the materials but also obtain the craftsmen capable of handling those materials": Ward-Perkins (1980) 325; cf. ibid. (1992b) 63.

centuries BC in the Greek world no less than 80 worked far from home.[155] Moreover, Pliny informs us of the presence of several Greek sculptors in 2nd-century BC Rome.[156] The concept of the itinerant craftsman was also known in the Roman world. A dedicatory inscription from Nicopolis ad Istrum in Bulgaria demonstrates the presence of an association of Nicomedian sculptors in that city.[157] Another dedication from Konya in Turkey attests to the presence in that city of two brothers named Limnaios and Diomedes, 'statue carvers and carvers of Dokimeian marble, Dokimeians'.[158] The valuable but ambiguous corpus of makers' inscriptions or sculptures 'signatures' is often used as evidence for the existence of travelling sculptors.[159] Several finished sculptures with makers' inscriptions have been found at sites that are far removed from the hometowns of their carvers, and this is often considered to be a result of the movement of carvers. However, several scholars have drawn attention to the issues that relate to the interpretation of such marks. Peter Stewart has convincingly warned against simply equating the prevailing Greek names that are inscribed in the Greek alphabet in finished statues with either these carvers' ethnic or cultural Greek origins and, by extension, touched upon the important issue of the significance and meaning of (Greek) ethnic and cultural identity in the Roman world.[160] From a very different angle, Ben Russell recently showed the difficulties of using makers' inscriptions as source for the actual movement of carvers.[161] The fact that such inscriptions are found at sites far removed from the places mentioned in the inscription does not necessarily imply the physical presence of carvers from far away. Indeed, a maker's mark could as easily be applied to a finished statue in a carver's hometown right before shipment.[162]

These observations indicate that makers' marks should be treated with caution. But then, does any concrete evidence remain to support the widely accepted idea that carvers travelled around and offered their services on location? The answer is yes. The Alexandrian sculptor Antoninos son of Antiochos left his name on two statue bases from Jerash in Jordan. While the first of these was carved from imported white marble, which complicates the question where the actual carving took place, the second base was made from a local yellow limestone that was neither widely acclaimed nor transported in Antiquity. Hence, the important implication is that the Alexandrian Antoninos is indeed very likely to have sculpted and signed this base at Jerash proper.[163] The find of metal carving tools among the stone cargo of the Porto Novo shipwreck hints at the same conclusion, and suggests that carvers were actually sent with shipments of freshly quarried stone – in this particular case rough column fragments and blocks of Luna marble.[164]

155. Dimartino (2010) esp. 19-20; for Greek makers' inscriptions see also Donderer (1996).
156. Pliny, *Natural History* 36.34-35 (translation D.E. Eichholz); cf. Toynbee (1951) 18-21.
157. See Ward-Perkins (1992b) 70 no. 4.
158. Hall – Waelkens (1982) 151-152; cf. Russell (2013a) 332.
159. The ambiguity of this corpus results from the fact that, although makers' marks demonstrate the presence of carvers in areas other than their places of origin, they generally do not provide actual evidence that these travelling or migrant carvers worked on location. Makers' marks are generally understood as quality signs. It has been noted that the practice of inscribing finished statuary was generally limited to carvers from a fairly small number of cities with reputable artistic traditions, such as Athens, Aphrodisias, Alexandria, Nicomedia, and Rhodes (bibliographical references for signed works of carvers from each of these cities are conveniently collected in Russell 2013a, 333 n. 82). This recognition has led to the idea that such makers' marks of artists from renowned production centres were intended as quality signs: see, e.g., Ward-Perkins (1992b) 69, Stewart (2008) 16, and Russell (2013a) 332-333; cf. Donderer (2011), for an emphasis on makers' marks as important advertising medium for carvers (or workshops), and Osborne (2010) for theoretical background to the practice and significance of artists' signatures in ancient Greece.
160. Stewart (2008) 15-18.
161. Russell (2013a) 332-333.
162. Examples like the statue of Eros and Psyche discussed in section II.1.3 above demonstrate that (nearly) finished sculptures were actually transported.
163. For this and similar examples see Russell (2013a) 333-334 with further literature; cf. Friedland (2012) 62-63.
164. This ship was supposedly wrecked in the early 1st century AD off the south-eastern coast of Corsica: see Bernard *et al.* (1998), esp. 57-66. The find of the stonecarving tools aboard a ship with a stone cargo is a concrete indication of Ward-Perkins' notion of workmen overseas. In discussing what the author called mason's marks inscribed on architectural pieces from especially Lepcis Magna, Ward-Perkins asserted that the marks were probably carved after shipment, that is, by Greek artists from Asia Minor, where the marble also came from. "Nothing would be more likely", he concluded, "than that the shipments of Greek marble for the capitals and bases were similarly accompanied by the skilled craftsmen needed to work them": Ward-Perkins (1951) 93-94, quote from p. 94. In his final contribution on the subject, Ward-Perkins specified the itinerant carver as "[…] what must have been a common phenomenon […]"; this would furthermore play a decisive role in his final understanding of the mechanisms

A brief assessment of the practice of travelling carvers in the Roman world demonstrates that there is indeed conclusive evidence for the movement of stone sculptors across the Mediterranean. Carvers moved around, either accompanying shipments of newly quarried stone materials or not. The presence and activity of sculptors outside their area of origin implies that, if we encounter a sculpture at a given archaeological site, we cannot automatically presume that it was made by local craftsmen. However, this was not the only approach to the production of stone sculpture. Sculptors could possibly also dispatch finished statues without ever leaving their areas of origins. The production process of stone sculpture in the Roman world therefore appears increasingly complex, and so does our understanding of the concept of provenance. Not only raw materials, but also craftsmen circulated across the Empire. These practices seriously complicate questions of where and by whom artefacts were manufactured. One of the important questions that remain is whether certain patterns existed in the relations between materials and carvers, as previous scholarship has often presumed. The following section will assess this issue.

1.5 RELATIONS BETWEEN MATERIALS AND CARVERS

"It is easiest to see a piece of stone as going through a sequence of operations after quarrying that leads to a finished object. Whether or not these operations are all carried on in the same place is important but does not destroy the sense of sequence of the process"

Rockwell (1993) 98

Any sculpture made of stone is the result of a series of choices and actions that start at the quarries and, subsequently, follow a certain order.[165] The basic operations within this sequence go beyond the limits of time and space. Therefore, regardless of when and where a stone sculpture was carved, its production sequence must have involved the quarrying of raw material and, by necessity afterwards, the sculpting of the raw material into the desired shape. However, there are many possible variations in the number and execution of operations between the initial and final production stages of stone sculpture. Peter Rockwell has drawn attention to the chronological aspect of this variability. He argues that the largest difference between Roman Imperial and medieval/modern approaches to stone working is the fact that the entire process was principally carried out in one location in later periods, while the Romans could break up this process geographically between quarry and worksite.[166] The geographical division of Roman production processes of stone objects, already referred to in the previous sections, is a very useful framework for assessing the question where objects were made. Different approaches to the production of stone objects could and did co-exist in the Roman period. Theoretically speaking, Roman approaches to stone working offer a wide range of possible relations between raw material and craftsmanship. This section briefly reviews how these relations have been traditionally understood and what this implies for our understanding of stone sculpture in the Roman world.

Several scholars have emphasised the correlations that would have existed between the geological sources of stone types and the origins of carvers. This supposed association played an important role in Ward-Perkins' final understanding of the Roman stone trade and the actual explanation that it provided for the Marble Style, namely, the diffusion of a 'flourishing *koiné*' of 'Asiatic' architectural styles and techniques over a large part of the Roman Empire.[167] In his comparative study on architectural elements from Tripolitania, Lower Moesia, and Pamphylia, the author pointed out the close stylistic and technical similarities that exist between objects from these geographically remote areas.[168] These objects would illustrate "[...] some of the many common elements of taste and craftsmanship that unite the architectural ornament of these three territories in the Antonine and Severan periods, resemblances

of the Roman stone trade: see Ward-Perkins (1992b) 69 (quote above) and 99-100, respectively. The idea of skilled craftsmen who accompanied shipments of freshly quarried stone has been followed by later authors: "Sicher ist auch, daß Steinmetzen aus einzelnen Steinbruchgebieten zusammen mit ihren fast vollendeten Produkten an den Bestimmungsort reisten, um sie dort zu vollenden" (Mielsch 1985, 15).

165. Not taking advance planning into account.

166. Rockwell (1993) 90-100, esp. 92.

167. See Dodge (1991) 39 n. 108 for the notion of a 'marble style'.

168. Ward-Perkins (1992b) 68-100.

that are in such striking contrast to their geographical remoteness from each other that they can hardly be accidental. Given the common material, Prokonnesian marble, and given the epigraphic evidence of Bithynian marble workers in two of the three areas, there really does seem to be a *prima facie* case for some commercial mechanism linking the import of fine materials with that of the craftsmen needed to work them".[169] The idea of a Marble Style has influenced subsequent writings on the subject. The direct relationship it presumes between the origins of carvers, who are deemed assessable through (ethnic) style, and materials indeed makes sense from a practical point of view. Based on the apprentice system through which sculptors were trained in Antiquity, it is likely that carvers tended to work with the materials they were most familiar with, which often will have been the stones from their own regions.[170]

But even though this is probably true, the relations between sources of materials and carvers were not linear and, therefore, "while […] Thasian carvers, as a result, are likely to have worked predominately [*sic*] in Thasian marble, this does not mean that all statues in Thasian marble were necessarily carved by Thasian carvers".[171] This observation is worth noting explicitly, were it only to counterbalance the direct relationship between origins of materials and carvers that is often implicitly presumed. Of course it is reasonable to imagine that "[...] monuments that *look* Greek were made by Greek artists who had inherited the necessary skills, habits, and sensibilities to work in this manner and who were patronised by Romans who favoured such work", as Stewart has argued with regard to the proliferation of what he calls Greek styles in Roman works of art.[172] But this was not necessarily the case. Moreover, these arguments overlook the role of the transference of knowledge and skills. Like raw materials and craftsmen, immaterial 'goods' will have flown to and from everywhere. This means that technical knowledge and skills are likely to have been available at other places than those from which they originated. This idea goes against the notion of ethnic styles, which has permeated Western approaches to art and art history, as it does not automatically assume a direct relationship between the stylistic execution of material culture and the ethnic or cultural backgrounds of a people or individual carvers. Recent scholarship has increasingly criticised this traditional assumption. Therefore, with regard to the carving and style of architectural elements from the theatre at Beth Shean in Israel, Elise Friedland argues that "[…] it is not impossible that artisans of one town or region would receive training from foreign or itinerant sculptors who had arrived to execute a special project. It is also possible that local artisans might have travelled to an area famous for its marble quarries and sculptural workshops to receive training in a different carving tradition".[173] Although it takes time to complete the transmission of the knowledge and skills necessary to work a specific type of stone – several generations, according to a recent study[174] – it is not unlikely that, in due time, it became difficult to distinguish between the carvings of 'local' and 'non-local' sculptors.[175] Such a development fits well with the cosmopolitan character of the Roman world, which provided access to both raw materials, carvers, and knowledge from distant sources.[176] While of course this does not mean that sculptural traditions like the Aphrodisian or Ephesian school did not exist,[177]

169. Ward-Perkins (1992b) 99-100.
170. Rockwell (1993) 2-5. A series of apprentices' or test pieces provides actual evidence for the training of sculptors at Aphrodisias: Van Voorhis (1998), (2012) 48-50.
171. Russell (2013a) 330, cf. 168-169. In similar vein, Freyberger's study of the production of capitals in Imperial Rome has demonstrated that several workshops worked together on the cities' large building projects and has noted the preferences between carvers and materials. Nevertheless, Freyberger (1990, 135) concludes that "[…] die Marmorsorte für die Bestimmung einer Werkstatt nicht ausslaggebend ist".
172. Stewart (2008) 14.
173. Friedland (2012) 59.
174. See Barresi (2003) 89-91, with regard to the transference of the skill to work Prokonnesian marble in Pergamon.
175. See also Russell (2013a) 332: "In both the Levant and Cyrenaica marble-working skills would have been transferred from immigrant carvers to local ones over time and by the Roman period it might often have been difficult distinguishing between those groups". For contrasting views see the references in Friedland (2012) 59 n. 30, and 69 n. 84.
176. Or, as Gosden (2004, 105-106) has it, "[…] the [Roman] empire as a whole formed a giant circulation system which connected flows of people, religious practices and material culture throughout the empire, so that influences came from everywhere and flowed to everywhere". In this respect, one might even wonder if, and to what extent, 'local' and 'non-local' constitute useful categories to discuss Roman stone working, at all.
177. The identification of individual artists' 'hands' and workshops or 'schools' on the basis of stylistic analysis has been one of the traditional focuses of scholarship on the Greek and Roman visual arts; for a current state of affairs and modern approaches to the subject see the volume *Ateliers and artisans* (2012).

it nevertheless indicates that the direct correlation between sculptural styles and either the ethnicity or geographical origins of people appears to be too narrow as a model for understanding the complex processes of stone working and stone trade in the Roman world.[178]

1.6 CONCLUSION: CIRCULATION OF STONES, SCULPTORS, AND SKILLS

On the basis of an analysis of the Roman stone trade and Roman stone working practices, this chapter has investigated the two questions at the heart of current debates on Aegyptiaca Romana: *where* were they made and *who* made them? The Roman stone trade was a complex system in which several approaches to and practices of stone production existed side by side. Although the origins of raw materials and the ethnic background of sculptors could have been one and the same, no strictly defined relationship existed between geological provenance and craftsmanship. Moreover, the distinction between local and non-local carvers may have been less evident than often assumed, since different carving traditions and the skills needed to work with different materials could be transferred through training. This implies that no simple answers can be given to questions of where in the Roman world stone artefacts were made and who made them.[179] The Roman world was an increasingly connective world in which materials, sculptors, and knowledge circulated and could function independently from one another.

This conclusion has important implications for the usefulness of existing approaches to Aegyptiaca in the Roman world, and Egyptian versus Egyptianising interpretations of material culture in particular. Perceived style, iconography, and the origins of materials are still often understood to relate to the provenance of Aegyptiaca in a direct way, as the discussion in section I.2 made evident. While it is indeed likely that Pharaonic Egyptian stone artefacts were often made in Egypt and by Egyptians, and even though there is evidence to suggest that Egyptian sculptors worked in locations outside Egypt during the Roman Imperial period,[180] the entangled nature of stone trade and stone working practices in the Roman world implies that relations between the origins of materials, artistic style, and iconography were not necessarily bound by ethnic and/or cultural backgrounds. Consequently, we cannot automatically assume that the geological provenance of the stone materials of Aegyptiaca is indicative of the place where these artefacts were manufactured. Moreover, the stylistic execution of these objects does not provide conclusive evidence for the background of their sculptors.[181] In other words, existing approaches to Aegyptiaca in the Roman world are too static to correctly reflect Roman Imperial connectivity, and in particular the flexible nature of Roman stone trade and stone working practices. This also emphasises one of the conclusions of Part I, namely, that the terms Egyptian and Egyptianising, and the associated binary interpretations that their use implicitly entail (i.e., authentic versus copy, religious versus exotic, and understanding versus misunderstanding) are not useful to assess Roman perceptions of the objects that we call Aegyptiaca. Those terms reflect modern attempts to categorise and understand the broad variety of objects that we associate with Egypt. These attempts draw on several assumptions about the supposed provenance of these objects, which appear to be untenable from a Roman perspective.

178. Critical voices about a direct relationship between sculptural style and ethnicity/cultural identity of carvers can also be heard in the field of Archaic Greek sculpture: Marconi (2010) with further references. See also Adornato (2010) for a recent critical appraisal of the 'approccio langlotziano' (p. 309), in reference to Ernst Langlotz (1895-1978), whose understanding and identification of Greek sculptural schools was essentially based on different ethnic origins of (groups of) carvers.

179. See also Russell (2013a, 329): "[…] how do we know whether marble statues at somewhere like Palmyra were carved locally using imported raw materials (by a migrant or Palmyrene carver), carved by an itinerant carver who arrived with the material, or carved elsewhere altogether and imported fully finished? The short answer, of course, is that it is usually impossible to know for certain since the evidence is often far from conclusive".

180. See Donderer (2001) 175-179 for attestations of Alexandrian sculptors in the Hellenistic and (early) Roman Imperial periods outside of Egypt, including the island of Kos, Messene, and Gerasa. On the presence of Egyptians in Roman Italy and Rome in general, see Cristofori (1998) with relevant bibliography.

181. Most sculptures are not signed and, as a result, we simply lack the information to determine who made these objects. While the practice of not signing works of art fits well with Egyptian traditions (see Ware 1927 for Egyptian artists' signatures), the fact that the large majority of Aegyptiaca are not signed can, of course, not be used as an argument in support of the view that the artists were Egyptians; cf. Friedland (2012) 59.