Egypt beyond representation : materials and materiality of Aegyptiaca Romana

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2. Understanding stone in the Roman world II: Roman perceptions of stone

"It is better to focus on a world of stones, sculptors and carving traditions – all of which could be easily transmitted from the great marble-carving centers of Italy, Greece and Turkey to the farthest reaches of the East. And we should not forget that patrons commissioned sculptures in specific materials, styles, and visual vocabularies in order to communicate certain messages to viewers and deities"

Friedland (2012) 60

This section shifts its attention from aspects of stone production to consumption in order to explore the social values that Romans attached to stones in general, and certain types in particular. Why were stones used so extensively, how did the particular demand for certain types of stone come about, and how could materials contribute to the efficacy of Roman stone sculpture? In order to study the materiality of so-called Aegyptiaca, it is necessary to gain a better understanding of the ways in which stone materials functioned and how they were perceived in the Roman world. Therefore, the first section discusses illustrative points of the growing demand for stone in the Roman world. Subsequently, an assessment is made of Roman appreciations of stones and of the characteristics that contributed to their desirability. To conclude, examples are presented of Roman Imperial sculptures to demonstrate how materials, artistic styles, and subject matters could interact in a way that rendered the objects in question objects significant 'beyond representation'.[182]

2.1 THE DEMAND FOR DECORATIVE STONES

The demand for stone that grew to unprecedented levels in the Roman world, especially in the 1st and 2nd centuries AD, had its origins in the 2nd century BC. It has traditionally been understood against the backdrop of the Roman expansion in the East.[183] For instance, Pliny recounts how, after the conquest of Asia in 189 BC, wooden and terracotta statuary came to be replaced with luxury materials, such as marble.[184] Besides the importation of already finished stone objects, which were often brought back as spoils of war,[185] the local

182. This section draws from a large body of literature and is therefore necessarily selective. The focus is mainly on the most renowned stones because these feature most prominently in both the archaeological and literary record. For the same reason, most attention will be paid to Rome; in addition to this, at least initially, Rome was the main consumer of decorative stones: although these materials were available in provincial centres as early as the 1st century AD, it seems that they did not reach the outlying provinces in large quantities until the 2nd century AD (cf., e.g., Schneider 2001, 7; Bartoli 2008, 148-150). This focus suffices for the purpose of the present study, which is to give a general idea of the relevance of stone in the Roman world and the ways in which stone materials can contribute to the understanding of stone sculpture. While indeed "the fashion for [the most renowned stones] is indicative of a more widespread and deep-rooted interest in stone use that took hold in almost every region under Roman rule" (Russell 2013a, 16), there are many regional and chronological differences between the different parts of the Roman Empire. For a more inclusive approach to the Roman consumption of stone, see especially Russell (2013a). Likewise, it is beyond the scope of this study to provide a literary interpretation of the textual sources that will be referred to throughout this chapter and that have been collected in Appendix B; for an interpretation of literary descriptions of stones in Pliny's *Natural History* see Carey (2003) 91-92, who sees Pliny's history of marble as "both a history of the Roman conquest of the world and a history of the world in Rome… The account of marble in Rome is […] also an account of the challenge to Roman morals through contact with *luxuria*". For an interpretation of building processes and stone building materials in Roman antiquity see Reitz (2013).

183. Cf. Jongstra (1995) 28-31, Maischberger (1997) 17, Bartoli (2008) 141-146, Hirt (2010) 90, and Russell (2013a) 13-14.

184. Pliny, *Natural History* 34.16.34; cf. *infra*, Appendix B.

185. The first recorded import of marble to Rome took place in 173 BC, when the censor Quintus Fulvaius Flaccus stripped half of the marble roof tiles of the temple of Juno Lacinia at Croton and had them brought to Rome to embellish the temple he had built for Fortuna Equestris (Livy, 42.3.1-11; cf. *infra*, Appendix B). Livy reports how Flaccus' act met with great indignation and was depicted as an act of sacrilege. The situation was settled by the Senate's order to return the marble tiles to Croton and to make atonements to Juno. Bartoli (2008, 143-145) has suggested that, rather than religious concerns, other reasons may have motivated the Senate's apparent haste and determination to send back the marble roof tiles. The use of marble was inextricably

stones of the newly conquered territories soon came to be appreciated as raw materials. This was made possible by the expansion during the first two centuries BC that gave Rome access to the most important quarry districts of the Mediterranean world.[186] The import of stones from distant sources as raw materials began in Rome during the mid-2nd century BC. This practice is closely associated with victorious Roman generals, who commissioned buildings *de manubiis* upon their return. Thus, in 146 BC, Quintus Caecilius Metellus, victor in Macedonia, ordered the construction of the earliest known building in white marble, the temple of Jupiter Stator in the Campus Martius.[187] The marble was brought from Mount Pentelikon in Greece, that is, from the very land that Rome had conquered, which transformed the building into a monument of victory.[188] Other generals followed suit and as a result imported stones quickly established their position as "potent tokens of victory" in the context of Republican elite competition.[189]

Over the course of the 1st century BC, an increasing variety of decorative stones entered the domestic domain and became a popular means of prestigious self-presentation and socio-political rivalry. Thanks to a series of passages in Pliny's *Natural History* we can trace the introduction of some of the most appreciated stone types in elite residences in Rome.[190] For example, in 95 BC, the consul L. Licinius Crassus installed six columns of Hymettian white marble in his house on the Palatine Hill; in 78 BC, the consul M. Aemilius Lepidus introduced *giallo antico* in Rome, followed four years later by L. Licinius Lucullus' introduction of *africano*, which he incidentally named after himself (*marmor luculleum*); in 58 BC, the aedil M. Aemilius Scaurus embellished his ephemeral theatre (which only lasted for one month) with a range of expensive materials, including 360 columns of *africano*, some of which were later used in Scaurus' residence on the Palatine Hill;[191] and finally Mamurra, Caesar's *praefectum fabrum*, is credited with being the first man in Rome to have covered entire walls with marble veneer, a tradition that would refer back to Mausollos of Halicarnassus, and to have only marble columns (of Luna and *cipollino* marble) in his house on the Caelian Hill.

This fashion for imported stones took hold rapidly. According to Pliny, Lepidus' house was the finest of its time, but it was not even among the first hundred 35 years later.[192] By the end of the Republic, the use of imported

associated with notions of luxury, wealth and power that were in contrast with Republican mores of modesty. Therefore, what was officially portrayed as an act of religious impiety can also be tentatively conceived as an attempt by the Senate to tame the marble's agency, a goal that only could be achieved by physically removing the stone from Roman soil – much like the famed Borghese statue that had to be put away from public viewing to tame its agency (Van Eck *et al*. 2015, 15-19). Throughout the Republican age, the use of imported stones evoked both praise and condemnation and seems to have become a literary *topos*: "the use of marble in urban architecture affirms Republican biases", as Favro (1996, 183) sums up. Hence, while ancient authors specifically applied the term *magnificentia* to describe buildings of marble, at the same time laws were issued that prohibited the excessive use of luxury materials, including imported stones in private monuments. Clearly, Rome was struggling to come to terms with its new material make up. See, e.g., Cicero, *Letters to Atticus* 12.35, 13.6.1: cf. *infra*, Appendix B. On the ambiguity towards imported stones and *luxuria* in general, see Carey (2003) esp. 91-99, Mielsch (1985) 29-31, Jongstra (1995) 17-19, Pensabene (2002) 7-8, Bradley (2006) 6-7, and Wallace-Hadrill (2008) esp. 329-338.

186. The quarries of *giallo antico* at Chemtou in Tunisia fell in Roman hands after the conquest of Carthage in 146 BC. In the same year, Rome gained access to some of the most renowned sources of white marble of the Greek world (Paros, Hymettos, Naxos, Thasos, Pentelikon) after its victory at the battle of Corinth. Further events that increased Roman access to important quarries occurred in 133 BC, when the kingdom of Pergamon was bequeathed to Rome, which granted Roman access to the Phrygian quarries at Dokimeion (the quarries of *pavonazzetto* and a high quality white marble), and the battle of Actium in 31 BC and subsequent annexation of Egypt in 30 BC, which brought the rich geology of Egypt into the hands of the Roman state. Cf. Bartoli (2008) 141-142.

187. Velleius Paterculus, *History of Rome* 1.11.5; cf. *infra*, Appendix B. See also Pensabene (2002) 3-4, Bradley (2006) 3, and Wallace-Hadrill (2008) 356.

188. A preference for Pentelic marble has been noted for early marble buildings in Rome in general: see Bernard (2010).

189. Excerpt from Russell (2013a) 13. At least three more temples were built in Rome from imported marble during the last decades of the 2nd century BC. Remains of one of these have been found under the Church of San Salvatore in Campo in the Campus Martius: namely, the temple of Mars in Pentelic marble, commissioned *de manubiis* by the triumphator D. Iunius Brutus Callaicus sometime after 133 BC: see esp. Bernard (2010); cf. Jongstra (1995) 29, Maischberger (1997) 17 with n. 32.

190. Relevant passages are all quoted in Appendix B. For late-Republican archaeological evidence from elite residences see Pensabene (2002) 4-5.

191. On Scaurus see now Leemreize (2016) 57-58 with n. 181, who notes a close association between Scaurus and extravagance/decadence in Pliny's *Natural History*, for which see also Carey (2003) 96-99.

192. *Natural History* 36.24.110; cf. *infra*, Appendix B. Russell (2013a, 15) discusses a similar example in Seneca's *Epistles* (86.6, quoted in Appendix B).

stones had been established as an efficient means to articulate the owner's socio-political position.[193] These materials came from far lands and therefore implied notions of costliness, scarcity, and labour, which in turn meant they were noteworthy and prestigious. In other words, decorative stones embodied aspects of affluence and privilege, and their prestige value quickly developed against the backdrop of socio-political rivalry in late Republican times.

Augustus was the first to use these prestigious materials on a large scale in public architecture and sculpture.[194] To meet the growing demand for stone, which has even been dubbed an "Augustan marble revolution",[195] decorative stones were more systematically exploited at the quarries from this time onwards. In addition, several new quarries were opened to increase the range and volume of the available materials, in particular of coloured stones.[196] Through the targeted use of these materials in monumental public buildings, like the Forum of Augustus, the temple of Apollo Palatinus, and the Basilica Aemilia, an imperial building program with ideological underpinnings was developed, in which the associations of stones were paramount.[197]

193. Besides the materials, also the tradition to decorate houses with 'marbles' came from the East, as several scholars have pointed out: "the metropolitan elites of this period [i.e. the late Republic] were following in a well-established Eastern tradition, consciously modelling their residences on the royal palaces of Hellenistic kings and notables" (Russell 2013a, 14). Often-mentioned Hellenistic 'models' include the royal palaces at Vergina and Alexandria. Dating from the 3rd century BC, the former displayed large thresholds of Pentelic marble, while an epigram by Poseidippus informs us on the installation, in the late 3rd century BC, of a fountain in the royal palace at Alexandria that was made of various imported stones: Pensabene (2002) 3-4, with references, Mielsch (1985) 16. For Poseidippus' epigram see Von Hesberg (1981) 96-97. On the basis of Kallixeinos of Rhodes' work, Athenaeus reports that the banqueting tent of Ptolemy II (285-246 BC) and the *thalamegos* or houseboat of Ptolemy IV (221-204 BC) were also decorated with costly materials including various coloured stones (Athenaeus, *Deiphnosophistae* 5.196a-197c, and 5.203d-206c, respectively); see Gans (1994) 448-449 and McKenzie (2007) 49, and 62-64.

194. Favro (1996, 185-186) assumes that Augustus made a deliberate distinction between the use of decorative stones in public and private works. Well aware of the impact and associations of stones, Republican conservatism, and his own newly acquired position as Princeps, he would have lavishly spent on decorative stones in public buildings "for the aggrandizement of the Roman state", while he refrained from material opulence in private life. To support her assertion, the author refers to a passage in Suetonius, who emphasises the modesty of Augustus' house on the Palatine Hill and explicitly mentions the absence of luxurious decorative stones: Suetonius, *Divus Augustus* 72.1 (quoted in Appendix B). To what extent Suetonius' statement reflected reality or was just an idealistic portrayal must be questioned in light of a series of Augustan-period columns and capitals of imported stones from the Casa di Augusto (*giallo antico*, *pavonazzetto*, *portasanta*, *alabastro fiorito*): see *Marmi colorati* (2002) 443-445 no. 139-145 (P. Pensabene); cf. Pensabene (2002) 4-6.

195. Schneider (2001) 3-4, (2002) 83. It is often assumed that, from the time of Augustus onwards, coloured stones were prized higher than white marbles (Pensabene 1983, 57; Schneider 1986, 149 n. 1124; Gregarek 1999, 108 n. 382; ibid. 2002, 208. See also Bradley 2006, 15 n. 77 with references). This assumption is based on a passage in Strabo's *Geography* (9.5.16, see Appendix B). The author, who wrote around the time of Augustus, records that white marbles had devaluated due to the predilection for coloured stones in his days. We get a similar impression from the poet Statius' description of the Domus Flavia in the late 1st century AD: white, Italian marble from Luna serves only as the base of columns of coloured – and one may seemingly add, more precious – stones (*Silvae* 4.2.26-29, quoted in Appendix B; cf. Schneider 2001, 8-9). Although some varieties of white marble were certainly much in demand and highly prized, the observation that many of the quarries that were newly opened in Roman times targeted coloured materials further supports this hypothesis. Coloured stones not only stood out because of their specific colouration – commonly labelled 'exotic' in the literature – but usually also had particular textural characteristics. Because of their distinct visual characteristics, these materials were presumably easier to recognise than white marbles, and as such it is not unlikely that they were a more direct means of 'communication'. Section II.2.2 will elaborate on Roman appreciations of stones.

196. These developments necessitated reorganisations of pre-existing quarry infrastructures and of the logistics of the stone transportation that took place during the course of the 1st and 2nd centuries AD – which formed the basis of Ward-Perkins' model of the Roman stone trade, which was discussed in section II.1. The growth in demand for decorative stones during the reign of Augustus is aptly recorded in Strabo's account of the quarries at Dokimeion, quoted in II.1.1.5 above (*Geography* 12.8.14); writing around the same time, Ovid claims that "mountains diminish as the marble is dug from them" (*The art of love* 3.125); cf. Pliny, *Natural History* 36.1.2-3 (all passages quoted in Appendix B below). These literary passages are supported by archaeological evidence from the quarries. While the available data are heterogeneous and differ in both geographical and chronological respect, three developments can be observed that may be considered as direct consequences of the changing demand for stones in the Roman period: 1). a striking intensification of activity in pre-existing quarries, 2). the opening of new quarries; this development is particularly clear in the West, where there was no established tradition of stone working prior to the Roman period, and 3). most notably, a vast increase in the number of quarries that produced coloured stones: see Russell (2013a) 82-93; for new quarries in Egypt that produced coloured stones cf., e.g., Harrell (2012b) 19.

197. For an overview of the materials used in Augustan building

Augustus' material imprint on the city of Rome set the tone for the public architecture and sculpture of the next centuries. As a result, the urban fabric of Rome was gradually transformed into the capital of an Empire.[198] In addition, the imperial architectural and sculptural 'canon' increasingly took hold among non-imperial elites, which had at least two important consequences. Firstly, it led to a further increase in the demand for stone; the available evidence indicates that the total, non-imperial consumption of stone was much larger than the quantities used in imperial projects. Furthermore, through the (provincial) elites' engagement with the fashion of stone use and display, these materials came to play an important role in municipal benefaction and urbanisation processes – especially in the Western provinces, where, in marked contrast with the East, there was no previously established tradition of stone working.[199] Stone materials fitted well with these processes: "great monolithic shafts of polished polychromes, transported from the ends of the earth regardless of difficulty, cost and distance and finished to a state of uniform perfection, stood in almost every Roman city, proclaiming not only the economic wealth, political loyalty and cultural identity of the (re-) urbanised provinces but also Rome's paramount power over all conditions of life, including commerce, industry and expertise".[200] Hence, there were many different associations that came with stones in general, and with specific types in particular. The next section charts these Roman appreciations in more detail on the basis of a selection of literary and archaeological sources.

2.2 ROMAN APPRECIATIONS OF STONES

2.2.1 The literary evidence: selected sources

"I have paid […] the HS 20,400 for the Megarian statues in accordance with your earlier letter. I am already quite enchanted with your Pentelic herms with the bronze heads […] so please send them and the statues and any other things you think would do credit to the place in question […] especially any you think suitable to a lecture hall and colonnade".[201]

The above quotation is taken from the correspondence between the orator Cicero and his friend Atticus. In 67 BC, Cicero was putting together a sculptural program for his recently acquired villa in Tusculum and to this end he had authorised Atticus to buy sculptures in Greece on his behalf. The passage is often quoted in modern literature to denote the discrepancy between Roman conceptualisations and modern appreciations of works of art.[202] In particular, the appropriateness (*decorum*) and utility (*utilitas*) of sculpture have been emphasised as two important criteria according to which Roman audiences would have judged works of art, as opposed to modern aesthetic theorisations. Hence, the sculptures for Cicero's villa had to be suitable first and foremost, namely, appropriate for the decoration of particular spaces in his villa. Rather than mere ornaments, sculpture served specific purposes. It offered an increasingly popular means of elite self-presentation, and therefore great care was taken in putting together intellectually consistent decorative programs according to the concept of *decorum*.[203]

projects see Favro (1996) 184-185 Table 5; cf. the references in Schneider (2001) n. 12; for the Forum Augustum see also Ungaro (2002).

198. Bartoli (2008) 147-149; Favro (1996) 183-186; Schneider (2001) 4. As such, Augustus' famous boast that he found Rome built of brick and left it as a city of marble brings together two important aspects of the Augustan use of stone (Suetonius, *Divus Augustus* 28.3). First, it conveys a sense of realism: the large-scale use of decorative stones in public building programs indeed first began with Augustus. Secondly, it alludes to the ideological undercurrents of the use of stone by Augustus, an aspect already noted by Dio Cassius (56.30.3-4): "He did not thereby refer literally to the appearance of its buildings, but rather to the strength of the empire"; cf. *infra*, Appendix B.

199. On imperial versus non-imperial consumption of stone and the role of stone in processes of urbanisation (with an emphasis on the importance of small-scale, local supply of suitable stones) see Russell (2013a) 18-21, 65-77, and 84 with relevant bibliography.

200. Schneider (2001) 9. For similar understandings of the use of decorative stones in Roman Imperial architecture and sculpture, see ibid. (1986) and (2002), Pensabene (2004), esp. 43, and McCann (2015) 23. Fant (1988b, 149) and Dodge (1991, 39) emphasise power and wealth but omit the aspect of imperialist conquest; for recent criticism on imperialist messages conveyed by stones, in particular of conquest of the lands from which stones came, see Burrell (2015). The author refutes the idea that monolithic columns of coloured stones would have conveyed any specific message of dominance in a 2nd-century AD context, when "any message of conquest was far in the past" (p. 950), and instead relates their significance to aspects of expense and difficulty of transportation.

201. *Letters to Atticus* 1.8.2; see also Appendix B.

202. See, e.g., Leen (1991), Stewart (2008) 37-38, and Squire (2015) esp. 590-593.

203. Cicero's letter to Fabius Gallus, another confidant who, like Atticus, was entrusted with the task to purchase appropriate

Which properties made sculpture suitable for display? If we consider the remarks in Cicero's correspondence with Atticus, it is evident that, rather than aesthetic appraisal, popular statue types and costly materials are emphasised.[204] The materials used are prominently mentioned. Besides the mention of heads made of bronze, statues and herms are said to be made from particular stone types: Megarian and Pentelic marble, respectively.[205] These white marbles were highly prized stones and therefore are likely to have contributed to the political and social atmosphere that Cicero alluded to in compiling a suitable decorative program. This suggests that the materials used were an important aspect of sculpture, and one that was worthy to be noted.

Cicero is by no means an isolated example. Passages in Pausanias' *Description of Greece* and Plutarchus' *Moralia* underline that the materials of statuary were indeed noticed by ancient viewers.[206] Such references also make clear that writers like Cicero and Pausanias were able to recognise specific stones in terms of their origins. The geological origin of stones is frequently remarked upon in literary sources, which suggests that it was considered to be an important aspect of stones.[207] In fact, many stone types were known after their place of origin, often with high geographical accuracy. For example, the green-spotted *serpentino* from the ancient town of Krokeai in the region of Lacedaemon was known in Greek as *krokeatis lithos* ("stone from Krokeai"), while its Latin name referred to the region from which it came: *marmor lacedaemonium* ("Lacedeamonian marble"). More examples of this practice are collected in Table 2.2.1.[208] This demonstrates that ancient authors had clear knowledge of the geographical origins of stones, and that they were able to tell them apart when they encountered them in sculpture or architecture.

The recognisability of stone materials was undoubtedly enhanced by certain visual properties. This is suggested by several literary passages, where the origins of stones are connected to specific remarks on their appearance.[209] The two most frequently mentioned visual characteristics relate to colour and texture. Some stones even took their names from particular eye-catching features. For instance, the metaconglomerate from the Wadi Hammamat in Egypt that consists of numerous well-rounded pebbles of other stones was either known by the name of *lapis hexecontalithos* or *lapis hecacontalithos*, which both clearly alluded to the stone's appearance ("stone of 60-stones" and "stone of 100-stones", respectively; see Table 2.2.2 for this and similar examples[210]).

Specific visual properties also contributed to the appreciation of stones. When discussing the use of stones in the Greek world, Pliny argues that "in those times no

sculpture, demonstrates that this was taken very seriously: Gallus is reprimanded because he bought statues that were not appropriate for the intended purpose (Cicero, *Letters to friends* 7.23.1-2).

204. Cf. Leen (1991) 234-235, and Stewart (2008) 36.

205. For the quarry locations see Russell (2013a) 87 fig. 3.17, no. 27 (Mount Pentelikon) and no. 35 (Megara).

206. *Description of Greece* 1.18.6 and *Moralia* 395B, respectively; cf. *infra*, Appendix B.

207. A selection of these references can be found in Appendix B below: Dio Chrystostom, *Discourses* 79.2; Juvenal, *Satires* 14.305-308; Lucian, *Hippias, or the Bath* 5-6; Martial, *Epigrams* 1.88.1-7; Pausanias, *Description of Greece* 1.18.6, 3.21.4; Pliny, *Natural History*, 36.2.6, 36.3.7-8, 36.7.48, 36.8.49-50, 36.34.113-115, and 36.27.131; Propertius, *Elegies* 2.31.3-8; Seneca, *Epistles* 2.31.3-8; Strabo, *Geography* 9.1.23, 10.1.6, 13.1.16, and 14.1.35; Suetonius, *Divus Iulius* 85; Suetonius, *Nero* 50; Tibullus, *Elegies* 3.3.13-14.

208. The following literature was used: *Il marmo e il colore* (1998) 5-16; Martano – Calogero (2000); Lazzarini – Sangati (2004); Price (2007); cf. Bugini *et al*. (2002).

209. References to the origins of stones in combination with remarks on their specific properties are listed in Appendix B: Martial, *Epigrams* 8.55.6-10; Paulus Silentiarius, *Description of Hagia Sophia* 617-663; Pliny, *Natural History* 36.4.14, 36.5.44-45, 36.5.46, 36.8.49-50, 36.11.55-58, 36.12.59-61, 36.13.62, and 36.13.63; Sidonius Apollinaris, *Letters* 2.2.7; Statius, *Silvae* 1.2.145-147, 1.5.30-41; Strabo, *Geography* 5.2.5, 9.5.16.

210. Harrell (2012b) was used for the overview. Depending on the literary genre, the visual aspects of certain stones are either stated as a fact or described in terms of the associations they evoke. Nevertheless, regardless of their character, these remarks have in common that they usually relate to aspects of colour and/or texture. Hence, although stylistically very different, the following descriptions of Aswan granite are essentially the same: "the Thebaic stone mottled with gold spots is found in a part of Africa that has been assigned to Egypt" (Pliny, *Natural History* 36.13.63), "nor do any stone surfaces, stained with a natural tinge among the Ethiopian crags with their purple precipices, furnish a counterfeit imitation of sprinkled bran" (Sidonius Apollinaris, *Letters*, 2.2.7). In addition to colour and texture, transparency and the ability to take a polish are also remarked upon. Cf. Heilmeyer (2004) 407: "homogeneity in structure and colour, durability and fine-grained quality, suitability for high polish and translucency and finally surface stability, were most likely the criteria by which the suitability of the material was judged. In an ancient mason's workshop, these criteria will have been debated no differently from in a modern one".

Table 2.2.1. Stone types named after their origins.

Modern name / *Italian name*	***Ancient name***	**Source**
Aswan granite	*Lapis syenites / thebaicus / aethiopicus*	Aswan (ancient Syene), near Thebes, Egypt
Breccia corallina	*Marmor sagarium*	Vezirhan, Turkey, close to the river Sakarya (ancient name Sagarius)
Breccia di Settebasi	*Marmor scyrium*	Skyros, Greece
Luna marble	*Marmor lunense*	Carrara, near Luni (ancient Luna), Italy
Cipollino	*Marmor carystium / styrium*	Near Karystos/Styra, Greece
Cipollino rosso	*Marmor iassense / carium*	Kiyikislacik (ancient Iasos), Caria, Turkey
Fior di pesco	*Marmor chalcidicum*	20 km south of ancient Chalkis, Greece
Giallo antico	*Marmor numidicum*	Chemtou, Tunisia (ancient province of Numidia)
Granito verde della sedia	*Lapis ophytes*	Wadi Semnah (ancient name Mons Ophyates), Egypt
Granito violetto	*Marmor troadense*	Çiğri Dağ, Troad peninsula, Turkey
Hymettian marble	*Marmor himettium*	Mount Hymettos, Greece
Parian marble	*Marmor parium*	Paros, Greece
Pavonazzetto	*Marmor docimium / synnadicum / phrygium*	Íscehisar (ancient Dokimeion), near Afyon (ancient Synnada), Turkey (ancient Phrygia)
Pentelic marble	*Marmor pentelicum*	Mount Pentelikon, Greece
Portasanta	*Marmor chium / carium*	Chios, Greece (near the coast of Caria)
Rosso antico	*Marmor taenarium*	Cape Tainaron, Mani Peninsula, Greece
Serpentino	*Krokeatis lithos / marmor lacedaemonium*	Krokees (ancient Krokeai) in the region Laconia (ancient name Lacedaemon), Greece
Verde antico	*Marmor thessalicum*	Thessaly (near Larissa), Greece

Table 2.2.2. Stone types named after visual properties.

Modern name / *Italian name*	***Ancient name***	**Translation**
Aswan granite	*Lapis pyrrhopoecilos*	“Red-spotted stone”
Breccia verde d Egitto	*Lapis hexecontalithos/ hecacontalithos*	“Stone of 60-stones” / “stone of 100-stones”
Imperial porphyry	*Lapis porphyrites / leptopsephos*	“Purple stone” / “(stone of) small pebbles”
Porfido nero	*Lapis porphyrites melanos*	“Dark/black *porphyrites*-stone”
Serpentina moschinata	*Lapis batrachites*	“Frog-stone”

value was attached to marble with markings".[211] This remark should be understood in contrast to the Roman period, which becomes clear further on in the text, where the author says that the most renowned stones of his own time "are favoured because of their markings or colours".[212] Notable visual characteristics facilitated the recognisability of stones and highlighted the fact that these materials were brought from afar, which in turn communicated notions of access to distant sources and, as such, luxury and affluence.[213]

The cost of these materials is another aspect that may tell us something about the Roman perception of specific kinds of stones. Several scholars have attempted to reconstruct the costs of stone objects.[214] While it appears to be difficult to get a grip on the different factors that influenced the total cost of a certain finished product in a given type of stone,[215] these studies nevertheless make clear that considerable capital was invested in stone and stone sculpture. Diocletian's Price Edict is the only ancient source that informs us of the comparative cost of mostly decorative stones. Issued in 301 AD, in an attempt to stop the inflation that was afflicting the Empire, the Edict set maximum prices for all sorts of services and goods that were available in the early 4th century AD, including a selection of nineteen different stone types (see Table 2.2.3).[216] There are several problems with the interpretation of this list, and it is clear that it cannot be used for straightforward cost calculations of finished objects.[217] Nevertheless, the Price Edict gives us an impression of the most appreciated stones in the early 4th century AD and their relative valuation. Considering the geological sources of the listed materials, the most highly prized stones appear to have come from the Eastern provinces of the Empire, including Egypt, Turkey, and Greece.[218] Moreover, the large majority of the stones on the list are naturally coloured types with characteristic textures. Of the seventeen identified stone types, only three are white marbles (Herakleian, Thasian, and Prokonnesian).[219] Lastly, the relative position of the section on stones in the Edict indicates that these materials ranked among the most luxurious goods that were available in the Empire.[220]

211. *Natural History* 36.5.44; see Appendix B.
212. *Natural History* 36.8.50; cf. 36.5.46: "our favourite marbles with their parti-coloured markings"; both quotations listed in Appendix B. Some varieties of certain stone types were prized higher than others because of different visual qualities. For instance, Pliny discusses a relative valuation of onyx marble or alabaster: the most 'excellent' and 'warmly recommended' types of alabaster thus have specific colours (honey-colour) and textures (spiral marks), while the absence of lustre and other colours (horn colour, or gleaming white) are the least valuable and considered as serious flaws (*Natural History* 36.12.59-61; see Appendix B).
213. For largely comparable analyses and conclusions see Mulliez (2014) 82-84 and Annexe 1 (p. 175-198); cf. Russell (2013a) 15. The relations between the visual appearance of materials, their geographical origins, and social identity are not restricted to the Roman world. Cooney (2002), for instance, discusses the importance of colour as distinguishing criterion for the origins of Irish Neolithic stone axes and its role in the construction of social identity through the access of materials from non-local sources. A similar coherence between the circulation of distinctly coloured materials, geographical distance, and power, wealth, and status has been documented in anthropology (Helms 1988; cf. Jones and MacGregor 2002, 10).
214. E.g., Pensabene (1983); Barresi (2002), (2003) 163-188, and (2015); Russell (2013a) 23-36.
215. Besides chronological and geographical patterns, these included the type of raw material, the type and distance of transport, and the amount of labour needed (man-hours).
216. Four different fragments of the section on stones have been preserved; two of them are in Latin (from Aezani and Aphrodisias, both in Turkey), the other two in Greek (from Pettorano sul Gizio in Italy, and Geronthrae in Greece); Giacchero (1974) and Lauffer (1971) are the main editions of the Edict; in these editions, the section on stones is listed as number 31 and 33, respectively.
217. Most notably, it is not clear whether prices are given in square or cubic Roman foot and in what form the units of listed stones are presented (raw, part-worked, finished); for a discussion on the unit measurement see in particular Corcoran and DeLaine (1994). Several problems concerning the section on stones are summarised in Russell (2013a) 33-36. For the relevance of the Edict for studies on Roman economy in general, see Reynolds (1995), esp. 17.
218. H.M. Ballance suggests that the omission of stones from Western sources might suggest that the Edict was not in effect in the provinces in the West (in Erim and Reynolds 1970, 136). Besides the omission of stones from Western sources in general, the absence of specific popular stone types from the East, such as *granito violetto* and several types of white marble mainly from the Greek world (Pentelic, Parian, and Naxian), has been noted, which might reflect the general character of the stone industry in the early 4th century AD: Pensabene (1983) 58; Bartoli (2008) 332-333.
219. The fact that the white marbles are among the least expensive stones on the list is not necessarily indicative of a lesser appreciation than the (generally more expensive) coloured stones: transport appears to be one of the main price-determining factors. The stones that travelled the largest distances over land are generally the most expensive. See H.M. Ballance in Erim and Reynolds (1970) 136 and Corcoran and DeLaine (1994) 266; on the cost of transportation, cf. *supra*, n. 109.
220. The goods in the Edict are sorted according to price, with the most expensive and luxurious items last. The section on marble takes the penultimate position, only followed by the most expensive single items in section 32 (Giacchero edition), African lions (the maximum price for a first-class lion is set at 150.000 denarii); cf. Corcoran and DeLaine (1994) 267; Schneider (2001) 7.

Table 2.2.3. Diocletian's Price Edict: prices of decorative stones (in denarii, per square or cubic foot).

Listed name	Modern name / *Italian name*	Source	Price
Porfyritici	Imperial porphyry	Egypt	250
Lacedaemonii	*Serpentino*	Greece	250
Numidici	*Giallo antico*	Tunisia	200
Lucullei	*Africano*	Turkey	150
Pyrrhopoecili	Aswan granite	Egypt	100
Claudiani	*Granito del Foro*	Egypt	100
Alabastreni	Egyptian travertine	Egypt	75
Docimeni	*Pavonazzetto*	Turkey	200
Euthydemiani	?	-	60
Anacasteni	?	-	40
Tripontici	*Occhio di pavone*	Turkey	75
Thessalici	*Verde antico*	Greece	150
Carusti	*Cipollino*	Greece	100
Scyriani	*Breccia di Settebasi*	Greece	40
Heracleotici	Herakleian marble	Turkey	75
Lesbi	*Bigio antico*	Greece	40
Thassi	Thasian white and greyish marble	Greece	50
Proconnesi	Prokonnesian white marble	Turkey	40
Potamogalleni	*Breccia corallina*	Turkey	40

Hence, stone materials mattered a lot. They were noted and discussed, and they belonged to the most prestigious and costly commodities that circulated throughout the Roman Empire. There was certain knowledge of the ways specific materials looked and where they came from. Visual appearance, notably colour and texture, and geological origins were considered to be important aspects of stones.

2.2.2 Substitution stones and imitations in wall paintings

"More and more evidence attests to the wide use of local marbles associated with imported ones"

Pensabene (2012) 731-732

Another testimony of the great importance of stones in the Roman world, and specific types in particular, is the fact that the most desirable decorative stones were replaced by more readily available local alternatives, so-called *marmi/materiali sostitutivi*, or were imitated in different media.[221] In the 1st century AD, the increasing

221. The substitution of the most desirable stones is often considered to have been a less expensive option to engage with wider fashions of stone use and display. Hence, Lazzarini (2002, 226) argues that "Va inoltre detto che la ricerca di materiali simili a quelli più costosi e prestigiosi, proprio in quanto già affermati, materiali che potremmo chiamare di sostituzione, generalmente destinati a una committenza di basso rango, fu una costante in tutte le epoche e province dell'Impero". However, other factors, such as availability and the better workability of some of these 'substitution' materials over others, may also have been involved. In similar vein, wall painting is usually considered to have been less expensive than a veneer of real stones: see Corcoran and DeLaine (1994) 271. On different expenditure see also a passage in Julian, *Letter* 29 (to his uncle Julian), in which the emperor remarks on the rebuilding of the temple of Daphne: "First of all set up the pillars of the temple of Daphne; take those that are in

prestige of and demand for certain decorative stones led to the practice of substitution stones. To this purpose, especially in areas that were located far from the sources of the most renowned stones (notably in the Western half of the Empire), a demand for local stones that looked similar to the most widely distributed stones from the Eastern provinces emerged. Table 2.2.4 provides some examples of substitution stones from the Roman world.[222] It is evident from these examples that there was a good knowledge of the appearance of stones. The similarities in colour and texture between Aswan granite and Italian *granito sardo*, to name but one example, are such that these stones are notoriously difficult to tell apart without scientific analysis, even for stone experts.[223]

If substitution stones were not locally available, other strategies could be adopted to ensure the desired visual similarity. An interesting case comes from Fâ and Périgueux in southern France, where two temples dating from the 1st century AD had walls covered with slabs of stone in two distinct colours: yellow on the side where they were attached to the temple, and pink on the outside. Material analysis has shown that the slabs were made from *breccia romana*, a stone with large white marble clasts in a yellow matrix with pink veins that was quarried at Saint-Béat in the French Pyrenean Mountains.[224] Owing to its overall brecciated yellow appearance, this stone was occasionally used as a substitute for the renowned *giallo antico* from Chemtou (Tunisia).[225] However, in this particular case, the *breccia romana* may have been artificially treated to make it resemble one of the other prestigious stones of the Roman world, namely, the pink brecciated *breccia corallina* from Bithynia (Turkey). Experiments have shown that the observed discolouration from yellow to pink occurs after heat treatment by means of the alteration of the yellow limonite mineral into red hematite. The fact that the altered colour only occurs on the visible side of the wall revetments is considered to be an argument against the suggestion that an accidental fire may have caused the alteration, as that would have resulted in an even pink colour throughout. Therefore, the targeted modifications may indicate a deliberate strategy of Roman craftsmen to modify the appearance of *breccia romana* in order to imitate the higher prized stone from Turkey.

Besides the substitution of the most desirable stones through local alternatives, another way to participate in contemporary fashions of display was through the imitation of stones in wall painting.[226] This first occurred in Italy in the late 2nd century BC and grew particularly popular in the 4th century AD.[227] The long list of sites with examples of this practice includes Rome, Pompeii, Oplontis, and Boscoreale, and it is evident that great care was taken to create the most realistic effect. For instance, the analysis of a late 2nd-century BC wall painting from Populonia has shown that pure colour pigments were mixed with calcium to obtain the desired colour tone and intensity. Moreover, the walls were prepared with several grounding layers of specifically selected components to facilitate their polishing, so that they resembled real stones in the best way possible when painted.[228] The resulting surface appearance was

any palace anywhere, and convey them thence; then set up in their places others taken from the recently occupied houses. And if there are not enough even from that source, let us use cheaper ones meanwhile, of baked brick and plaster, casing them with marble" (translation W.C. Wright).

222. The following literature was used: Röder (1992); Bruno (2002b); Lazzarini (2002) 250; Lazzarini – Sangati (2004) 75; Lazzarini (2004); Beltrán *et al*. (2012); Corremans *et al*. (2012); Dessandier *et al*. (2012); Blanc and Blanc (2012); Salán (2012); Lazzarini and Van Molle (2015). Other examples can be found in Pensabene (2004), Braemer (1986) (*non vidi*), and Fant and Barker (2015).

223. On the similarities between Aswan granite and *granito sardo* see also *infra*, 75 with n. 314.

224. Blanc and Blanc (2012).

225. See, e.g., Antonelli (2002) 267.

226. There may have been a hierarchy of wall decoration. Although imitations in wall painting developed their own aesthetic, wall revetments of real stones are usually understood to be the more highly prized of the two. For instance, recent work on the decorative schemes of Nero's Domus Aurea in Rome, which includes both wall paintings and real stone veneers, suggests the existence of a certain correlation between the importance of space and decoration type (Meyboom and Moormann 2013). As a result, the most prominent rooms of this complex had their walls nearly completely covered with decorative stones. In decreasing order of the importance of rooms, the walls would be less covered with real stones, while the least important rooms are usually fully painted; cf. Corcoran and DeLaine (1994) 269 with n. 45-46. In addition to substitution stones and imitations of real stones in wall paintings, stones could also be painted to imitate more prestigious stones, as suggested by architectural mouldings from Alba Fucens (Italy), which were carved from white marble but painted red in imitation of *rosso antico*: C. Evers, N. Massar, *Polychromy, religion and power: the forum of Alba Fucens*, unpublished paper delivered at the Xth International ASMOSIA Conference, Rome 2012.

227. The practice of imitating decorative stones in wall painting thus preceded the use of actual stones for wall revetments.

228. Cavari *et al*. (2015); the preparation and treatment of the walls in this study showed many similarities with Vitruvius'

Table 2.2.4. Substitution stones from the Roman world.

Modern name / *Italian name*	**Alternative**	**When?**
Aswan granite	*Granito sardo* (Italy)	> 2nd c. AD
Bianco e nero antico	*Nero Timau* (Italy)	?
Breccia corallina	*Breccia di Arbe* (Croatia)	?
	Breccia Romana (France)	1st c. AD
Breccia di Settebasi	*Breccia di Seravezza antica* (Italy)	> 1st c. AD
Cipollino	Limestone of Macael (Spain)	Roman period
Egyptian travertine	*Alabastro di Circeo* (Italy)	> 1st c. AD
Giallo antico	*Breccia Romana* (France)	1st c. AD
	Espejón limestone (Spain)	1st c. AD
	Giallo di Siena (Italy)	> 1st c. AD
	Limestone of Kristel (Algeria)	Roman period
Granito del Foro	Felsberg granite (Germany)	4th c. AD
Grey stones (e.g., *bigio antico, bigio morato*)	Kaplan postu marble (Turkey)	Roman period
Luna marble	Marble of Filfila (Algeria)	Roman period
Nero antico	Marble (?) of Antequera (Spain)	Roman period
Occhio di pavone	Limestone of El Torcal (Spain)	Roman period
Portasanta	*Breccia rosata di Roselle* (Italy)	> 1st c. AD
	Breccia rossa di Verona (Italy)	> mid-2nd c. AD
Rosso antico	*Breccia rossa di Verona* (Italy)	> mid-2nd c. AD
	Cipollino rosso (Turkey)	Late 2nd c. AD?
Verde antico	Marble (?) of Sierra Elvira (Spain)	Roman period

very similar to wall revetments made of real stones, and the materials are easily recognisable as imitations of the most prestigious stones of the Empire, including *giallo antico*, Egyptian travertine, Aswan granite, *pavonazzetto*, *breccia di Settebasi*, *breccia corallina*, and *cipollino*.[229]

Customers were aware of the availability and prestige of different varieties of stones. Some types were more highly prized than others, and people knew this. The care that was taken to ensure the best possible imitations of the most prestigious stones – either in wall painting, or through the selection of *Ersatz*-stones, or, if necessary, after artificial treatment – shows that people had a particular knowledge of the way materials looked, and subsequently indicates that it was considered important how materials looked. Visual appearance, especially colour and texture, thus once more emerges as a noteworthy quality of stones.

recommendations for stucco walls (*On architecture*, 7.3). On imitation of stones in wall painting see also, *in extenso*, Mulliez (2014) 79-122.

229. The two practices that are investigated here, substitution stones and imitations in wall painting, were neither confined to the Roman Imperial period, nor were they the only two options in the Roman world to engage with wider fashions of stone use and display. In late 16th century Milan, for instance, a shortage of the most sought-after stones (broadly speaking the same stones as those in Roman times) led to the extraction of new local 'surrogates'. In similar vein, the tradition of imitating prestigious stones in wall painting was continued in later times and places, for instance in Renaissance Venice, and also later in Victorian England. See Bugini and Folli (2012) and (2015) for substitution stones and imitation in wall paintings, respectively, both with further references. Moreover, the imitation of certain stone types could also be realised in media other than stones or wall painting. For instance, imitations of *opus sectile* floors from Albania include ceramic as substitute for red stones, and different colours of glass for renowned green and blue stones: Omari (2015).

2.3 ROMAN SCULPTURE BEYOND REPRESENTATION

Previous studies on Roman sculpture have drawn attention to the possible relationships between the materials used and subject matter. As early as 1923, Georg Lippold devoted a brief chapter to the use of coloured stones for Roman Imperial statuary in his work on *Kopienkritik*, and wondered whether there was a deliberate link between the use of coloured stones and the subject matters of Roman Imperial sculptures.[230] Similar questions formed the basis of Rolf Michael Schneider's *Bunte Barbaren*, an important and frequently cited work.[231] Schneider's main argument was that, (at least) starting from the reign of Augustus, a decorative program can be observed in Imperial sculpture that not only relates to iconographical and stylistic properties of material culture (*Bildprogramm*), but that also involved a deliberate selection of the medium of sculpture. His thesis opened up an alternative perspective on the understanding of Roman sculpture, which until then had largely relied on style and iconography.[232] Through his focus on a series of statues of Eastern barbarians in *pavonazzetto* from the Augustan period, he showed how conscious relationships could be established between a statue's theme, its iconographical scheme, functional use, and its medium. He convincingly showed that these relationships imbued the resulting monuments with cumulative and mutually reinforcing layers of meaning, in which the visual appearance of stone, as well as its geological provenance, played a crucial role.[233] Subsequent studies that explored the relations between material and subject matter include Belli Pasqua's treatise on Roman sculptures in Egyptian greywacke and Gregarek's study on Roman *Idealplastik* in coloured stones.[234]

The remainder of this section discusses a few examples of Roman sculptures to assess *how* the material properties discussed in the previous sections could be capitalised upon in practice. It will be shown that the material of choice could interact with and even transcend subject matter to augment a statue's efficacy, thereby demonstrating that stone sculptures do more than representing fixed meanings.

Celebrating the spectacles of the recently opened Colosseum in Rome, Martial compared a Numidian lion to the appearance of the prized stone from that country.[235] Manufactured around the same time, the statue of a lion now in the Vatican Museum embodied the relationship between the animal and the 'marble-painted' yellow stone, both from Numidia.[236] A semantic relation can be established between the selected stone and the subject matter of the sculpture, namely, one that relates to two different aspects of the particular stone. The lion is

230. Lippold (1923) 137-146. Other early forays into this subject include Sievering (1941) (on the selection of greywacke for the colossal statues of Dionysos and Heracles from Domitian's Aula Regia), Mielsch (1985) 23-28, and various contributions in *Radiance in Stone* (1989). Additional bibliography can be found in Gregarek (1999) 35 n. 8.

231. Schneider (1986); see also ibid. (1990), (1998), (2001), (2002), (2007), and (2008).

232. Hölscher (2004, esp. 58-85) has demonstrated the intricate relationship between subject matter and style in Roman statuary. The given examples make clear that, while the relationship between subject matter and form was not static, style would nevertheless have been essentially subordinate to theme: certain styles would be appropriate for the representation of certain subject matters, so that the "modes and types of representation were to a great extent thematically prescribed" (quotation from p. 114). While Hölscher's theory on the language of Roman art has been influential in recent scholarship (although see the criticism in Versluys 2015, esp. 154), it does not take material characteristics into account at all.

233. *Contra* Mielsch (1985, 24) who says with regard to the Augustan statues of barbarians that "es also nicht auf die Herkunft aus einem bestimmten Steinbruch ankommt, sondern auf Farbe und Musterung".

234. Belli Pasqua (1995), Gregarek (1999). On the materiality of (specific varieties of) white marble and semantic relations between white marble, style, and iconography in late Republican Rome, see Gros (2016). Furthermore, publications like *Marmi colorati* (2002) are indicative of a development towards a more integrated approach to Roman stone by bringing together experts on geological, technical, and economic aspects of the Roman stone trade, like Patrizio Pensabene and Lorenzo Lazzarini, with leading specialists on the socio-cultural significance of Roman stone use, like Rolf Michael Schneider. A similar tendency of convergence can be observed in the most recent volumes of the ASMOSIA-proceedings, in which contributions on the cultural significance of stones have gradually begun to emerge besides the more scientifically and geologically oriented studies that formed the traditional core of the series. A good example is the inclusion of a brief résume of Gregarek's above-mentioned study in *ASMOSIA V*: Gregarek (2002). Moreover, *ASMOSIA IX* (2012) for the first time included a section on the symbolism of stones.

235. Martial, *Epigrams* 8.55.6-10; cf. *infra*, Appendix B.

236. Musei Vaticani, Sala degli Animali, inv. 149 (1st century AD): Amelung (1908) 353 no. 149 Taf. 36 = Gregarek (1999) H25; cf. Schneider (1986a) 153-156, ibid. (2001) 3, Lazzarini (2002) 244, and Bradley (2006) 12-13.

carved from *giallo antico*, the famous Numidian stone. Care was taken to select a block of stone that mimicked the appearance of the animal as closely as possible: while *giallo antico* comes in a wide range of different colours and textures, the specific stone block that was used is indeed reminiscent of a lion's colouring.[237] In addition to this relation between the visual appearance of the stone and the subject matter of the statue, the Numidian provenance of the *giallo antico* reinforces the theme that it represents. Numidia was known as the land of wild beasts and lions *par excellence*; as far as Pliny was concerned, the produce of that country was not worth mentioning except for its marble and wild beasts.[238] Therefore, in this particular case, the colour, texture, and provenance of the selected material interacted with and reinforced the statue's subject matter. A comparable example is the sculpture of a crab now also in the Vatican Museum.[239] It is carved from *porfido verde egiziano* (*lapis hieracites*), an andesite-dacite porphyry from the Egyptian Eastern Desert. This stone was rarely used, and usually only for small columns and veneer slabs; indeed, the Vatican crab is the only known statue in this particular stone.[240] Its unusual selection seems to have had a specific reason. The *porfido* is characterised by a dark olive green matrix with numerous green-yellowish and white phenocrysts. These specific material properties made this stone a suitable choice to depict the subject matter of a crab: the dark green colour resembles a crustacean's shell when wet, while the phenocrysts simulate drops of water. In this case, the odd material selection was thus presumably determined by its characteristic colour and texture.[241]

Other cases where the medium of sculptures augmented the realistic expression of particular contents, likewise derived from the natural world, include the use of various dark coloured stones to depict Blacks,[242] and the use of Greek *cipollino* to portray trees.[243] However, the visual characteristics of stones were not always entirely appropriate for a specific subject matter, which meant that sometimes compromises were necessary. For instance, several statues of leopards are made from a porphyritic variety of granodiorite from Aswan (Egypt) that is characterised by an overall greyish matrix and white and pink phenocrysts.[244] While the material's overall colour is not reminiscent of a leopard, its phenocrysts evoke the characteristic feline rosette pattern, which suggests that in these cases texture was preferred over the realistic rendering of colour that could have been mimicked, for instance, by *giallo antico*.[245]

Stone materials could also reinforce their subject matter in other ways than by adding a sense of realism. Representations of Dionysiac themes were often carved from *rosso antico* from the Greek Mani Peninsula. This recurrent connection is generally understood as a semantic relation between the red colour of the material and the wine associated with Dionysiac mythology. However, representations of the deity himself were often made from the yellow *giallo antico*, the colour that would allude to saffron, with which Dionysus is often associated.[246] A particularly telling example of the

237. Its colour typically ranges from off-white to dark-yellow and from pink to almost purple; the texture ranges from monochrome to veined or brecciated types with dark cement.

238. Pliny, *Natural History* 5.2.22. For other references to ancient authors on Numidia as the land of wild beasts see Schneider (1986) 156 n. 1178.

239. Musei Vaticani, Sala degli Animali, inv. 229: Amelung (1908) 390 no. 229 Taf. 43 = Gregarek (1999) H59; cf. Spinola (2002) 357.

240. See Lazzarini (2002) 235.

241. Similar examples of animals include boars in a variety of grey stones and statues of a horse and a donkey's head in black and grey stones, respectively, which establish a semantic relation between colour and subject matter: see Gregarek (1999) H5 (horse), H7 (donkey's head), H13-18 (boars) with further references.

242. Dark skin colour was the most characteristic feature of Negroid people according to ancient authors: see the references in Gregarek (1999) 146 n. 701.

243. Besides the green colour of the stone, which resembled that of trees, its undulating texture may have evoked the typical growth rings in wood. Examples include a palm trunk in Constantinople (Lazzarini 2007, 185 Fig. 16) and a tree trunk of the Holy Cross. The Late Roman/early Byzantine use of *cipollino* for representations of the wood of the Holy Cross seems to have continued in medieval times: Lazzarini (2007) 186-187 Fig. 17; see also ibid. (2002) 257, and Price (2007) 174.

244. Examples can be found in Liverpool (World Museum inv. 59.148.77), Naples (Museo Nazionale inv. 6225) and Rome: Musei Vaticani, Sala degli Animali 155 & 163 (Amelung 1908, 357 no. 155 Taf. 36 & 362 no. 163 Taf. 37, respectively). See also Gregarek (1999) H34-39 for more examples; cf. Spinola (2002) 357.

245. Other examples suggest that textural resemblance could also be sacrificed in favour of a proper rendition of colour or different colour shades: Spinola (2002) 357-358. In addition, the statue of another feline in the Vatican Museum (Sala degli Animali, inv. 383) attests to the uncompromising desire to mimic reality: its body is carved from alabaster, which evokes the colour of its fur, while inlays of *nero antico* and *giallo antico* mimic its rosette fur pattern; cf. Amelung (1908) 357 no. 154 Taf. 36 = Gregarek (1999) H42 Abb. 12.

246. Lazzarini (2002) 256, and (2007) 74. Gregarek traces back this specific semantic relation to Hellenistic Rhodes, where local

possible associations between particular stones, subject matter, and iconography that rendered the object in question into something larger than the sum of its parts is the so-called *Bocco* monument.

In 91 BC, the king of Mauretania, Bocchus, had a monument erected on the Capitoline Hill in Rome to commemorate the military victory of his Roman ally Sulla over the king of Numidia, Jugurtha. Six blocks of black marble from this monument were found on the southern slopes of the Capitoline Hill in the 1930s.[247] They depict part of a frieze with shields, trophies, and Victories in relief. The blocks are generally considered to have served as base for a gilded statuary group that, according to Plutarchus, would have portrayed the surrender of Jugurtha to Sulla.[248] Hölscher has demonstrated that the monument's style and iconography form a coherent propagandistic *Bildprogramm* as an effective and deliberate metaphor for Sulla's policy.[249] Yet the glorifying character of the monument is given an additional dimension by the material from which its base is carved. The black limestone, or *nero antico*, is generally thought to originate from Numidia.[250] Being from Numidia, the stone embodies the conqueror's access to the conquered land's resources, which were to be used in Rome as a spoil of war for the glorification of the conqueror, Sulla. Therefore, the selected medium, which was virtually unknown in Rome at that time and stood out with its natural colouration, reinforced the ideas of conquest and victory that were represented on the relief that had been carved in it, thus showing how a deliberate selection of stone materials could contribute to the efficacy of an object in a way that transcended the efficacy of medium and representation individually.

Stones could thus be used to augment the efficacy of representation. Yet, "[…] for every example of self-evident use of particular marbles for suitable subjects, there are far more which make no attempt to find a realistic match between subject and marble type".[251] Associations between medium and subject matter were not always well-defined, and it is often not possible to define a specific rationale for the use of particular materials. However, that does not necessarily mean that the stones used were any less significant in those cases.

Dark coloured stones can illustrate this. The virtually infinite possibilities of these materials for statuary purposes make it "very difficult to establish a particular significance for the choice of the stone itself".[252] Hence, greywacke from the Wadi Hammamat in Egypt was the medium of choice for a wide variety of subject matters and types from the Augustan up to the Antonine periods.[253] The corpus of extant sculptures in this material includes Imperial portraits, *Idealplastik*, especially including athletes of Polycleitan models but also mythological figures and animals, as well as various utilitarian and ornamental sculptures, like craters and bathtubs. Widely diverging motivations have been proposed for its diverse applications in Roman sculpture.[254] Its resemblance to old patinated bronze in terms of colour and lustre may have determined its use for the portrayal of Polycleitan athletes, thereby conveying a sense of antiquity that was

red limestone had been repeatedly used for the portrayal of Dionysiac representations. Moreover, when used for portrayals of Dionysus' entourage, such as satyrs, the red colour of the stone would allude to the tanned body mentioned by ancient sources and the ferocity and exuberance for which these creatures were known: Gregarek (1999) 53-64, ibid. (2002) 206-207. For the relation between *giallo antico* and Dionysus see Gregarek (1999) 143-144 and McCann (2015) 24.

247. Now in Rome, Musei Capitolini, Centrale Montemartini, inv. 2749/S-2752/S, 3517/S; another block is currently kept at the archaeological area of Portico d'Ottavia (see Brilli *et al.* 2011, Fig. 1a-e); a final fragment is in Vienna, Kunsthistorisches Museum, inv. 1576: see Schäfer (1979) pl. 55.

248. Plutarchus, *Marius* 32.2: "And when Bocchus the Numidian, who had been designated an ally of the Romans, set up trophy-bearing Victories on the Capitol, and by their side gilded figures representing Jugurtha surrendered by him to Sulla" & Plutarchus, *Sulla* 6.1-2: "Moreover, Sulla's quarrel with Marius broke out afresh on being supplied with fresh material by the ambition of Bocchus, who, desiring to please the people at Rome, and at the same time to gratify Sulla, dedicated on the Capitol some images bearing trophies, and beside them gilded figures representing Jugurtha being surrendered by Bocchus to Sulla" (translations B. Perrin).

249. Hölscher (1980) 359-371.

250. On the alleged Numidian provenance of the *nero antico* of the *Bocco* monument see Schäfer (1979) 248-249; cf. Hölscher (1980) 369 n. 126 and Schneider (1986) 145-146. Recent archaeometric investigations to determine the geological source of the monument's stone blocks have not yet resulted in an unequivocal attribution of the black limestone to one particular Tunisian quarry-site; the current *status quaestionis* is that the *nero antico* was presumably extracted from an as yet undiscovered quarry in north-western Africa/Tunisia: see Brilli *et al*. (2011), Lapuente *et al.* (2012) 379.

251. Anderson (1989) 14.

252. Fullerton (1997) 614; on the wide applications of dark coloured stones in Roman sculpture see also Schneider (1986) 158-159, and Gregarek (1999) 147-148 and (2002).

253. Belli Pasqua (1995).

254. Ibid., 56-58.

particularly suitable to depict a sculptural type of the 5th century BC. Similar associations may have been the rationale behind its use for craters and bathtubs, as these sculptural types were modelled after metallic forms.[255] However, when used to depict the originally Egyptian gods Isis and Sarapis, the Egyptian provenance of the stone would have been capitalised upon, whereas its dark colour would allude to the skin colour of the people of Egypt when used for representations of the river Nile.[256] A rather different explanation has been given to account for the selection of greywacke for early imperial portraiture. Belli Pasqua wonders "se non sia possibile che, sulla scia di quanto era stato introdotto da Augusto, questa pietra non avesse sviluppato nel corso del I secolo d.C. un particolare legame con la figura dell'imperatore tanto da divenirne quasi un simbolo".[257] This citation suggests that materials may become imbued with a particular significance through reiterative co-occurrence. In the particular case of greywacke, notions of (Julio-Claudian) imperial dynastic belonging may indeed have come to 'reside' in this stone through its repeated use for the portrayal of its dynasts.

This and the other examples discussed above demonstrate that, while not always self-evident, specific properties of stones, including colour, texture, and geological origins, could interact with other object parameters, such as artistic style and subject matter, to enhance the presence and efficacy of Roman sculptures. This implies that stone objects in the Roman world cannot be fully understood without considering all relations that may possibly exist between the different parameters that constitute an object. While demonstrating the shortcomings of a focus on representational aspects alone, this also shows that a mere focus on materials and materiality is insufficient to assess the efficacy of Roman stone sculptures. Rather, in order to fully appreciate Roman sculpture, we need a more integrated approach that studies material data in relation to parameters that traditionally have received more attention, like style and subject matter. This conclusion has important implications for previous approaches to the objects that we call Aegyptiaca. It becomes evident that these objects have not been studied to their full potential yet. The strong reliance on representational aspects has resulted in the overall neglect of these objects' material properties and their associations. However, without involving these material data into our analyses, our interpretations have remained necessarily limited. This demonstrates the necessity of a more integrated approach to so-called Aegyptiaca from the Roman world.

255. The resemblance of dark coloured stones to metal, especially of Egyptian greywacke, is mentioned by Pliny (*Natural History* 36.11.58, cf. Appendix B), and has long been recognised in scholarship: see Schneider (1986) 158-159 n. 1188 with older literature. Furthermore, according to Gregarek (2002, 206), red stones could be used to create the illusion of coppery bronze. However, several authors have objected to the idea that stone materials were considered as a mere substitute for metal. It has been repeatedly stated that bronze "involved less expense and cachet" than dark coloured stones (Anderson 1989, 14). This acknowledgement led Schneider (1986, 159) to argue that "Die dem Stein eigene »Patina« ermöglichte dem reichen Römer, jedes von ihm begehrte Statuenmotiv mit dem einmaligen Anspruch der bedeutendsten alten, natürlich verfärbten Bronzewerke zu verbinden und diese durch das kostbarere Material noch zu übertreffen"; cf. Mielsch (1985) 26, Di Leo (1989) 59-60, Belli Pasqua (1995) 56, and Gregarek (1999) 148.

256. According to Pausanias, statues that represent rivers are usually made from white marble, except statues of the Nile, which are traditionally made in black stone because "it descends through the sea through Aethiopia": *Description of Greece* 8.24.12; cf. Appendix B); cf. Schneider (2002) 96, Jones (2005) 39-40. In similar vein, the black dress of bi-chrome statues (i.e., sculptures that combine coloured stones with white marble for limbs and head) depicting Isis is generally understood as a reference to Apuleius' *Metamorphoses* 11.3-4 and the mourning goddess when she searches for her murdered husband Osiris: Gregarek (1999) 142.

257. Belli Pasqua (1995) 57; see also Fejfer (2008) 168-169.