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Diverging Trends in the Visual Appearance of Fired Clay in Roman Architecture: ‘Campana Plaques’ and Terracotta Façades

Abstract: This article addresses aesthetic, functional and semantic aspects of the material clay/terracotta in Roman architecture and possible changes to these aspects over time. In particular, the focus lies on ‘Campana plaques’, a class of Roman architectural terracottas used in the upper parts of architectural structures. My aim is to provide a phenomenological overview of general design tendencies, and to contribute to the interpretation of large-scale plaques from the Palatine in Rome, which have recently been regarded as important evidence for a special appreciation of clay in the era of Augustus. In order to complement this (inevitably partial) insight into the manifold ways in which terracotta was used and shaped for architectural surfaces, this paper includes a second case study focussed on exposed terracotta façades. After a short overview, each section first turns to the usage of clay and its visual appearance(s) in the particular cases, and then approaches possible semantics tied to clay during this period of its use. Both cases relate to the metropolis or its immediate surroundings and belong to the late 1st century B.C. and the 2nd century A.D., respectively.

Introduction

Of the many natural resources used in antiquity, clay is a real ‘wonder material’: it is widely available and easy to work with, both in terms of influencing its physical-chemical composition and utilising its natural plasticity. When properly treated, this malleable substance will take on almost any kind of form, whether achieved purely manually, or by moulding or impression; furthermore, it maintains its given form for an impressive length of time, thanks to its material strength and the resistance gained through the processes of various preparation methods and firing¹. This great usefulness easily explains the material’s ubiquity in ancient architecture: clay’s uses range from roof tiles and architectural terracottas (associated with the earliest surviving examples of monumental architecture in Early Archaic Greece) to brickwork as a standard Roman building technique from the Late Republican period onward². The durability of antique ceramic and terracotta products makes them objects of modern research, which usually relies upon their form and primary ‘practical’ function in its approach to this class of material. Yet the important characteristics of clay are not limited to these: as with any other *materies/ὕλη*³, colour also holds an important place amongst its physical properties. Depending on the raw clay that is used, as well as the preparation and firing processes,

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¹ On clay/terracotta as a material for construction, see, e. g., Malacrino 2010, 41–60.

² For Greek roof tiles and architectural terracottas, see Winter 1993. Gerding (2006) provides a brief overview of the early use of fired brick.

³ On *materies/ὕλη* and material, see Meier et al. 2015; on the concept of affordance, see Plant and Hielscher, this volume.

its spectrum ranges from whitish-grey to brown and orange-red. The characteristic, intense earth hues of clay products therefore result from a combination of both natural properties and human intervention⁴.

Ancient material culture is rich in examples of the deliberate integration of earthy tone(s) into an overall design, which makes clay a potential medium for colour decoration (as is the case with many kinds of ceramic, including Athenian glazed pottery or *terra sigillata*, for example). However, in many cases this facet of clay's physical properties seems to have been simply accepted as a given fact, rather than seen as a feature chosen deliberately for its decorative potential. In architecture, for example, a monochromatic earth tone characterises many objects that served primarily practical purposes, such as roof tiles, *tubuli* and bricks. While the former sat in a remote position on the less conspicuous rooftop surfaces, the latter were usually plastered over. Lavish façades, when finished, almost always concealed the intense hue of the monochromatic terracotta elements used in their construction. Thus, unlike other – mostly 'noble' – materials, the characteristic earthy colour of clay did not necessarily form a visible component of the final visual appearance, as was the case with precious metals or marble, which were usually visible in the finished appearance of artefacts crafted from them. With respect to clay/terracotta in Roman architecture, there were many situations in which the inherent colour was clearly less appreciated than the material's other qualities (such as its strength and useful multiformity).

If, in material culture studies, we understand material as a specific quality of 'things' or objects and attempt to explore its effects on the usage and perception of artefacts in a certain cultural frame (materiality)⁵, clay's colour is of special interest. Stressing clay's inherent colour as a medial quality can help us to recognise the presence – or absence – of this physical property in the overall appearance of the final artefacts (or architectural structures) not as a matter of course but rather as the result of the technical and artistic treatment that it has undergone. This emphasises the choices made by the relevant actors and reflects deliberate cultural preferences. As with form and decoration, colour also depended on the 'fashioning' that a material underwent during the production process: within the realms of possibility and intention, the actors involved had 'a choice'⁶. In the process of fashioning, the basic *materies*/ὕλη was either included in the visual appearance of the final product (which I take to be a combination of form, surface/texture⁷ and colour), possibly supplementing or enhancing those three qualities, or it was excluded from it and concealed. In the latter case we may speak (paraphrasing Martin Seel)⁸ of a difference between the basic material with its native colour, and the finished artefact's material appearance *in terms of* colour, which may include other hues and substances applied to the surface (for example, a slip or gilding). A terracotta product may thus appear as if it was made of plaster/stucco or plastered stone, or it could even glitter like gold. In order to avoid the biased term 'surrogate' here⁹, I suggest comprehending the effect stemming from such an artificial accumulation of various, even foreign, synesthetic

⁴ Malacrino 2010, 42.

⁵ See the introduction by Haug – Hielscher, this volume and Plant, this volume. On 'material' and 'materiality', see also Meier et al. 2015, 21 (with further references); Karagianni et al. 2015.

⁶ I thank Annette Haug for pointing out Stephen Greenblatt's *Renaissance Self-Fashioning* (1980) to me, which examines the construction of identity based on English Renaissance literature. Another reference point here is Pierre Lemonnier's 'technological choice': see Lang 2006, 311–313. Referring to 'actors', I mean the contemporary figures involved in ordering, producing and consuming terracotta artefacts (I do not refer to actor–network theory).

⁷ This aspect, although important for the aesthetic appearance in all of its complexity, must be almost completely omitted here. On surface/texture, see Grüner 2014, 424–439, which discusses the effect of the Vitruvian *asperitas* on stone surfaces etc.

⁸ Seel 2003, 173 f.: 'eine basale Operation der Malerei dürfte in der Herstellung einer Differenz von Bildfläche und Bilderscheinung liegen'; see Haug – Hielscher, this volume.

⁹ The potential to deceive – a standard accusation made against the 'ignoble materials' (for the concept of 'Materialgerechtigkeit', see Wagner, this volume; Raff 2008) – is one of the many key reference points I share with Jessica Plant's contribution on stucco in this volume.

information in one material appearance as that object's 'aesthetic cloud'. In this mental figure, a variety of aesthetic potentialities correspond to a single material. Or, put conversely, different materials may share the same aesthetic qualities¹⁰.

The preceding discussion characterises my approach to terracotta in this context only insofar as I will be focusing on different methods of fashioning this material, especially with regard to its natural colour. However, as the following comparisons will show, the divergence between the basic colour of the material and the colouring chosen for the artefact's visible surface not only indicates a range of possible visual appearances, but is also instructive in terms of semantics and the underlying concept of appropriateness (*decorum*)¹¹. For this reason, my contribution will attempt to draw conclusions from the archaeological evidence through comparison and close analysis. Observations concerning both the combination of materials used side by side within one architectural structure, as well as brief glances at other solutions applied in buildings of the same period or their historical predecessors can shed some light on the semantic aspects and diverging tendencies within the concept of *decorum*. Methodologically, I thus share the approach taken by Annette Haug, Adrian Hielscher, Matthias Grawehr and Dominik Maschek (among others) in this book, who argue for the need to draw conclusions from archaeological 'pragmatics' and to address the subject from the perspective of production¹². In scholarship to date, however, conclusions regarding the semantics of clay/terracotta have almost unanimously been drawn from ancient literary sources and follow a preconceived and standardised 'hierarchy of materials'¹³. Despite the polyfunctionality and heterogeneity of preserved terracotta artefacts, there remains a common assumption that a general, almost 'monolithic' semantic connotation can be assigned to clay in the Roman era. This view is almost unquestionable, especially as regards the aspects of material value and immaterial meaning: clay is humble, but from its simplicity, a high ideational content emerges, marking it *the* traditional Roman medium, which signalled decency in architecture, the arts and everyday objects.

Even though my remarks in this essay are in many respects limited to outlines and indications, I still hope to contribute to shifting the semantic perspective towards a view that pays more attention to the archaeological evidence. At the very least, the examples gathered here should reveal diverging strategies in fashioning – negating, supplementing or using – the inherent monochromatic colour as one factor among others with regard to clay's physical properties.

'Campana Plaques'

'Campana plaques' are commonly understood as a Roman version of Etrusco-Italic architectural terracottas¹⁴. Emerging in the 1st century B.C., probably between the period of Sulla and that of Julius Caesar, they continue the old tradition of moulded terracotta plaques which were applied

¹⁰ See Haug – Hielscher, this volume. This blending, it has to be stressed, produces direct consequences for the field of semantics, as discussed by Anguissola, this volume, in the context of Pliny the Elder's writings. The deception of a camouflaged material, however, is rarely absolute, always bearing in itself the possibility of revelation.

¹¹ Here I focus on 'original', first-phase decorations, leaving aside the aspects of later alterations affecting the aesthetic appearance during the artefacts' lifespan, such as weathering, damage, refurbishment, etc.

¹² See esp. Maschek, this volume, along with the contributions by Grawehr, Anguissola and Haug – Hielscher.

¹³ According to which – in a seemingly transcultural manner – clay/terracotta assumes a relatively unimportant place in comparison with precious materials such as gold, silver, bronze and marble. Even if this categorisation is deeply rooted in ancient thought (as shown in passages that discuss tableware, such as Plin. HN 33, 142, Sen. Ep. 5. 6 and Val. Max. 4, 3, 7. 4, 11, in which comparisons between vessels made from precious metals and simple ones made from clay forms a known topos: see Raff 2008, 29. 77–82), this does not mean that diverging interpretations and classifications were not practiced under certain socio-cultural circumstances (as we shall see).

¹⁴ The plaques' rich imagery is decisive (addressed as 'neo-Attic' in scholarly tradition): see Borbein 1968, 20–27; Reinhardt, forthcoming. However, the differences from other related forms of Roman architectural terracottas (which are actually produced side by side: see Pensabene 2017, 136 f.) are often fluid.

to the edges of roofs as well as to wooden entablatures of both religious and public buildings, as well as in domestic architecture. Typologically, ‘Campana plaques’ can be divided into four different shapes, three of which stem directly from the Etrusco-Italic tradition. First, revetment plaques (Verkleidungsplatten) were fixed to the entablatures of temples, as well as porticoes in villa architecture. *Simae* framed the roof edges of both sacred and profane buildings. In many cases, they were crowned with crestings (Krönungen), low and elongated elements which were typically worked ‘à jour’ (producing a pierced cresting). The irregular upper end of this cresting is mirrored in the fourth type: cresting plaques (Aufsatzplatten). This type is the most common among surviving examples, and was used for several purposes in various architectural contexts, from eave tiles to wall friezes¹⁵. Because of their use in the upper parts of architectural structures, the contextual setting of ‘Campana plaques’ within original decorated surface assemblages is much harder to identify than, for example, stucco or wall painting.

Fashioning Clay in Various Colours

‘Campana plaques’, like other architectural terracottas, take advantage of their constituent material’s malleability during the manufacturing process. The standard procedure applied in their production was the principle of mould and impression; this permitted, for example, the forming of relief depictions from the same substance to a certain elevation/height. In a semi-dried state, minor changes could be performed by hand (e. g., the reworking of details or, by piercing the background, the creation of cutwork or openwork) and it was possible to join individual pieces (as was the case with the water spouts on the *simae*). ‘Campana plaques’ are thus mechanically reproduced items¹⁶. This shows a fruitful connection between the favourable material properties of clay and the particular need for identically shaped and decorated elements that fit the overall design of a building. It also goes hand in hand with a certain seriality in terms of the images, which were bound to form friezes on the entablature, the roof edges or upper wall zones in quite a repetitive form¹⁷.

However versatile the material in this regard, its natural monochromatic tone usually underwent further alteration (although the majority of terracottas survive without colour today, traces indicate that they were originally painted in almost every case). In the absence of an overarching study in this field, we remain dependent on the remarks of Hermann von Rohden and Hermann Winnefeld, who were working on the material between 1878 and 1900/1911¹⁸. Overall, they distinguish four typological groups. The most common were plaques covered in a layer of whitewash, which served as a support for further painting in various colours (1). However, several of the ‘best pieces from the Augustan era’ lack this supportive layer and the clay is painted directly while some parts were omitted (2). In these cases, a thin coat of clay, which must have been incorporated into the mould first before filling it with the usual compound, indicates a special treatment of

¹⁵ The standard publication is von Rohden – Winnefeld 1911 (esp. 23*–47* on the types and their use); see also Borbein 1968, 14–19. For villa contexts, see Johannsen 2008 and Känel 2013, 1115–1119 for more recent works.

¹⁶ This fact has been interpreted in different ways: see von Rohden – Winnefeld 1911, 24* f.; Borbein 1968, 33 f.; Känel 2013, 1115; Reinhardt 2016, 256–260. On production, see Tortorella 1981.

¹⁷ Identical pieces were set next to one another; varied counterparts formed companion pieces and single plaques closely linked in content were combined (e. g., three deeds of Hercules): see von Rohden – Winnefeld 1911, 29*–31*; Borbein 1968, 19; Reinhardt 2016, 250–256. For ‘Campana plaques’ as wall decoration, see Tortorella 2018.

¹⁸ Modern scientific methods form a necessary and important addition to their observations. For example, a mixed analytical approach (Tarquini et al. 2019) has recently helped to reveal remnants of Egyptian blue on a fragment from the Palatine Hill, and in this case the naked eye was not able to perceive traces of colour at all. Yet this type of research remains rare; a poster published by Buccarella Hedegaard et al. in 2017 represents a rare, but important example, while additional research is forthcoming (e. g., that performed in the Kunsthistorisches Museum in Vienna and the Ny Carlsberg Glyptotek in Copenhagen, to be presented at the International Conference ‘Status Quo Campana Reliefs’, organised by the author).

Fig. 1: *Sima* with lively colours; Rimini, Museo della Città, inv. 4767.

the plaques' surfaces. Furthermore, reliefs (especially *simae*) exist that were covered by a thick, milk-white colour (3) alongside, perhaps, pieces that remained entirely unpainted (4)¹⁹. These four groups correspond directly to two different decorative conventions: one that covers the original clay colour entirely (cases 1 and 3), while the other allows it to come through at least partially (2 and 4).

The first convention may be illustrated by a fragmented *sima* from Rimini, which is dated to the 2nd century B.C. and has survived with much of its original colouring intact (Fig. 1)²⁰. On its concave front, it is decorated with an elongated pattern based on the traditional lotus and palmette frieze. However, the heads of a Gorgon and a lion alternate with these floral elements, separated by elongated spirals. While the piece itself is brown to greyish in colour, a white slip originally covered large areas (or all) of this earth tone, which has now become visible through surface wear. As far as it is possible to discern today, the white slip primarily served as a preparation layer, remaining visible in the final state only at the bottom of the piece. Further colours were then applied: the background is dark blue, with the lower border of the *sima* a wine red; this same red was also applied to the hair of the *gorgoneion*, which is adorned with pink skin, black eyebrows, red lips and a collar of blue snakes. In accordance with this veristic application of colour, the lion's head is reddish brown with yellow manes. A rich red was applied also to the main leaves of the lotus flower and palmette, while the tiny leaves in their bottom and the middle sections differ in colour (the former are light blue, while the latter, in the case of the palmette, are yellow; light blue was used for its calyx).

The fashioning of this *sima*'s decorative elements relies on the usual material properties of clay, both in terms of function (forming a weatherproof eave) and plasticity (shape, surface elevations), but originally it must have been almost completely deprived of its inherent colour. For the sake of aesthetics, the decoration was further pigmented, which reflect both convention (the use of blue and red as major colours for architectural ornaments) and a general veristic tendency as far as the figural parts are concerned.

¹⁹ For technical questions, see von Rohden – Winnefeld 1911, 26* f. esp. 23*. 29*; see also Perry 1997, 58–60; Blume 2016. Comparing these findings with the polychromy of related pieces, such as other *simae* and antefixes (e. g., Pensabene – Sanzi di Mino 1983, Pls. O–Q), remains an important activity for future research.

²⁰ Rimini, Museo della Città, inv. 4767; see also Maioli 1998 (thanks to Maddalena Mauri for this reference).

Other supplementary evidence can be presented. While some fragments from the Casa del Granduca Michele (VI 5,5) in Pompeii provide us with another example of vivid colourfulness, both a cresting plaque in the Museo Nazionale Romano and a revetment plaque from the Casa del Fauno (VI 12,2) in Pompeii rely heavily on the use of white. In the theatre scene depicted on the cresting plaque in Rome, white denotes the architectural structure in the background and plays an important part on the lower border and in the palmette frieze at the top, whereas the plaques from Casa del Fauno's north peristyle lack any evidence of additional colour²¹. In general, the use of this white primer coat is attested from the 2nd century B.C., and it continues into later periods. This timeline parallels the chronology associated with the finishing of architectural surfaces (e.g., those of walls, columns, capitals and friezes) produced in tuff or travertine with a thin protective layer of plaster, which could then be supplemented with additional paint. This practice, common in Republican architecture, subsequently became less popular in Imperial Rome due to the increasing use of white marble at that time. Accordingly, white plaster is often believed to have served as a substitute²². However, both the white primer coat and the vivid colours applied to architectural terracottas followed the same decorative strategy; in effect, the general aesthetic impression produced was similar to that of other painted plaster surfaces. Today, one of the inner gardens of Villa A in Oplontis still provides a basic idea of how coated terracotta elements merged aesthetically with adjacent surfaces covered in painted plaster²³.

In contrast, another technique for colouring Roman architectural terracottas omitted the white primer coat. The large-scale revetment plaques from Rome's Palatine hill provide the best examples of this (dating, most probably, to 42–36 B.C.). Figure 2 shows one of the plaques depicting the struggle for the Delphic tripod. The additional colours used here – light blue for the background, wine red for hair, yellow ochre for the leonté – were applied directly to the surface of the clay, which ranged in colour from rose pink to yellow. In addition, a white/cream colour appears along the upper borders and may denote clothing²⁴. In the majority of cases, however, the figures' bodies lack additional colour: uncovered body parts appear yellowish²⁵.

In contrast to the whitewashed pieces cited above, here the plaque incorporates the native colour of the clay as one of its physical properties. This use of natural colour is partial, remaining strictly limited in its scope; nevertheless, it mirrors directly the basic substance, which forms the background to the decorated surface and the plaque as a whole. Here, terracotta not only shapes the general form and constitutes the surface decoration in terms of motif, its natural colour also claims a certain visibility precisely where its plastic qualities are most conspicuous, namely in the figural elements.

Generally speaking, the chromatic fashioning here corresponds to a palette built heavily around the earth tones (with the addition of blue). As a result, the overall impression evokes the

²¹ For the piece in Rome (Museo Nazionale Romano, Palazzo Massimo alle Terme, inv. 34355), see von Rohden – Winnefeld 1911, 280 Pl. 81; when found, the plaque decorated a funerary monument and thus perhaps represents an example of reuse (after renewal of the painted decoration?). Zink (2019, 20 Fig. 18) refers to the Pompeian examples, including the revetment plaques from the Casa del Fauno (Naples, Museo Archeologico Nazionale, inv. 21517; see also Haug 2020, 102 Fig. 61 with references).

²² See Mattern 1999, 24–26 for examples in temple architecture, as well as the contribution by Plant, this volume. As for architectural terracottas, a white primer coat is sometimes believed to be typical of the Republican period: see Zink 2019, 3. 20 Fig. 18. See also Grawehr, this volume. In addition, the (ancient) restoration of architectural terracottas with stucco (e.g., Merone 1993/1994, 58 f. Fig. 1) must have created a similar impression.

²³ See Borriello et al. 1996, 156 Pl. 58. 266 cat. no. 583. See also Zink 2019, 18, on the polychrome architectural decoration in terracotta and (as a comparison) stone used in Temple A at Cumae; on stucco, see Zink 2019, 24. Tortorella (2018, 212–217) discusses the relationship between stuccowork and terracotta reliefs.

²⁴ Rome, Museo Palatino, inv. 379663. 379664. 379665. See von Rohden – Winnefeld 1911, 28* f.; Carettoni 1973, 80 with n. 40–43 and Figs. 20–23; Pensabene 2017, Pls. A–E; Perry 1997, 6 f. n. 3 f.

²⁵ While, according to the first convention, the bodies of relief figures remained white: cf. von Rohden – Winnefeld 1911, 28*.

Fig. 2: Revetment plaque coloured in earthen hues (figures) and blue background; Rome, Museo Palatino, inv. 379663, 379664, 379665.

‘typical’ aesthetics of painted terracotta known from earlier examples, as saturated and reserved colours prevail over more vibrant and lively hues²⁶. Altogether, it becomes apparent that ‘Campana plaques’ fashioned in this way must have created an impression clearly distinguishable from that of the whitewashed pieces previously described; consequently, this fashioning will have triggered and nurtured diverging semantic connotations²⁷.

Approaching Semantics: Roof Material and Façade Appearance

As we have seen, additional colour dominated the aesthetic appearance of the average architectural terracotta when first attached to a building’s façade. With respect to the terracotta itself, the rear and the sides retained the natural aesthetic of the raw material’s colour, as did most Roman roof tiles. Yet despite this strong connection in terms of material and function, it is the colouring and further decoration of the front-facing surfaces that aesthetically decouples ‘Campana plaques’ from roofs and relates them more closely to building façades.

Taken on its own, this might not point unequivocally towards a positive appreciation of terracotta, but several external indicators offer further support in this direction. For example, many ‘Campana plaques’ and related terracottas come from building projects and villas of the Roman aristocracy, as on the Palatine in Rome, where Octavian/Augustus converted his house and the adjacent area into the temple complex of Apollo Palatinus (vowed in 36 and inaugurated in 28 B.C.; Fig. 2)²⁸. Thus, when it comes to function and aesthetics, ‘Campana plaques’ were apparently an

²⁶ The colour white may illustrate this: ‘cream white’ has a firm part in the ‘Archaic Colour Triad’ of architectural terracottas from Central Italy: see Zink 2019, 6. 16–18 with a short overview; Winter 2009, 519–522.

²⁷ Currently it is unclear to what degree a certain evolution of taste is mirrored by these aesthetic differences, and how this relates to the types of plaques employed and their respective positions on the façade (entablature vs. eave/cresting). See von Rohden – Winnefeld 1911, 27* with references to *simae*, crestings and cresting plaques.

²⁸ Pensabene 2017, esp. 45–47. 53. 56–64. 126–131 Pls. 25–39. Other finds come from the Villa of Livia at Prima Porta, the *gens* Cotta villa near Cottanello, the villa at Punta Eolo on the island of Ventotene, the ‘villa di Palazzo a Mare’ on Capri and Caligula’s luxurious ship no. 2 on Lake Nemi. See Johannsen 2008, 19. 32 with references; Reinhardt, forthcoming.

appropriate form of decoration for both the entablatures and roof edges of religious buildings²⁹ and lavish private houses during the Late Republic and the Early Imperial period in Italy and beyond³⁰.

Several reasons presumably lay behind this, not all of which can be unambiguously identified. A major factor must have been the natural qualities of the clay (such as malleability during the working process, the capacity to create multiple copies, a high durability when properly fired, and so on), which, apart from its inherent colour, fulfilled many functional requirements. The long tradition of typologically related architectural terracottas from the Archaic period onwards also mirrors these aspects³¹.

These qualities also permit the possibility of applying various designs – both in relief and in additional colour – to visible building façades. However strong the connection between ‘Campana plaques’ and the Etrusco-Italic tradition, the large-sized figurative images applied to entablatures and eaves during the 1st century B.C. seem to have been something new³². There should be little doubt that this trend represented a decisive factor for the actors involved when ordering and manufacturing these kinds of products. To a certain degree, the appropriateness of ‘Campana plaques’ depended on the fact that they were carriers of images³³. Their figurative relief decoration represented one form of the lavish surface finishing that was required to fulfil the actors’ needs, and fit the concept of *decorum* at the time. Obviously, architectural terracottas which retained the old (i. e., less figurative) style were insufficient for those needs.

Two general assumptions may be drawn from these observations regarding semantics. First, the surface treatment, in the form of both figurative relief images and additional colour, stands in contrast with the view that the plaques’ raw material was cheap and undemanding³⁴. Even if terracotta was less esteemed than bronze or marble in absolute terms, it obviously did not violate the rules of *decorum* when used next to ‘noble’ materials in the proper position (i. e., entablature/roof edge) in cases where the basic substance – deployed according to its functional qualities – was properly treated in terms of technique and decoration.

Second, this argument regarding proper artistic treatment should prevent us from giving too much weight to the *luxuria*-centred perspective which emerges from literary sources such as Pliny and Livy (see above). According to this discourse, a high degree of positive ideational content attached to a raw material served as the counterbalance to its general lack of material value (regardless of the artistic treatment that it underwent). Recently, Christopher Hallett connected this model with the emergence of large scale, high-quality ‘Campana slabs’ with archaistic figures (Fig. 2)³⁵.

²⁹ New evidence comes from the sanctuary of Castrum Inui and other find spots: see Tortorella 2019.

³⁰ On chronology, see Pensabene 2017, 135 n. 356 with references. Most of the ‘Campana plaques’ from dated contexts in the Roman provinces date to the Augustan period (Reinhardt, forthcoming).

³¹ Additionally, the material’s longevity is mentioned in the written sources: see n. 57 below.

³² In scholarship, this imagery is deemed a decisive factor for the constitution of this ‘Gattung’ (class or type): see Borbein 1968, 25. The standard example is the terracotta decoration of the temples on the *arx* at Cosa (see Taylor 2002; Pensabene 2017, 125).

³³ See Tortorella 2019, 212 and Johannsen 2008, 23. 29 f. on the relationship of single images to building function. Furthermore, various interpreters have stressed the possibility of a political reading (mainly based on the finds from the Palatine): see Strazzulla 1990.

³⁴ More than once, this earthen material has stimulated negative assessments. For example, scholars have contrasted ‘Campana plaques’ with marble reliefs in a negative sense, or even claimed that they served as substitutes for those who could not afford marble sculpture (see Vermeule 1977, 12; Froning 1981, 31 f.; Känel 2013, 1115; or, as a general view, RE V A, 1 (1934) 808 s. v. Terrakotten [Heidenreich]). Plaques are rarely discussed in terms of their associated production technique (e. g., in a series using moulds) or their durability despite their dual function, protecting and decorating the architectural surfaces of roofs/eaves and entablatures (e. g., Borbein 1968, 17–19).

³⁵ Hallett (2018, 185–194) suggests that the Augustan restoration programme of old temples represented an important parameter for this development. In his view, this kind of architectural decoration was deliberately adapted for new structures, such as the temple complex of Apollo Palatinus, and subsequently spread to other contemporary buildings (e. g., a shrine at Castrum Inui). On the assignment of these plaques to the Porticus of Danaids in the new complex of Apollo Palatinus, or better the House of Octavian, see above, n. 28.

Against the backdrop of a ‘new early Augustan valuation of clay’, he proposes that the material of these architectural terracottas was ‘intended to make reference to the traditional architectural ornament of the temples of central Italy, and that the use of terracotta was intended to sound an unmistakably Italian patriotic note in Augustus’ first building programme’³⁶. This sheds interesting light on associations connected to the entire material class of clay, but two major problems with this thesis remain. The first is the assumption that terracotta stands in contrast with the use of ‘noble’ materials³⁷. We could object, saying that the position of clay/terracotta in the hierarchy of materials was not absolute, but rather relative, insofar as it depended on the extent of artistic treatment which it underwent in the context of its socio-cultural significance at the time of its production. Second, the uninterrupted tradition of using terracotta elements for entablatures and eaves during the Republican and Imperial periods raises the question of whether some special referential power inherent to clay may have existed beyond the literary discourse on *luxuria*. Perhaps for most contemporaries, the use of baked clay as a basic substance for these architectural forms would not have been surprising at all³⁸. Examining the appearance of the finished product is obviously more instructive than looking at that material in isolation. In this regard, the large slabs from the Palatine Hill certainly point in a different stylistic direction – in terms of typology, figural decoration and colour scheme – than the decoration applied to contemporary marble buildings³⁹.

Terracotta Façades

In contrast to architectural terracottas, *opus latericium* emerged late in central Italy, possibly not until the mid-1st century B.C. Recent research has shown how the use of fired bricks spread from mainland Greece to the Italian peninsula, where they were employed in the walls surrounding several cities in Gallia Cisalpina from the Mid-Republican period onwards; they later also appeared in the Transpadana⁴⁰. The Porta Palatina, which makes up a part of Turin’s circuit wall, is a later example that is particularly instructive, with its carefully set and exposed brickwork (Fig. 3)⁴¹. In Rome, apart from private *mausolea*, the construction of the Theatre of Marcellus (finished 13/11 B.C.) forms an important example for the use of fired bricks, which were to become the ubiquitous building material for masonry shells during the Imperial period. The majority of these brick walls were covered by plaster and painted or clad in marble revetment⁴².

³⁶ Hallett 2018, 200. He notes that terracotta is ‘the authentic material of the old gods of Italy’ and thus provides *gravitas*: Hallett 2018, 194, 199, 201. See also Hallett 2012, 86 f.

³⁷ Hallett 2012, 87; 2018, 181–183, 194, 200.

³⁸ This is suggested by Vitruvius, who, in his account of the origins of architecture (Vitr. De arch. 2, 1, 3–6), describes how roofs were first made of wood, straw or unfired clay, as can be seen from buildings in other parts of the Mediterranean and older properties in Athens and Rome. Generally, this is taken as evidence for the earliest technical solutions for this architectural task (see Vitr. De arch. 2, 1, 7). For Vitruvius, roofs covered with tiles made of baked clay are considered standard, and he begins his overview of ‘suitable’ building materials with the ‘new’ bricks (Vitr. De arch. 2, 3).

³⁹ In my view, Hallett’s reading of an explicit back reference to the Palatine is best underpinned by the plaques’ characteristic surface treatment and ‘colour management’. The lack of a white primer coat, together with the limited colour range, indeed links these examples to the terracotta revetments of the *maiores’* venerable old temples, even if they differ considerably in terms of figural decoration.

⁴⁰ Coarelli 2000; Gerding 2006; Bonetto 2015; Vitti 2016, 350–357.

⁴¹ Quite similarly to the brickwork of the *mausolea* described below, joins were kept to an absolute minimum (see Papotti 2003, 279–285 Figs. 269–280, 294 Figs. 285, 286), which – together with the fact that a finish is applied to some of the bricks – unequivocally indicates the presence of non-plastered façades: see Henry 1984, 59–68. The gate is sometimes described as having once been plastered: see Thomas 2007, 110.

⁴² On the Theatre of Marcellus, see Buonfiglio 2015. It is generally assumed that Roman brickwork was usually covered: see, e.g., Kammerer-Grothaus 1974, 199; Henry 1984, 12–16 (on history of research); Adam 1999, 145–150; Zink 2019, 26 f. (using the Basilica of Constantine in Trier as example); see also Barker, this volume.

Fig. 3: Turin, main gate of the Porta Palatina, meticulous brickwork on the façade.

The heavy use of clay for the Roman ‘brick industry’ relied on the positive material qualities already mentioned, which, besides the factors of durability, stability and capacity for multiple applications, also guaranteed a high degree of standardisation that helped to accelerate the building process⁴³. Unlike roof tiles, however, the basic aesthetic quality of brick’s earthen tone was in many cases concealed under decoration after building had finished. From the convention of covering brick walls with marble veneer or painted plaster, it follows that the bricks’ natural colour must have been perceived as something ‘raw’ and typical of construction sites, and, thus an indicator of incompleteness (or poorly maintained architecture). However, this does not exclude the fact that special care must have been paid to the meticulous (sometimes decorative) arrangement of the material(s) used for the masonry shell (as often occurs in *opus reticulatum*)⁴⁴.

Nevertheless, several exceptions to this general ‘aesthetic principle’ of covered Roman brickwork are attested, such as the Porta Palatina mentioned above. Apart from funerary architecture, uncovered bricks were sometimes also used for ornamental purposes in domestic architecture, as on the corners of houses in Pompeii. Some public buildings, such as the Mercati Traiani in Rome or the Horrea Epagathiana et Epaphroditiana in Ostia, also suggest a combination of plastered surfaces and exposed brickwork⁴⁵. While these examples already point towards diverging tendencies in the appearance of bricks in Roman architecture, one group of monuments breaks completely with the established convention. Specifically, about one dozen *mausolea* constructed in and around Rome during the middle of the 2nd century A.D. have façades produced in (exposed) red and light ochre brickwork (‘Sichtziegel’/‘brique apparante’)⁴⁶.

Clay is Colour: The Exposed Brickwork of the so-called Temple of the Deus Rediculus

This ostentatious use of fired bricks in two⁴⁷ different colours is best illustrated by the so-called Temple of the Deus Rediculus, a burial structure in the Triopion of Herodes Atticus (ca. A.D. 160) (Fig. 4), although the same phenomenon occurs in other examples of this limited group. The bricks

⁴³ Volpe 2015, 231. The latter aspect is treated by other contributions in Bukowiecki et al. 2015.

⁴⁴ See the contribution by Busen, this volume.

⁴⁵ Bukowiecki 2014; Kammerer-Grothaus 2017, 161–166; for Rome and Ostia, including some cases of *opus reticulatum*, see Kammerer-Grothaus 1974, 199 f. 214–233, cf. Henry 1984; Bukowiecki 2014, 227. For the city of Ostia, see also Stöger 2007, 353. Apart from this, single related examples exist in the provinces (e. g., Greece: Fouquet, forthcoming).

⁴⁶ The corpus compiled by Kammerer-Grothaus contains mostly *mausolea* of the tempietto type: see Kammerer-Grothaus 1974, 200–214. 252 appendix 8 (Rome); Bukowiecki 2014, 226. The large square structure (villa) of Le Mura di Santo Stefano/Anguillara Sabazia should also be included in Kammerer-Grothaus’ corpus: see Blagg 1979, 276.

⁴⁷ Kammerer-Grothaus (1974, 169) speaks of two colours. For the sake of accuracy, it should be noted that slight divergences in tone are present (especially as far as the yellow bricks are concerned).

Fig. 4: Rome, Temple of Deus Rediculus, view from the southwest.

used are made of two different varieties of clay, and they were applied to the masonry shell according to a distinct method⁴⁸. Red bricks were positioned on the podium and the pilasters, i. e., on elements that are decisive for the chosen architectural form and that are significant in terms of their visualised architectural function (since they determine the layout, set the rhythm of the individual architectural parameters and ‘support’ the structure). The light bricks, in contrast, form the components of the wall fields and appear in the upper zone on capitals and in the entablature. This basic rule also varies somewhat. For example, the pilaster capitals and cornice are composed of both kinds of bricks, whereas the architrave and frieze were produced in bricks of light ochre⁴⁹. This ochre frieze, however, is interrupted by vertical stripes of red bricks that correspond with the axes of the pilasters below. Conversely, red bricks frame the ochre meander panels between the pilasters, thus highlighting these ornamental fields and at the same time contradicting the exclusive use of red bricks for supports (podium/pilaster).

In general, the mausoleum’s colour management refers to the architectural function of the elements depicted, indicating a difference between ‘support’ and ‘load’ (*Tragen und Lasten*) of the vertical and horizontal elements. The attribution of the two colours in this binary system is consistent; however, in certain situations the basic rule is reduced for the sake of accentuation and chromatic variety within a zone that would otherwise be monochromatic and uniform⁵⁰.

This ostentatious two-colour display relies upon further measures which are not paralleled in common brickwork. In the case of the Temple of the Deus Rediculus, the joins between the bricks are unusually thin, especially in the case of the light ochre bricks (measuring c. 0.2 cm in height),

⁴⁸ Kammerer-Grothaus 1974, 169–171. 234–236. 252 appendix 8; Bukowiecki 2014, 226–229. For an inversion of this colour system, see Kammerer-Grothaus 2017, 161. 163 Fig. 10.

⁴⁹ Kammerer-Grothaus 1974, 169 f. 177–179.

⁵⁰ Possibly, this mirrors (within the façade’s limited colour range) the convention of accentuating capitals and friezes with additional colour (see Zink 2019, 24 f.).

while the red bricks were attached to one another by pigmented mortar in slightly thicker joins (0.8–1 cm)⁵¹. In order to achieve this, the bricks were tapered towards the rear, and, furthermore, their front face was typically smoothed or polished⁵². The resultant visual effect consists of homogeneously coloured surfaces in which the single elements blend almost seamlessly together, so that the typical impression of a grid generated by the pattern of bricks and mortar joins is minimised⁵³. Finally, single architectural motifs, such as consoles, capitals and so on, are created out of several bricks that are cut accordingly, and moulded terracotta elements were also used (in the meander panels, for example)⁵⁴.

To summarise, the façades of the Temple of the Deus Rediculus and related buildings make use of clay's physical properties in a different and more comprehensive way than had been seen previously. On the one hand, the basic shapes of the individual elements and moulded features rely on clay's strength and plasticity. The work associated with the basic material, however, was extended from the pre-firing phase (the fashioning of architectural terracottas is usually almost completely limited to this stage) to the building process, in which the terracotta elements received their final shape and surface treatment (i.e., the cutting and smoothing/polishing of the bricks). On the other hand, the masonry technique deliberately utilised the native colour of the material, integrating it into the visual appearance of single elements right from the beginning. The creation of two different colours from one kind of *materies*/ῥλή (undoubtedly relying on two different clay deposits) exploited and thus demonstrated the natural versatility of clay in this regard. Later, during the construction and finishing processes, the additional techniques mentioned above were applied to help further bring out the two-toned character of the brickwork. What had remained hidden in many earlier (and contemporary) buildings was now displayed as an aesthetic quality in its own right. Basic form, plastic decoration and colour coincided in one place: here, clay not only guaranteed stability and useful multiformity, its intrinsic colour also brought beauty (mimicking the well-known Vitruvian triad).

A Seemingly 'Basic' Material: Self-Representation via a Reversed Hierarchy

Although built with the ubiquitous building material of Imperial Rome par excellence, fired brick *mausolea* such as the so-called Temple of Deus Rediculus and Temple of Fortuna Muliebre (Fig. 5) show how this traditional construction technique could take on another dimension, both technically and aesthetically.

Looking at both the technical efforts and socio-cultural context associated with *mausolea* in general, we can deduce a high degree of acceptance – or better, esteem – for the material used and its natural, native colour. With respect to burial monuments, buildings used expressly for the exhibition of social status and prestige, it is commonly assumed that the decorative emphasis shifted from the façade to the interior during the Imperial period, reflecting a 'private turn' in self-representation⁵⁵. At this time, brick was a dominant building material in the *necropoleis* of Rome

⁵¹ Kammerer-Grothaus 1974, 169–172. The author mentions that the mortar used for the joins of the red bricks was also red (Temple of Deus Rediculus); see Borg 2019, 29 n. 90. See Zink 2019, 26 n. 134 and Borg 2019, 28 f. for additional colour on the terracotta façade of the so-called Sepolcro Barberini on the via Latina.

⁵² Kammerer-Grothaus 1974, 169–172; Bukowiecki 2014, 228 Fig. 12.

⁵³ Aesthetically speaking, this seems to indicate a kind of visual correction regarding the ornamental effect that otherwise results from the pattern of light joins and dark bricks: see Grüner 2014, 435–437.

⁵⁴ Bukowiecki 2014, 228; Kammerer-Grothaus 1974, 172–181 Pls. 102–105 (Deus Rediculus) with further descriptions in the catalogue. Scattered evidence is preserved in the Allard Pierson Museum in Amsterdam (Lulof 2007, 96 f. n. 5–10 Pl. 31).

⁵⁵ On this topic, see Borg 2019, 2 f. n. 8 (with further references). 27–29. 258 f.

Fig. 5: Rome,
Temple of Fortuna
Muliebre, detail of
the northern wall.

and its hinterland⁵⁶. Within this environment, bichrome terracotta façades had the advantage of combining a common and simple material with a somewhat more elaborate appearance. Similarly, the use of two different hues for adornment guaranteed a clear aesthetic distinction from the many other brick tombs⁵⁷. It is also noteworthy that architectural elements produced in white marble were occasionally included in these decorative assemblages. A pierced marble cresting crowned the terracotta pediment of a mausoleum at Grottarossa (Via Flaminia), for instance, while the entablature and marble columns of San Urbano alla Caffarella represent another example. The same trend also occurred outside of *mausolea*, as exemplified by the marble *tabula ansata* included above the main entrance of the Horrea Epagathiana et Epaphroditiana in Ostia⁵⁸. In the history of taste and *decorum* in Rome, this represents a clear change in comparison to the previously dominant trend, which dictated that a decent façade should be made from marble or at least covered in coloured plaster⁵⁹, presuming brickwork to be either subordinate or in implied opposition to marble⁶⁰. Here, this general tendency is reversed.

If brick was the right material for the construction and *decor* of these *mausolea*, then other positive connotations must have been connected with this material, according to social negotiations of the actors involved. Certainly the contrast with the use of marble on façades is significant here. Based on the literary evidence, one might assume that the ‘decent sumptuousness’ of these earth-coloured façades could be understood to refer to the traditional Roman value of modesty⁶¹. If we

⁵⁶ E.g., on Ostia’s Isola Sacra, see McDonnell 2014, 270.

⁵⁷ The higher number of *mausolea* that show a combination of terracotta elements and plastered surfaces on their main façades is another indicator: see Kammerer-Grothaus 1974, 214–225. On the necropolis Sotto San Pietro, see Mielsch – von Hesberg 1995 and Liverani – Spinola 2010 (with colour illustrations).

⁵⁸ Bruto – Vannicola 1985; Thomas 2007, 189 Fig. 155; cf. Bukowiecki 2014, 222, 224. Kammerer-Grothaus (1974, 154–161) argues for a later date for San Urbano, with the possible secondary addition of the marble elements. For marble at the Temple of Deus Rediculus, see Kammerer-Grothaus 1974, 172, 197; for *horrea* at Ostia, see Kammerer-Grothaus 1974, 225.

⁵⁹ Above, n. 43. Similarly instructive is a passage by Vitruvius (De arch. 2, 8, 49, 52), in which the author is eager to defend this building material by pointing to its technical advantages and usefulness for buildings of high value as was the case in Greece and Asia Minor.

⁶⁰ Interestingly, Seneca (Ep. 115, 9) refers to the gilding of *lacunaria* and marble veneer as deceptive: see Raff 2008, 75; see also Bradley 2009, 92 f. n. 17 on the concept of *fraus* in the *Naturalis historia* and the contributions by Haug – Hielscher and Anguissola, this volume. It is noteworthy that building inscriptions sometimes point to the ‘massiveness’ of the marble used, e. g., on the arch at Oea/Tripolis *ex marmore solido*: see Mühlenbrock 2003, 12, 223 no. LAR 6.

⁶¹ Thomas (2007, 189) speaks of a deliberate reference to older Italic temples and sees such terracotta decoration as an expression of cultural identity; cf. Hallett 2018, 194, 199–201. Borg (2019, 29), in contrast, argues convincingly for the prestige connected to temple tombs with bichrome terracotta façades.

start from material evidence, however, the situation is more complex. It becomes clear that the individual facets that comprised the materiality of these façades permit different points of reference: the red and yellow hues would have triggered different associations, and the comparative scarcity of the latter must have also formed an important parameter for its contemporary ‘semantisations’. Today, we can only guess at the aesthetic and semantic significance of this light ochre brickwork; perhaps it was associated with structures built in the unfired bricks that preceded *opus latericium* (a reference that would likewise point backwards in terms of age and material expense), although further research would certainly be required to reach such a conclusion⁶².

More tangible – from the perspective of both the archaeological evidence and the literary sources – is the notion of durability and stability (*firmitas*) that is commonly associated with elements made from fired clay, whether roof tiles, architectural terracottas or brickwork⁶³. It was certainly this quality, which was of highest relevance to the owners of a private mausoleum, that helped to create a permanent *monumentum* perpetuating *memoria* for the longest possible time. Placing two kinds of bricks together with special care and according to a distinct aesthetic concept guaranteed that both the building itself and its *decor* remained unchanged for several generations. As the building’s design and colouring was thoroughly integrated into its structural body⁶⁴, typical problems, such as the fading of colours, flaking of plaster or the removal of stone for reuse (which certainly occurred during the life of many buildings)⁶⁵, might have been minimised. The nature of this building type was such that nothing could be revealed by altering the decoration applied to it, as was the case with plaster or a marble veneer: the brickwork was bare to begin with, and therefore could not be ‘exposed’.

Finally, that this brickwork was indeed perceived as something robust, strong and long-lasting is demonstrated by the semantic use of the two colours on the façade itself: the yellow bricks form the components of the wall fields, while dark red was employed for the basic structural elements, such as the pilasters. This is certainly no coincidence, but rather shows how red bricks usually served exactly this function when they were used in Imperial architecture, even if they were destined to be covered under layers of plaster afterwards⁶⁶.

Conclusion

This contribution has focussed on two case studies chosen from the large spectrum of clay/terracotta applications in Roman architecture. Although different in many respects, ‘Campana plaques’ and bichrome brick façades both rely on certain functional qualities present in clay, their constituent material. These include clay’s malleability in its unfired state and its great durability after firing, features that distinguish it from other materials used in architecture (economic

⁶² That some structures built using this technique were still visible in later times is suggested by Vitruvius (De arch. 2, 1, 3–6). Interestingly, at Villa Adriana, the same ‘colour dichotomy’ was applied to the Teatro Marittimo’s ring wall before it was plastered during its second phase. Initially, the surfaces of the *opus reticulatum* shell were painted yellow, before red was applied to the structuring stripes and cornice made from brick: see Üblacker 1985, 9 col. Pl. A, 2, 3 (thanks to M. Grawehr for this example). The bricks used in the inner galleries of Rome’s Theatre of Marcellus were also yellow in colour: see Buonfiglio 2015, 13.

⁶³ Pliny admires the durability of old architectural terracottas (Plin. HN 35, 158) and Vitruvius hints repeatedly at the outstanding age of many buildings built with bricks (Vit. De arch 2, 1, 3–6; 8, 49 f. 53 for bricks and roof tiles). From an archaeological perspective, several examples in which roof tiles were employed as proper bricks exist, including the Tomb of Caecilia Metella (Gerding 2006, 357) and (in a smaller quantity) the Baths of Trajan in Rome (Volpe 2015, 232–234 with further examples).

⁶⁴ For the term ‘structural polychromy’, see Van Zanten 1977, 304.

⁶⁵ On the reuse of building materials, see Barker – Marano 2017.

⁶⁶ The (plastered) columns in the interior of the basilica of Pompeii represent an early example: see Dessales 2015, 81. Besides, the term/concept ‘column’ was almost proverbial for ‘stability’ in antiquity: see Thomas 2007, 18.

considerations must also have come in to play). Even if the basic qualities highlighted here were significant for the production of architectural elements, the use of clay's natural colour could vary considerably. As we have seen in the case studies, in terms of surface finishing, this variation ranged between two opposite poles. On the one hand, the material's natural colour typically appeared when further decorative measures were not taken, as in the case of roof tiles and most bricks. Where terracotta was used to produce prestigious architectural or decorative elements, then a final finish was often applied. In the case of 'Campana reliefs', this included decoration with relief images and the application of paint, with or without a white primer coat. In both cases, the natural colour of the basic material was altered, either by completely concealing it (Fig. 1) or by widening the natural colour spectrum. With respect to the high-quality slabs from the Palatine Hill, however, this includes a partial combination of the materials' plastic qualities and its intrinsic colour, at least for the figural sections (Fig. 2). On the other hand, the exposed terracotta façades that were popular during the 2nd century A.D. represent a hybrid form of these two approaches, combined with a transformation. Here, the natural terracotta hues of the two clay varieties are unaltered (Fig. 3). Form and plastic decoration fully coincide with the basic, native colour of the clay employed. This is no longer an expression of a basic state of fabrication, however, but rather the outcome of the augmenting of a common masonry technique with minute enhancements (e. g., bricks produced in two colours, minimal joins and the pigmentation of the mortar). When compared with traditional uses of brick and tile, in Rome's *mausolea* with bichrome terracotta façades we observe a different consciousness of material. The aesthetic of a pure terracotta hue (especially the red variety) seems to be divided between an accepted and widespread use on the one hand and a desirable aesthetic outcome on the other⁶⁷. The latter is an exception with regard to terracotta but it is the standard treatment of coloured marble⁶⁸. Here, terracotta is almost presented as a type of synthetic, artificial marble.

The painted 'Campana plaques', in contrast, attest to the more widespread convention of enhancing the clay's monochromatic appearance by means of additional colour. Even if these architectural terracottas do not signal an explicit appreciation of the basic colour of clay, they rely on the abovementioned positive material qualities that have linked all the examples cited here. However different in terms of the technique applied, 'Campana plaques' and terracotta façades were therefore both subject to a basic principle of surface finishing. When properly crafted and fashioned, terracotta did not indicate a violation of *decorum*, despite the ancient debate surrounding *luxuria* and clay's supposed 'sobriety'.

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⁶⁷ The shift between the two poles occurred considerably later than the introduction of fired bricks as a new material for construction in Rome (above, n. 40). Similar staggered intervals are present in the history of the use of other building materials, such as travertine or tuff: see Grawehr and Maschek, this volume.

⁶⁸ See Kammerer-Grothaus 1974, 234 f. and, in terms of technique, Bukowiecki 2014, 228; see also Henry 1984, 55 ('ashlar tradition').

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 Fig. 2: Rome, Museo Palatino, inv. 379663, 379664, 379665. Su concessione del Ministero per i Beni e le Attività Culturali e per il Turismo – Parco Archeologico de Colosseo.
 Figs. 3–5: A. Reinhardt.

Bibliography

- Adam 1999: J.-P. Adam, *Roman Building. Materials and Techniques* (London 1999)
- Barker – Marano 2017: S. J. Barker – Y. A. Marano, *Demolition Laws in an Archaeological Context. Legislation and Architectural Re-Use in the Roman Building Industry*, in: P. Pensabene – M. Milella – F. Caprioli (eds.), *DECOR. Decorazione e architettura nel mondo romano. Atti del Convegno Internazionale, Roma 21–24 maggio 2014*, *Thiasos Monografie 9* (Rome 2017) 833–850
- Blagg 1979: T. Blagg, *The Use of Terra-Cotta for Architectural Ornament in Italy and the Western Provinces*, in: A. McWhirr (ed.), *Roman Brick and Tile. Studies in Manufacture, Distribution and Use in the Western Empire* (Oxford 1979) 267–284
- Blume 2016: C. Blume, *Szenische Tonreliefs in Farbe. Zur Polychromie der Campana-Reliefs*, in: Ph. Baas – M. Flecker (eds.), *Fragmentierte Bilder. Die Campana-Reliefs des Instituts für Klassische Archäologie Tübingen*, *Schriften des Museums der Universität Tübingen 13* (Tübingen 2016) 40–45
- Bonetto 2015: J. Bonetto, *Diffusione ed uso del mattone cotto nella Cisalpina romana tra ellenizzazione e romanizzazione*, in: Bukowiecki et al. 2015, 105–113
- Borbein 1968: A. H. Borbein, *Campanareliefs. Typologische und stilkritische Untersuchungen*, *RM Suppl. 14* (Heidelberg 1968)
- Borg 2019: B. E. Borg, *Roman Tombs and the Art of Commemoration. Contextual Approaches to Funerary Customs in the Second Century C.E.* (Cambridge 2019)
- Borriello et al. 1996: M. Borriello – A. D'Ambrosio – S. De Caro – P. G. Guzzo (eds.), *Pompei. Abitare sotto il Vesuvio. Exhibition Catalogue Ferrara* (Ferrara 1996)
- Bradley 2009: M. Bradley, *Colour and Meaning in Ancient Rome*, *Cambridge Classical Studies* (Cambridge 2009)
- Bruto – Vannicola 1985: M. L. Bruto – C. Vannicola, *Grottarossa. Sepolcro “a tempietto” (circ. XX)*, *BCom 90*, 1985, 153–163
- Buccarella Hedegaard et al. 2017: S. Buccarella Hedegaard – A. Rodler – J. Bredal-Jørgensen – S. Klein: C. Brøns, *A Highly Unusual Constituent in Roman Polychromy*, Conference Poster, <http://trackingcolour.com/assets/7/1/1220/Vanadinite_poster_Goldschmidt2017.pdf> (30.09.2020)
- Bukowiecki 2014: E. Bukowiecki, *Considérations sur l'esthétique de la brique apparente dans l'architecture impériale à Rome*, in: S. Bourdin – J. Dubouloz – E. Rosso (eds.), *Peupler et habiter l'Italie et le monde romain. Études d'histoire et d'archéologie offertes à Xavier Lafon* (Aix-en-Provence 2014) 221–230
- Bukowiecki et al. 2015: E. Bukowiecki – R. Volpe – U. Wulf-Rheidt (eds.), *Il laterizio nei cantieri imperiali e il mediterraneo. Atti del I workshop ‘Laterizio’, Roma 27–28 novembre 2014*, *AArchit 20* (Florence 2015)
- Buonfiglio 2015: M. Buonfiglio, *L'utilizzo di laterizi nella costruzione augustea del Teatro di Marcello*, in: Bukowiecki et al. 2015, 13–19
- Carettoni 1973: G. Carettoni, *Nuova serie di grandi lastre fittili ‘Campana’*, *BdA 58*, 2/3, 1973, 75–87
- Coarelli 2000: F. Coarelli, *L'inizio dell'opus testaceum a Roma e nell'Italia romana*, in: P. Boucheron – H. Broise – Y. Thébert (eds.), *La brique antique et médiévale. Production et commercialisation d'un matériau*, Paris 27–29 octobre 1995, *CEFR 272* (Rome 2000) 87–95
- Dessales 2015: H. Dessales, *La produzione laterizia a Pompei. Adeguamento di un materiale e organizzazione dei cantieri urbani*, in: Bukowiecki et al. 2015, 81–89
- Fouquet, forthcoming: J. Fouquet, *What's in a Brick? Building (Material) Identities in Roman Greece*, in: C. Maderna (ed.), *Proceedings of the Congress on Romanization, Heidelberg 15.–17. Dezember 2017* (Heidelberg forthcoming)
- Froning 1981: H. Froning, *Marmor-Schmuckreliefs mit griechischen Mythen im 1. Jh. v. Chr. Untersuchungen zur Chronologie und Funktion*, *Schriften zur antiken Mythologie 5* (Mainz 1981)
- Gerding 2006: H. Gerding, *The Early Use of Fired Brick in Hellenistic and Roman Architecture*, in: C. C. Mattusch – A. A. Donohue – A. Brauer (eds.), *Common Ground. Archaeology, Art, Science and Humanities. Proceedings of the 16th International Congress of Classical Archaeology, Boston August 23rd–26th 2003* (Oxford 2006) 355–358

- Grüner 2014: A. Grüner, Licht und Oberfläche bei Vitruv. Überlegungen zum Status sensualistischer Gestaltungsstrategien in der römischen Architektur, in: E. Emmerling – S. Correll – A. Grüner – R. Kilian (eds.), *Firmitas et Splendor. Vitruv und die Techniken des Wanddekors* (Munich 2014) 414–463
- Hallett 2012: C. H. Hallett, The Archaic Style in Sculpture in the Eyes of Modern and Ancient Viewers, in: V. Coltman (ed.), *Making Sense of Greek Art* (Exeter 2012) 70–100
- Hallett 2018: C. H. Hallett, Terracotta, Antiquarianism, and the 'Archaic Revival' of Early Augustan Rome, in: C. M. Draycott – R. Raja – K. Welch – W. T. Wootton (eds.), *Visual Histories of the Classical World. Essays in Honour of R. R. R. Smith, Studies in Classical Archaeology 4* (Turnhout 2018) 181–203
- Haug 2020: A. Haug, *Decor-Räume in pompejanischen Stadthäusern. Ausstattungsstrategien und Rezeptionsformen, DECOR 1* (Berlin 2020)
- Henry 1984: M. R. Henry, *Architectural Terra Cotta in Rome and Latium. Studies in Decorative Revetment in the 2nd Century A.D.* (Ph.D. diss. University of California, Berkeley 1984)
- Johannsen 2008: K. B. Johannsen, Campanareliefs im Kontext. Ein Beitrag zur Neubewertung der Funktion und Bedeutung der Campanareliefs in römischen Villen, *Facta. A Journal of Roman Material Culture Studies* 2, 2008, 15–38
- Känel 2013: R. Känel, Rev. of A. V. Siebert, *Geschichte(n) in Ton. Römische Architekturterrakotten*, *Museum Kestnerianum* 16 (Regensburg 2011), *GFA* 16, 2013, 1115–1123, <<http://gfa.gbv.de/z/2013>> (04.09.2020)
- Kammerer-Grothaus 1974: H. Kammerer-Grothaus, Der Deus Rediculus im Triopion des Herodes Atticus. Untersuchungen am Bau und zu polychromer Ziegelarchitektur des 2. Jahrhunderts n. Chr. in Latium, *RM* 81, 1974, 131–252
- Kammerer-Grothaus 2017: H. Kammerer-Grothaus, Monumenti funerari in opus latericium al V miglio della via Appia antica, *BABesch* 92, 2017, 159–178
- Karagianni et al. 2015: A. Karagianni – J. P. Schwindt – C. Tsouparopoulou, Materialität, in: T. Meier – M. R. Ott – R. Sauer (eds.), *Materiale Textkulturen. Konzepte – Materialien – Praktiken, Materiale Textkulturen 1* (Berlin 2015) 33–46
- Lang 2006: F. Lang, Perspektiven einer Technikarchäologie, in: A. Dostert – F. Lang (eds.), *Mittel und Wege. Zur Bedeutung von Material und Technik in der Archäologie (Möhnesee 2006)* 297–325
- Liverani – Spinola 2010: P. Liverani – G. Spinola, *Die Nekropolen im Vatikan* (Milan 2010)
- Lulof 2007: P. S. Lulof, *Architectural Terracottas in the Allard Pierson Museum, Collections of the Allard Pierson Museum 2* (Amsterdam 2007)
- Maioli 1998: M. G. Maioli, Sima policroma, in: A. Donati (ed.), *ROMANA PICTURA. La pittura romana dalle origini all'età bizantina*, Exhibition Catalogue Rimini (Milan 1998) 249. 318 f. cat. no. 157
- Malacrino 2010: C. G. Malacrino, *Constructing the Ancient World. Architectural Techniques of the Greeks and Romans* (Los Angeles 2010)
- Mattern 1999: T. Mattern, „Vielheit“ und „Einheit“. Zu Erscheinungsbild und Wirkung römischer Tempelarchitektur, *BjB* 199, 1999, 1–30
- McDonnell 2014: K. J. McDonnell, Funerary Cult and Architecture, in: R. B. Ulrich – C. K. Quenemoen (eds.), *A Companion to Roman Architecture* (Malden, MA 2014) 264–280
- Meier et al. 2015: T. Meier – F.-E. Focken – M. R. Ott, Material, in: T. Meier – M. R. Ott – R. Sauer (eds.), *Materiale Textkulturen. Konzepte – Materialien – Praktiken, Materiale Textkulturen 1* (Berlin 2015) 19–31
- Merone 1993/1994: R. Merone, Due tipi di terrecotte architettoniche da Pompei. Le sime dalla casa di Sallustio e dalla casa dell'Argenteria, *RStPomp* 6, 1993/1994, 57–62
- Mielsch – von Hesberg 1995: H. Mielsch – H. von Hesberg, Die heidnische Nekropole unter St. Peter in Rom. Die Mausoleen E–I und Z–Psi, *MemPontAc* 16, 2 (Rome 1995)
- Mühlenbrock 2003: J. Mühlenbrock, *Tetrapylon. Zur Geschichte des viertorigen Bogenmonuments in der römischen Architektur* (Münster 2003)
- Papotti 2003: L. Papotti, La Porta Palatina. L'intervento di restauro degli anni novanta, in: L. Mercado (ed.), *Archeologia a Torino. Dall'età preromana all'alto Medioevo* (Turin 2003) 258–291
- Pensabene 2017: P. Pensabene, Scavi del Palatino II. Culti, architettura e decorazioni 2. La 'Casa dei Grifi', La Casa di Ottaviano-Augusto e il Tempio di Apollo, *Studi Miscellanei* 39 (Rome 2017)
- Pensabene – Sanzi di Mino 1983: P. Pensabene – M. R. Sanzi di Mino, *Museo Nazionale Romano. Le Terrecotte III, 1. Antefisse* (Rome 1983)
- Perry 1997: R. Perry, *Die Campanareliefs. Katalog der Sammlung antiker Kleinkunst des Archäologischen Instituts der Universität Heidelberg 4* (Mainz 1997)
- Raff 2008: T. Raff, *Die Sprache der Materialien. Anleitung zu einer Ikonologie der Werkstoffe* ²(Münster 2008)
- Reinhardt 2016: A. Reinhardt, Fragmente von Campana-Reliefs aus den Altgrabungen im Bereich der Basilica Aemilia auf dem Forum Romanum. Eine neue Variante des Bildtypus 'Hallen der Palästra' und ihre Einordnung, *Jdl* 131, 2016, 235–272
- Reinhardt, forthcoming: A. Reinhardt, Der Dachrand als kultureller Marker in der frühen Kaiserzeit? Überlegungen zum Auftreten von 'Campana-Reliefs' und verwandten Terrakotta-Simen in den römischen Provinzen,

- in: C. Maderna (ed.), *Proceedings of the Congress on Romanization, Heidelberg 15.–17. Dezember 2017* (Heidelberg forthcoming)
- von Rohden – Winnefeld 1911: H. von Rohden – H. Winnefeld, *Architektonische römische Tonreliefs der Kaiserzeit, Die antiken Terrakotten IV* (Berlin 1911)
- Seel 2003: M. Seel, *Ästhetik des Erscheinens* (Munich 2003)
- Stöger 2007: H. Stöger, *Monumental Entrances of Roman Ostia. Architecture with Public Associations and Spatial Meaning*, *BABesch* 82, 2007, 347–363
- Strazzulla 1990: M. J. Strazzulla, *Il principato di Apollo. Mito e propaganda nelle lastre ‘Campana’ dal tempio di Apollo Palatino*, *StA* 57 (Rome 1990)
- Tarquini et al. 2019: O. Tarquini – L. Pronti – E. G. Lorenzetti – A. C. Felici, *Pigment Identification on Campana Reliefs from the Palatine Hill and Colosseum Valley in Rome*, *Journal of Cultural Heritage* 2019, 294–307, <<https://doi.org/10.1016/j.culher.2019.07.026>> (04.08.2020)
- Taylor 2002: R. M. Taylor, *Temples and Terracottas at Cosa*, *AJA* 106, 2002, 59–83
- Thomas 2007: E. Thomas, *Monumentality and the Roman Empire. Architecture in the Antonine Age* (Oxford 2007)
- Tortorella 1981: S. Tortorella, *Le lastre Campana. Problemi di produzione e di iconografia*, in: *L'École Française de Rome* (ed.), *L'art décoratif à Rome à la fin de la République et au début du principat. Actes de la table ronde, Rome 10–11 mai 1979*, *CEFR* 55 (Rome 1981) 61–100
- Tortorella 2018: S. Tortorella, *Terrecotte architettoniche, stucchi, pitture. Affinità reciproche tra generi diversi di arte decorativa*, *ArchCl* 69, 2018, 197–221
- Tortorella 2019: S. Tortorella, *Lastre fittili architettoniche del tipo Campana in edifici sacri. Un aggiornamento*, in: M. Modolo – S. Pallecchi – G. Volpe – E. Zanini (eds.), *Una lezione di archeologia globale. Studi in onore di Danilee Manacorda* (Bari 2019) 205–213
- Üblacker 1985: M. Üblacker, *Das Teatro marittimo in der Villa Hadriana*, *Sonderschriften des Deutschen Archäologischen Instituts, Römische Abteilung* 5 (Mainz 1985)
- Van Zanten 1977: D. Van Zanten, *The Architectural Polychromy of the 1830's* (New York 1977)
- Vermeule 1977: C. C. Vermeule, *Greek Sculpture and Roman Taste. The Purpose and Setting of Graeco-Roman Art in Italy and the Greek Imperial East*, *Jerome Lectures* 12 (Ann Arbor, MI 1977)
- Vitti 2016: P. Vitti, *Building Roman Greece. Innovation in Vaulted Construction in the Peloponnese* (Rome 2016)
- Volpe 2015: R. Volpe, *Laterizio. Scelta, trasporto e organizzazione dei cantieri*, in: Bukowiecki et al. 2015, 231–237
- Winter 1993: N. Winter, *Greek Architectural Terracottas from the Prehistoric to the End of the Archaic Period* (Oxford 1993)
- Winter 2009: N. A. Winter, *Symbols of Wealth and Power. Architectural Terracotta Decoration in Etruria and Central Italy, 640–510 B.C.*, *MemAmAc Suppl.* 9 (Ann Arbor, MI 2009) 519–523
- Zink 2019: *Oxford Classical Dictionary* (2019) s.v. *Polychromy, Architectural, Greek and Roman* (S. Zink), <<https://oxfordre.com/classics/view/10.1093/acrefore/9780199381135.001.0001/acrefore-9780199381135-e-8184>> (30.09.2020)