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The 'Nabataean' Blocked-out Capital in Its Wider Framework: A Closer Look

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Abstract

The paper offers a fresh analysis of the long-discussed subject of the 'Nabataean' blocked-out capitals. The phenomenon is presented on a wider background, with particular reference to Nabataea and Cyprus. The definition and description of the blocked-out capitals are followed by a short history of research since their first discovery. A focus of previous research lays on the transformations of the capitals from the classical forms to their simplified versions. Presently many aspects of this change are well known, but there are still questions that need to be answered. We argue that the properties of the material used to carve this special type of decoration were the basic reason for using the simplified forms instead of the fully ornamented: the local stone, present in all of the areas where the blocked-out capitals were used, was characterised by low quality, and enforced the use of simpler shapes. This interdependence between the material and the form constitutes the main topic of the paper, at the same time presenting a new approach to the studies of the 'Nabataean' blocked-out capitals. As a further result of our research we discuss the use of the capitals in their contexts: in rock-cut and freestanding architecture.

Keywords: Nabataea, Petra, Cyprus, Nabataean capitals, blocked-out capitals.

Introduction

The 'Nabataean' blocked-out capitals have attracted scholars since the 19th century. Primarily they were observed in Nabataea and thus described and named as 'Nabataean' capitals typical only of that area. They were subsequently discovered on Cyprus, in Egypt and the Herodian realm, and it turned out that that phenomenon had had a much wider range. In such circumstances the term 'Nabataean capitals' unambiguously pointing to Nabataea as the place of origin of this specific type of decoration was no longer accurate. Other names were introduced: plain-faced, simplified, geometrized or blocked-out capitals, all more

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neutral as they emphasize the features of the form, not the place where they initiated.³ The last one seems to be the most often used.

The specific form constitutes the most characteristic attribute of the blocked-out capitals. They are derived from the Corinthian and the Ionic capitals whose shapes were simplified (Fig. 1). As Judith McKenzie wrote, the process consisted of "smaller more detailed elements being blocked out or absorbed into larger elements, and the individual elements became increasingly similar to each other."4 It resulted in the creation of the 'Nabataean' blocked out capitals types 1 to 3, simplified versions of the Floral capitals types 1 and 2, and the pseudo-Ionic blocked-out capitals, a geometrized form of the Ionic capital with four corner volutes.⁵ In all these types the floral decoration (e.g. the Acanthus leaves, springs, flowers, petals, volutes, and fleurons) was replaced with or transformed into simple geometrical forms with sharp edges, resulting in sophisticated simplicity or even austerity in their appearance.

In this paper we are going to take a closer look at the position of the 'Nabataean' capitals in a wider framework. We hope that our new approach to this old issue will initiate a new scholarly discussion on the Eastern Mediterranean and especially the Nabataean architecture.

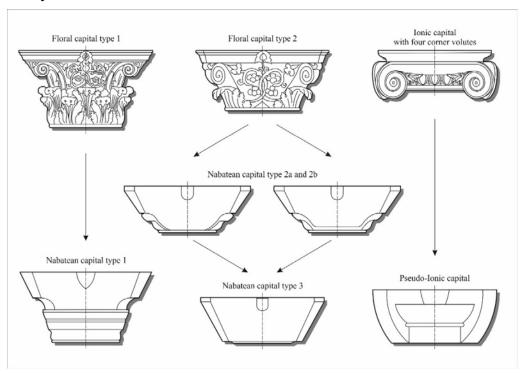


Figure 1. Evolution of capitals: from classical orders to Nabatean types. Drawn by A. Brzozowska-Jawornicka, based on: McKenzie 1990:190, Diagram 13-14; McKenzie 2001: 101, Figs 11b, 14.

³ Selected literature: Daszewski 1990: 121–3; Czerner 2009: 2–3; Kammerer 1930: 488; McKenzie 1990: 116-7; McKenzie 2007: 96-7; Netzer 2002: 162-4; Vanderstar 1997: 101-2.

⁴ McKenzie 1990: 121, 190, diagram 14.

⁵ McKenzie 1990: 116–7, 121, 190, diagram 14; 2001: 101, figs. 11b, 14.

A brief history of research on the so-called Nabataean capitals

The shape of the so-called Nabataean capital has attracted the interest of researchers ever since Petra moved into the focus of European art history. In 1818, William Bankes described them first as the blocked-out draft of Ionic capitals, forming an "Arabian order", and at least since the end of the 19th century they were correctly recognized as blocked-out versions of Corinthian capitals. Besides the blocked-out Corinthian capitals, a blocked-out Ionic version is also known, although the order was used much less frequently.

The fact that the usual shape of the 'Nabataean' capitals ultimately derives from the process of roughing-out a Corinthian capital is best and incontestably illustrated by a larger number of such capitals that received their final dressing only on the front side, while the back remained in the blocked-out state.⁸ It has often been stated that the specific shape of the capitals would have served only as a stone core to which the detailed ornaments would have been added in plaster⁹, but this is wrong: in addition to the evidence of the half-sided capitals just mentioned, the 'Nabataean' capitals possess a surplus of volume not a lack of it¹⁰, and the few known examples of plaster capitals modelled on a stone core from Petra and the wider region, show a much more simplified shape of the core. 11 Furthermore the few surviving traces of paint on 'Nabataean' capitals, as well as the ornaments occasionally carved on them, by no means imitate the usual ornamental apparatus of Corinthian capitals, but instead the veining of alabaster or present centrally placed palmettes or rosettes. 12 Finally, where traces of paint or whitewash have been observed on Nabataean tomb facades, it is usually the necking of the pilaster, the architrave and frieze zone, as well as the background space between the crowsteps that were emphasized by colour, not the capital.¹³

⁶ For W. J. Bankes account cfr. Irby and Mangles 1823: 409; Lewis 2007: 18–9. As blocked-out Corinthian capitals described by: M. de Vogüé, letter to C. M. Doughty, 24.1.1886, in: Doughty 1888: 621; Kohl 1910: 38; Bachmann, Watzinger, and Wiegand 1921: 93; Schlumberger 1933: 289, n. 10; McKenzie 1990: 116–7; Wright 1992: 458; Patrich 1996; Bessac and Raboteau 2002: esp. 428–9; Dentzer-Feydy 2015: 290.

⁷ McKenzie 1990: 117; Brzozowska 2016: 58–62; Dentzer-Feydy 2015: 287–9.

⁸ From Petra: McKenzie 1990: pl. 49e; Kolb and Keller 2000: fig. 11 (left side connection to back wall); Schmid 2012: 139 fig. 7 (side views). – From Herodion: Corbo 1989: 57, figs. DF 57–9; Fischer 1990: 15–6, nos. 19–33, pls. 3–6.

⁹ Borchardt 1903: 79; Brünnow and von Domaszewski 1904: 166; Kohl 1910: 38; Bachmann, Watzinger, and Wiegand 1921: 93; Schlumberger 1933: 288, n. 2; 289, n. 10; Schmidt-Colinet 1980: 201–2, fig. 14 and n. 51; Schmidt-Colinet 1983: 308 with n. 7; Callot 1988: 228; Daszewski 1990: 122–3; McKenzie 1990: 117; Matthiae 1991: 235; Laroche-Traunecker 2000: 211; Hellmann 2002: 177.

¹⁰ Lyttelton and Blagg 1990: 95; Kolb and Keller 2000: 359.

¹¹ From Petra: Zayadine 1987: 139, fig. 18; McKenzie 1990: 117, pl. 49d; cfr. Kanellopoulos 2001: 177, fig. 58. – From the Herodian realm: Foerster 1995: 46–50, figs. 60–68; Vörös 2013: 299–300.

¹² From Petra: Grawehr 2017: 106, fig. 3. – From Marina el-Alamein: Czerner 2009: 38–9. – From Alexandria: Tkaczow 2010: 128, no. 38, pls. 25 and A. – From Karnak: el-Masekh et al. 2017: 224, 242, fig. 8–9. – From the Fayyum: Rubensohn 1905: 6–7, fig. 9 left; Pensabene 1993: 390, no. 370. – From Hegra: Dentzer-Feydy 2015: 293, fig. 5.63; 5.65; 294, fig. 5.77; 295, fig. 5.79; 5.86; 296, fig. 5.91; 5.93; 5.94; 297, fig. 5.95; 301. – From Tayma: Hausleiter 2010: 236, fig. 12.

¹³ Shaer 2012; Dentzer-Feydy 2015: 249–50.

Until the end of the 19th century this type of capital was known exclusively from Nabataea and after Bankes' suggestion of an 'Arabian' order, it was Howard Crosby Butler who in 1914 first dubbed it explicitly a 'Nabataean' capital.¹⁴ When similar capitals surfaced in Cyprus in the 1890s¹⁵ and then were studied with more interest since the 1960s, the occurrence of 'Nabataean' capitals in Cyprus was first explained as a hint to direct cultural influences from the Nabataean culture to the Island.¹⁶ But when soon after, examples from Egypt and the Herodian realm became known, this idea had to be abandoned and instead a common source of inspiration for all these capitals was sought in Alexandria.¹⁷ Below we will opt for an alternative yet complementary solution.

Typological, chronological and contextual considerations of the 'Nabataean' capital at Petra and in Nabataea

Tracing the stylistic and typological development of 'Nabataean' capitals in the Nabataean realm itself, for dating, we have to recur to the general typological development of the tomb facades and on the few dated tombs from Hegra. The earliest types of Nabataean tombs, the freestanding block tombs and the Pylon Tombs, do not possess capitals. They occur only on the Hegra Tombs and the Classical Tombs. At Petra the earliest dated tomb facade with 'Nabataean' capitals is the Hegra Tomb of ca. 50 B.C. abolished for the carving of the Khazneh; the latest is the Tomb of Sextius Florentinus from A.D. 129. At Hegra dated examples are found from 1 B.C./A.D. onward until A.D. 74/5.

The sub-typology of 'Nabataean' capitals has been provided by Judith McKenzie in 1990, and recently it was further refined by Jacqueline Dentzer-

¹⁴ Butler 1914: 238: "The fact that this sort of capital is found only in places known to have been occupied by the Nabataeans, and usually in connexion with Nabataean inscriptions, gives a reason for referring this detail to a Nabataean origin, and for applying the name Nabataean to the Order, at least in its simpler and less Classical form". In a similar manner G. Dalman called it "das peträische Kapitell". The designation "'horned' capitals", was used colloquially by H. C. Butler (Butler 1914: 243) and was later translated into German as "Hörnerkapitell" (i. e. Schmidt-Colinet 1983: 226). In the glossary of architectural history, this designation usually denotes a variety of gothic capitals. It is in our view misleading and should be avoided.

¹⁵ Tubbs and Munro 1891: 114, pl. 8:13.

¹⁶ Selected literature: Bessac and Raboteau 2002: 415–30; Brzozowska 2016, 43–65; Brzozowska-Jawornicka 2018: 57–73; Brzozowska-Jawornicka, forthcoming a; Callot 1988: 219–28; Hermary and Aupert 1982, 745–51; Hermary and Schmid 1982: 749; Hermary and Schmid 1985: 279–86; Sinos 1990: 220, 228–9, fig. 250; Soren 1987; Wright 1972: 175–7, pls. 32–37; Wright 1992: 460–2, pl. 308. cfr. Schmidt-Colinet 1980: 228, n. 61. With far-reaching historical conclusions: Mavrojannis 2015.

Hermary and Schmid 1985: 286; Callot 1988: 225, 227; Daszewski 1990: 121–3; McKenzie 1990: 117;
 Sinos 1990: 229; Dentzer-Feydy 1990: 641; Wright 1992: 220; Pensabene 1993: 131–44; McKenzie 2001: 97–9; Hellmann 2002: 177; Netzer 2002: 162–4; Tholbecq 2007: 129–31; McKenzie 2007: 95–6; Czerner 2009: 2; Bergmann 2012: 115.

¹⁸ For the typological development of the Nabataean tomb facades the study of R. E. Brünnow and A. von Domaszewski (Brünnow and von Domaszewski 1904: 137–73) is still fundamental, although important modifications have been made, cfr. McKenzie 1990: 12–4, 119; Wadeson 2013; Braun 2015.

¹⁹ Faraiat and Nawafleh 2005.

²⁰ McKenzie 1990: 165–6.

²¹ Nehmé 2015b: 139-41.

Feydy in the discussion of the tombs from Hegra.²² There are basically two subtypes: type 1 with and type 2 without the lower part representing the ranges of Acanthus leaves (Fig. 1). The larger (1) as well as the smaller version (2) are, as explained above, in principle blocked-out versions of the two corresponding ornamented versions of Floral Capitals. But in the rock-cut architecture the capitals are generally designed more liberally, as they do not constitute an architectural block with all its requirements of pre-defined dimensions and rectangularity, but more a piece of sculpture.

At Hegra type 2 is used on 33 rock-cut tombs with the height from 4.30 to 12.45 m (average 8.24 m), as well as on the relatively late and exceptionally large tomb IGN 100 (14.80 m) of A.D. 63/64.²³ The width of the capital is always larger than its height. The more elaborated variety (1) is present only on the eight largest facades with the height from 12.85 to 21.10 m (average 15.56 m). It is always placed in the main order, never on the door aedicula, where instead type 2 is used. As a rule of thumb the height of the capital is always slightly larger than the width at its bottom, but otherwise no fixed proportional system can be observed in the rock-cut architecture of Hegra. A simplified (sometimes unfinished) version of type 2-capitals in the rock-cut architecture was classified by McKenzie as type 3.²⁴

At Petra the same general rules apply for the use of blocked-out capitals in the Nabataean tomb facades: Type 1 for larger orders, Type 2 for smaller ones (Fig. 1). As the Classical and Hegra type facades at Petra are usually rather large, type 1 is the common choice, and type 2 is used mainly for the door aedicula and the dwarf orders. Examples of smaller facades in which type 2 appears in the main order are the 'Tomb of the Broken Pediment' with the height 6.9 m or the Bab es-Sig Triclinium with the height of 11.2 m (thus in the same scale range as at Hegra).²⁵ In addition, like in Hegra, some of the latest facades, from ca. A.D. 70– 150 use type 2-capitals, though they are rather large, like the Renaissance Tomb (h 13.2 m) or the Palace Tomb (h >46 m).²⁶ In both examples a combination of quarter columns and pilasters shares the same capital.

In the Nabataean free-standing architecture blocked-out capitals are of a more homogenous appearance and they adhere more strictly to a fixed proportional system (see Dehner in this volume). From the second century A.D. onward, the shape of 'Nabataean' blocked-out capitals becomes more and more removed from the ornamented versions, and this is clearly a stylistic development on its own within the class. Capitals illustrating this development are known especially from the Negev and the Hauran.²⁷

²² McKenzie 1990: 116-7, 190, diagram 14; Dentzer-Feydy 2015: 290-304.

²³ The following observations are based on the excellent and thorough study of the Hegra tombs in Nehmé

²⁴ McKenzie 1990: 21, 190, diagram 14; Dentzer-Feydy 2015: 299–301.

²⁵ McKenzie 1990: 154–6, 157–8.

²⁶ McKenzie 1990: 162–5: 166–7.

²⁷ Si'a, south temple: Butler 1919: 391–5. – Shahba, south gate, third cent. A.D.: Brünnow and von Domaszewski 1909: 147-50, figs. 1040-3. - Umm el-Jimal, 'Nabataean' temple: Butler 1913: 156, fig.

The use of the blocked-out 'Nabataean' capital in the free-standing architecture is confined to a few contexts. Most frequently it recurs in applied orders framing the entrance or facade of a building, a setting that resembles the rock-cut facades closely. Examples include the facade of the rich dwelling on ez-Zantur at Petra,²⁸ the monumental entrance of building B east of the Qasr el-Bint at Petra,²⁹ the facades of the temple precincts of Khirbet et-Tannur and Khirbet edh-Dharih,³⁰ but also the famous Nabataean arch at Bostra³¹ or a niche frame re-employed in the Petra church.³² Secondly the blocked-out shape is used for capitals made from precious stones like alabaster, when the veining of the stone is emphasized: At Gerasa the upper part of such a capital is reported from the Artemis temple,³³ and at Petra a capital with a painted alabaster imitation once decorated a dining hall in the mansion on ez-Zantur.³⁴

Typological, chronological and contextual considerations of the 'Nabataean' Capital on Cyprus

The phenomenon of the so-called blocked-out capitals on Cyprus appears to be different in some aspects as compared to other areas where such elements occur. They were found in the majority of the important Cypriot cities, especially on the south coast of the Island: in Salamis, Kition, Amathous, Kourion and Nea Paphos.

Unfortunately, the provenance of the overwhelming majority of Cypriot blocked-out capitals is unknown.³⁵ They are scattered around the present archaeological sites, in many cases next to architectural structures they did not originally belong to, which prevents linking them with particular buildings. However, their great number and occurrence in many different areas of ancient towns indicate first of all that this type of decoration was quite popular on the Island and, second of all, that edifices of all types and scales were equipped with such architectural decoration: from buildings surrounding or erected within agorae, through temples and gymnasia, to rich residences. The exact proportion of the blocked-out capitals to the classical ones is difficult to establish. However, it seems to be more balanced on Cyprus, where we can observe the presence of capitals of most of the types, especially in comparison with Petra, where the Nabataean capitals are more prominent.

As mentioned above, there are only few buildings on Cyprus where the

^{132. –} For more examples in the province of Syria and in the Dekapolis, see: Dentzer-Feydy 1990: 641, 651. – For the Negev area see: Negev 1974; Rosenthal-Hegginbottom 1982: 132–3; Negev 1988: 75–94. Cfr. Dalman 1908, 267–8, figs. 209–11.

²⁸ Kolb and Keller 2001: 312–5.

²⁹ Th. Fournet in: Tholbecq 2017: 46–50.

³⁰ Muheisen – Villeneuve 2000: 1538–9; McKenzie et al. 2013: 106–9, figs. 194–7.

³¹ Butler 1914: 240–3; J.-M. Dentzer and P.-M. Blanc in: Dentzer-Feydy et al. 2007: 133–6 with further bibliography.

³² Kanellopoulos 2001: 187, fig. 76 and colour plate on p. 334.

³³ Parapetti 1998.

³⁴ Grawehr 2017: 106, fig. 3; 110.

³⁵ Brzozowska-Jawornicka forthcoming a; Vanderstar 1997: 111–9, Catalogue 63–74.

presence of the blocked-out capitals is unquestionably confirmed: two sanctuaries (the temple of Apollo Hylates in Kourion and the temple of Aphrodite in Amathous, both erected in the last third of the 1st century A.D. in the form of a prostyle with one architectural order of blocked-out capitals crowning the façade portico)³⁶, the Gymnasium of Salamis³⁷ (the complex repeatedly rebuilt, the exact date of the erection of the support emphasising one of the inner corners of the peristyle and crowned with the blocked-out capital is presently impossible to establish) and two residences in Nea Paphos (the 'Hellenistic' House³⁸ and the House of Dionysus³⁹, both erected in the beginning of the 2nd century A.D. with blocked-out capitals surmounting columns of atria and peristyles).

The simplification of capitals occurs in two orders on Cyprus: Ionic and Corinthian, the vast majority belonging to the second (Fig. 2). The only pseudo-Ionic blocked-out capital that can be linked with a particular building belonged to the atrium of the 'Hellenistic' House in Nea Paphos. The capital resembles strongly the pseudo-Ionic blocked-out capitals from Petra (e.g. from the Deir or the Palace Tomb), but with cuboid corners instead of rounded ones at the bottom.⁴⁰

The Cypriot blocked-out capitals derived from the Corinthian order were based on the simplified version of the Alexandrian Corinthian capital. The latter one was particularly popular on the Island but in the majority of cases it was carved according to local trends. No Floral capitals were carved on Cyprus. Their lack is crucial especially in the case of type 2 (without the ranges of Acanthus leaves in the lower part of the capital) as it resulted in the absence of the shorter version of the blocked-out capital – the equivalent of the Nabataean capital type 2 and 3 so commonly found in Nabataea.

The Cypriot blocked-out capitals are characterised by a great variety of forms, probably derived from many versions of the Alexandrian Corinthian capitals carved by many local workshops (Fig. 2). This extraordinary diversity seems to be their most characteristic feature distinguishing them from other areas where the blocked-out capitals were used. The capitals are significantly different from each other in terms of their proportions of height to width, 'modelling', and the degree of simplification: from spatial, three-dimensional forms to rather linear, geometrical shapes with sharp edges.

It is also worth noting that the blocked-out capitals on Cyprus were used in various structures: from simple free-standing columns creating porticoes or colonnades to more compound supports like pilasters or engaged columns. The

³⁶ Hermary and Aupert 1982: 745–51; Hermary and Schmid 1985, 279–86; Sinos 1990, 220, 228–9, fig. 250.

³⁷ Wright 1972: 175–7, pls. 32–37; Wright 1992: 460–2, pl. 308.3.

³⁸ Brzozowska-Jawornicka forthcoming a, Brzozowska-Jawornicka forthcoming b.

³⁹ Brzozowska-Jawornicka forthcoming a.

⁴⁰ Brzozowska 2016: 46–51.

DIZOZOWSKA 2010. 40–31.

⁴¹ Brzozowska-Jawornicka forthcoming b.

latter are primarily characteristic of the rock-cut architecture of Petra, 42 which does not occur on Cyprus, but one of its most distinctive attributes, the engaged support, is widely present in the free-standing architecture on the Island. Perhaps the simple form of a capital was the reason why they were often applied in complex supports and structures like pseudo-porticoes or richly embellished façades.

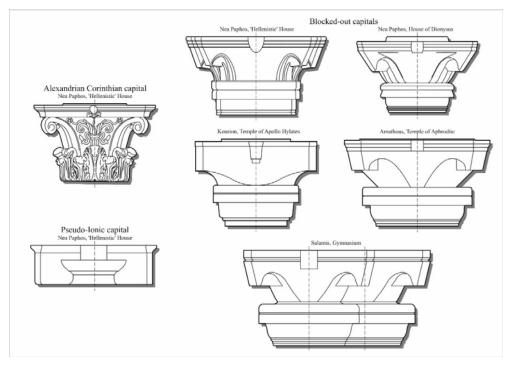


Figure 2. Cypriot capitals. Paphian capitals drawn by A. Brzozowska-Jawornicka, based on: Kourion: Sinos 1990: 230, fig. 253; – Amathous: Hermary – Aupert 1982: 748, fig. 7; – Salamis: Wright 1972: pl. XXXII.2.

Having so few blocked-out capitals linked with particular structures, it is difficult to analyse their position in buildings, but it seems that they were mostly used outside in external colonnades, porticoes or courtyards. Against this background, the arrangement of the 'Hellenistic' House looks particularly interesting, as its two courtyards were equipped with five different architectural orders. The classical orders, with Alexandrian Corinthian, Ionic and Doric columns, were mixed with the simplified ones. The latter were crowned with pseudo-Ionic capitals and blocked-out ones which were derived from the Corinthian order. Even such eclectic and eccentric arrangements could be designed theoretically against the rules and the canon. Perhaps it constitutes another local feature of Cypriot architecture, although it could be as well considered as a one-time experiment.

⁴² The façade architecture typical of the ancient baroque of the Eastern Mediterranean. Lyttelton 1974: 9–16, 39, 231.

⁴³ Brzozowska-Jawornicka forthcoming b.

The Wider Framework

A number of blocked-out capitals from the adjacent regions are closely comparable to the Nabataean and Cypriot examples (Fig. 3). In the Herodian kingdoms examples are known from the North palace at Masada of ca. 25 B.C.⁴⁴ and from a villa in Khirbet el-Muraq near Hebron.⁴⁵ In Egypt they are known for example from Marina el-Alamein,⁴⁶ from the backside of the Augusteum at Philae of 13/12 B.C.,⁴⁷ and from several other places.⁴⁸ Earlier examples from Egypt are made of plaster.⁴⁹ The simplified shape of the workpiece is common to all these examples. Similarly, independent and extreme forms of stylization are known from Pompeii (second century B.C.) or Mauretania (second and third century A.D.).⁵⁰

Capitals in a slightly more advanced stage of carving are used at Marina el-Alamein and elsewhere in Egypt, where the bosses for the single acanthus leaves are already defined on the lower part of the capital.⁵¹ Another slightly more advanced stage is represented by capitals from Egypt, for example in the front porch of the Augusteum at Philae, or by capitals from Gerasa of a similar date in the last quarter of the first century B.C., where the acanthus leaves and the volutes are already sensitively modelled, but still lack the details of the ornamentation.⁵² Related pieces are generally known as capitals with smooth leaves and they are present in most of the provinces of the Roman Empire.⁵³ They are set apart from

⁴⁴ Foerster 1995: 114–9.

⁴⁵ Damati 1982; Japp 2007: 230–32, fig. 6.

⁴⁶ Czerner 2009: 36–7, 100–102, pls. 6–7.

⁴⁷ Borchardt 1903, pl. 3.

⁴⁸ Douch: Laroche-Traunecker 2000, with further references to half-worked pieces; Pensabene 2018: 419–20, fig. 33. – Karnak: el-Masekh et al. 2017: 224, 242, fig. 8–9. – Kom Ombo: Pensabene 2018: 420, figs. 35 and 36. – Theadelphia: Rubensohn 1905: 4. 6–7, figs. 3b, 9; Breccia 1926: 129, pl. 68:4, 6; Pensabene 1993: 390–91. – Madinat Madi: Bresciani 1968: 40–1, pls. 24, 25; Pensabene 1993: 390, nos. 368–72, pl. 45; Pensabene 2018: 416–8, figs. 27 and 28. – Alexandria: Pensabene 1993: 389, no. 365, pl. 44; 391, no. 374, pl. 45; Tkaczow 2010: 128, nos. 38 and 40, pl. 25.

⁴⁹ Plinthine: Venit 2002: 170, fig. 145; Grawehr 2017: 104, fig. 2a; 111, fig. 8. – Alexandria: Sabottka 1983: 201–2, pl. 41:1.

⁵⁰ Pompeii: Maiuri 1958; Richardson 1988: 377; Lauter 1998: 405–8; Bigi 2012; Grawehr 2017: 113. – Mauretania: Mugnai 2018: 103–5.

^{Marina el-Alamein: Czerner 2009: 6–9, 91–6, pls. 1–3. – Marsa Matrouh: Adriani 1935–1939: 159–60, pl. 65, 4; Pensabene 1993: 134, no. 3, pl. 117:8; Schmidt 2003: 114–5, nos. 74, 76, pls. 24–25. – Akoris: Kawanishi–Tsujimura 1988: 10, pl. 8; Palaeological Association of Japan 1995: 207, pl. 122:5. – Alexandria: Pensabene 1993: 388–9, nos. 358–9, 361–4. 366A, pl. 44. – Karanis: Pensabene 1993: 388–9, nos. 357. 366, pl. 44; Pensabene 2018: 415, fig. 20.}

⁵² Philae: Borchardt 1903: pls. 3, 5; Gans 1994: 441–3, fig. 11; Pensabene 1993, 387, nos. 354–5, pl. 43, fig. 5; McKenzie 2007: 166–7, figs. 286–9. – Hermoupolis Magna and Tuna el-Gebel: Ronczewski 1936: 101–2, fig. 19; Gabra 1941: 61, pls. 23, 24, 26; Pensabene 1993: 257–8, fig. 159; 266–267; 387, no. 356, pls. 44, 125; Lembke 2010: 247, fig. 14. – Alexandria: Pensabene 1993: 388, no. 360, pl. 44. – Gerasa: Seigne and Morin 1995; Seigne 2006.

See for example: Syria: Ertel, Freyberger, and von Hesberg 2008: pl. 7c; Wienholz 2008: 273–4, fig. 3; Hoebel 2014: 85–6, fig. 102; Wienholz 2014: 152, fig. 185. – Cilicia: Equini Schneider 2003: 365–6, 399, 628–31; Berns 2003: 86, n. 213; 89–95; Kaplan 2014. – Africa proconsularis: Di Vita 2017. –

the blocked-out capitals, besides being more elaborated, by referring to the orthodox Corinthian model instead of the Floral or Alexandrian Corinthian capital.

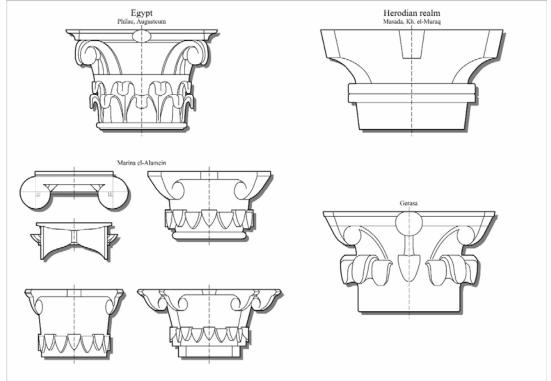


Figure 3. Capitals from Egypt and Herodian Kingdom. Drawn by A. Brzozowska-Jawornicka, based on: Czerner 2009: 57, 67, 71, figs 9, 10, 38, 45; Foerster 1995: 116, 118, figs 208, 213 (corrected by M. Grawehr); McKenzie 2007: 166, fig. 287; Seigne and Morin 1995: 181, fig. 7.

A new explanation: the Materials of 'Nabataean' Capitals

Why have the 'Nabataean' capitals been used in their blocked-out state? It is generally accepted that this was a deliberate choice, but different suggestions have been given regarding its motivation. In the introduction, we have already referred to the statements that the shape of the 'Nabataean' capitals refers to a common Ptolemaic model (but does not answer the question). To some, like Antonin Jaussen and Raphaël Savignac, or Joseph Patrich, the austere shape seemed "to fit the taste of these descendants of the Arabian desert."54 Judith McKenzie speculated that "that the fine decoration on the early monuments, such as the Khasneh, was done by imported craftsmen from Alexandria who trained the Nabataean labour to do the blocking out. The Nabataeans then preferred the blocked out form as the finished form on their later monuments."55 A minority of scholars, including the authors, claim that the lack of elaboration was a conscious

55 McKenzie 1990: 117.

Mauretania Tingitana: Mugnai 2018: 177-8, 221-8, 254-8, 277-81. - Hispaniae: Gutiérrez Behemerid 1992: 153-63. - Pannonia: Ertel 1991: 23-5, 64-88. - Rome: Grawehr 2015.

⁵⁴ Patrich 1996: 206; cfr. Jaussen – Savignac 1909: 397.

choice—by adapting the design to the properties of the available stone material.⁵⁶ With the capitals with smooth leaves, for example, before the third century A.D., they have in common that they were all made from locally available stones, and almost never from imported marble. If we consider especially the stones from which 'Nabataean' capitals were made – the sandstone of Petra, the limestone of Marina el-Alamein or the calcarenite of Nea Paphos – they are all characterised by high porosity and weak durability (Fig. 4). And it seems a logical assumption that is was the material that led stonecutters to retain the more simplified forms instead of the classical ones with a rich ornamental decoration.⁵⁷



Figure 4. Local stones of Nabataea, Cyprus and Egypt. Petra, ed-Deir: Phot. Aerial Photographic Archive of Archaeology in the Middle East (APAAME) APAAMEG_20081014_DLK-0039. Photographer: David Kennedy, courtesy of APAAME; Petra, Palace Tomb and Nea Paphos: A. Brzozowska-Jawornicka; Marina el-Alamein: R. Czerner.

At this point it must be emphasized that before the middle of the first century B.C., and occasionally also afterwards, some indeed ventured to carve fragile ornaments out of the local, porous and soft stone.⁵⁸ The liberal choice to use the

⁵⁶ Dalman 1908: 268; Jaussen – Savignac 1909: 397, n. 1; Bachmann, Watzinger, and Wiegand 1921: 8; Matthiae 1991: 273; cfr. Bessac 2007: 130.

⁵⁷ Remarkably, also Vitruvius (2,7,2–4) is very sensitive on the question what stones are durable against weathering and suitable for the carving of fine details.

For Cyprus see: von Hesberg 1978: 138; Wright 1992: 455–7; Fuduli 2015: 35–6, nos. 36–38; Brzozowska 2016: 51–2. – For Petra see: McKenzie 1990: 95, pls. 46–47; Stucky 1996: 22–3, figs. 24–25.

blocked-out, simplified shapes instead represents one of the aspects of a wider and more general tendency to use the forms and shapes that, although derived from the classical ones, differed significantly from them. Such a phenomenon has in many regards been observed in the Eastern Mediterranean in the Greco-Roman period. In this specific case, it may have been a way to express local pride and to establish or to develop further an architectural language that included vernacular traditions and materials and differed significantly from the empire-wide Roman model.

Summary

Although more than a century has passed on on-going studies of the 'Nabataean' blocked-out capitals, there are still many questions concerning their origin or form that are waiting to be answered. One of them regards the motivations of craftsmen to choose such an unobvious type of decoration. In our opinion the necessity of using the local material could have constituted one of the most important but easily overlooked reasons. In all the areas where the blockedout capitals were carved (i.e., Nabataea, Cyprus, Egypt), the local deposits of stone are characterized by a rather low quality which could have become a significant factor in choosing the less ornamented versions of classical decoration. On the other hand, such a choice resulted in new possibilities. For example, it seems that the blocked-out capitals were much more often used than the classical ones in more complex supports, like engaged columns or corner supports. Perhaps their simple form was more appropriate and easier to use in more compound structures. Meanwhile, no traces of polychrome imitating the floral decoration or mounting holes for the ornamentation in plaster were discovered on the blocked-out capitals. It may indicate that this simplicity or even austerity of the architectural decoration was a purposeful and conscious decision of the builders or sculptors who did not intend to hide the simple forms of the blocked-out capitals or simulate the floral embellishment on their surfaces. They were meant to remain as plain and simple as possible while maintaining the original proportions of their classical prototypes.

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التاجيّاتُ النبطية المقفلة في إطار أوسع: نظرةٌ فاحصة

ماتياس جراوير 1، أليكساندرا برزوزوفسكا جاورنيكا 2

ملخص

تقدّم الدراسة تحليلاً جديدًا لموضوع التاجيات النبطية المقفلة الذي طالما خضع للنقاش، وتُقدَّمُ هذه الظاهرة على مستوى أوسعَ مع الرّجوع بشكل خاصّ لدولة الأنباط وقبرص، ويتبعُ التعريف بهذه التاجيات ووصفها نبذة قصيرة عن تاريخ البحث العلميّ حولها منذ اكتشافها أوّل مرة. لقد ركّز البحث سابقًا على التحوّلات التي طرأت على التاجيات من الأشكال الكلاسيكيّة إلى نُسَخِها المُبسَطة، وكثيرٌ من جوانب هذا التغيير معروفة جيّدًا في الوقت الحاضر، لكنّ هناك أسئلةً ما زالت تحتاجُ إلى إجابات. وعليه، فيرى الباحثان أنّ خصائص المادّة التي استُخدمت لنحت هذا النوع الخاص من الزخرفة كانت هي السبب الرئيس لاستخدام الأشكال المبسطة بدلًا من المزخرفة بشكل كامل؛ فالحجر المحليّ الموجود في كلّ المناطق التي استُخدمت فيها الاعتماد المتبادل بين المادة والشكل يمثل موضوع هذه الدراسة الرئيس، وفي الوقت نفسِه تقديم مسار جديد للدراسات المعنيّة بالتاجيات النبطيّة المقفلة. وكنتيجة إضافيّة لدراستنا، سنناقشُ مسار جديد للدراسات المعنيّة بالتاجيات النبطيّة المقفلة. وكنتيجة إضافيّة لدراستنا، سنناقشُ استخدام التاجيات في سياقاتها في العمارة المنحوتة بالصّخر والعمارة القائمة بشكل حرّ.

الكلمات الدالة: دولة الأنباط، البترا، قبرص، التاجيات النبطيّة، التاجيات المقفلة.

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REFERENCES

- Adriani, A. 1935–1939 Découvertes à Marsa Matrouh. *Annuaire du Musée gréco-romain*: 159–161.
- Bachmann, W.; Watzinger, C.; and Wiegand, T. 1921 *Petra*. Wissenschaftliche Veröffentlichungen des deutsch-türkischen Denkmalschutz-Kommandos 3. Berlin: W. de Gruyter.
- Bergmann, M. 2012 Petra und Alexandria. Pp. 112–9 in *Petra: Begleitbuch zur Ausstellung "Petra Wunder in der Wüste: auf den Spuren von J.L. Burckhardt alias Scheich Ibrahim"*. Basel: Schwabe.
- Berns, C. 2003 *Untersuchungen zu den Grabbauten der frühen Kaiserzeit in Kleinasien.* Asia Minor Studien 51. Bonn: Dr. Rudolf Habelt.
- Bessac, J.-C. 2007 Le travail du pierre à Pétra: Technique et économie de la taille rupestre. Paris: Recherche sur les civilisation.
- Bessac, J.-C, and Raboteau, A. 2002 Archéologie expérimentale à propos des chapiteaux « nabatéens » du temple d'Aphrodite à Amathonte (Chypre). *Bulletin de Correspondance Hellénique* 126: 415–30.
- Bigi, F. 2012 I capitelli cubici: Una nuova tipologia tutta pompeiana? *Vesuviana* 4: 87–110.
- Borchardt, L. 1903 Der Augustustempel auf Philae. *Jahrbuch des Deutschen Archäologischen Instituts* 18: 73–90.
- Braun, J.-P. 2015 Éléments pour une analyse architecturale des tombeaux. Pp. 203–245 in *Les tombeaux nabatéens de Hégra*, ed. L. Nehmé. Paris: Academie des Inscriptions et Belles-Lettres.
- Breccia, E. 1926 *Le rovine e i monumenti di Canopo*, Vol. 2: *Teadelfia e il Tempio di Pneferô*. Monuments de l'Égypte gréco-romaine 1. Bergamo: Off. dell'Istit. ital. d'arti grafiche.
- Bresciani, E. 1968 *Missione di scavo a Medinet Madi: Rapporto preliminare delle campagne di scavo 1966 e 1967*. Testi e documenti per lo studio dell'antichità 20. Milan: Ist. ed. Cisalpino.
- Brünnow, R. E., and Domaszewski, A. von 1904 *Die Provincia Arabica auf Grund zweier in den Jahren 1897 und 1898 unternommener Reisen*, Vol. 1: *Die Römerstrasse von Mâdebâ über Petra und Odruh bis el-'Akaba*. Strasbourg: K. J. Trübner.
- 1909 Die Provincia Arabia auf Grund zweier in den Jahren 1897 und 1898 unternommenen Reisen und der Berichte früherer Reisender, Vol. 3: Der westliche Hauran von Boṣrâ bis eš-Šuhba und die Gegend um die Damaskener Wiesenseen bis eḍ-Ḍumêr, nebst einem Anhang über die römischen Befestigungen von Maṣada von A. v. Domaszewski und einem Überblick über die Geschichte der Provinz Arabia von R. Brünnow. Strasbourg: K. J. Trübner.
- Brzozowska-Jawornicka, A. (Brzozowska) 2016 A Pseudo-Ionic Blocked-out Capital at Nea Paphos. *Études et travaux* 29: 43–65.
- 2018 Reconstruction of the Western Courtyard of the 'Hellenistic House' in Nea Paphos, Cyprus. Pp. 57–73 in *Greco-Roman Cities at the Crossroads of Cultures*, ed. R. Czerner, G Bakowska-Czerner. Oxford: Archeopress.
- Forthcoming a Blocked-out Capitals from Nea Paphos. Preliminary remarks. In *Decoration of Hellenistic and Roman Buildings in Cyprus*, ed. H. Meyza. Warsaw: Institute of Mediterranean and Oriental Cultures, Polish Academy of Science.

- Forthcoming b The architectural orders and decoration of the 'Hellenistic' House'. In *Nea Paphos and Western Cyprus*, ed. Cl. Balandier, D. Michaelides and E. Raptou, Bordeaux: Editions Ausonius.
- Butler, H. C. 1913 Publications of the Princeton Archaeological Expedition to Syria 1904–5 and 1909, Division II: Architecture, Section A: Southern Syria, Part 3: Umm idj-Djimâl. Leiden: Brill.
- 1914 Publications of the Princeton Archaeological Expedition to Syria 1904–5 and 1909, Division II: Architecture, Section A: Southern Syria, Part 4: Boṣrā. Leiden: Brill.
- Butler, H. C., ed.
- 1919 Publications of the Princeton University Archaeological Expeditions to Syria in 1904–5 and 1909, Division 2: Architecture, Section A: Southern Syria, Part 6: Sî (Seeia). Leiden: Brill.
- Callot, O. 1988 Éléments d'architecture romaine à Larnaca. Report of the Department of Antiquities, Cyprus: 219–28.
- Corbo, V. C. 1989 *Herodion*, Vol. 1: *Gli edifici della reggia-fortezza*. Studium Biblicum Franciscanum: Collectio Maior 20. Jerusalem: Franciscan Printing Press.
- Czerner, R. 2009 *The Architectural Decoration of Marina el-Alamein*. British Archaeological Reports: International Series 1942. Oxford: Archaeopress 2009.
- Dalman, G. 1908 *Petra und seine Felsheiligtümer*. Leipzig: J.C. Hinrich'sche Buchhandlung.
- Damati, E. 1982 The Palace of Hilkiya. *Qadmoniot* 15: 117–21 (Hebrew).
- Daszewski, W. A. 1990 Nouvelles recherches sur la côte Nord de l'Égypte: Un type méconnu de chapiteaux. *Études et travaux* 15: 109–124.
- Dentzer-Feydy, J. 1990 Les chapiteaux corinthiens normaux de Syrie méridionale 1. *Syria* 67: 633–63.
- 2015 Le décor architecturale, Pp. 247–419 in *Les tombeaux nabatéens de Hégra*, ed. L. Nehmé. Paris: Academie des Inscriptions et Belles-Lettres.
- Dentzer-Feydy, J.; Vallerin, M.; Fournet, T.; Mukdad, R.; and Mukdad, A. 2007 *Bosra aux portes de l'Arabie*. Guides archéologiques de l'Institut français du Proche-Orient 5. Beirut: Institut français du Proche-Orient.
- Di Vita, A. 2017 Per un profilo del capitello a foglie lisce: i capitelli del tempio di Liber Pater ed il capitello a foglie lisce di Sabratha. Pp. 57–98 in *Antonino di Vita: La Tripolitania antica: Scritti inediti*, ed. M. A. Rizzo Di Vita. Monografie di archeologia Libica 39. Rome: L'Erma di Bretschneider.
- Doughty, C. M. 1888 *Travels in Arabia deserta*. Cambridge: Cambridge University Press.
- el-Masekh, S.; Fournet, T.; Piraud-Fournet, P.; Boraik, M. 2017 The Roman Baths at Karnak, Between Rivers and Temples: Architectural Study and Urban Context. Pp. 221–66 in *Collective Baths in Egypt 2: New Discoveries and Perspectives*, ed. B. Redon. Etudes urbaines 10. Cairo: Institut Français d'Archéologie Orientale.
- Equini Schneider, E., ed. 2003 *Elaiussa Sebaste 2: Un porto tra Oriente e Occidente*. Bibliotheca archeologica 37. Rome: L'Erma di Bretschneider
- Ertel, C. 1991 *Römische Architektur im Carnuntum*. Der römische Limes in Österreich 38. Vienna: Österreichische Akademie der Wissenschaften.
- Ertel, C.; Freyberger, K. S.; and Hesberg, H. von 2008 Das Theater und die Kultbezirke des römischen Byblos. *Zeitschrift für Orient-Archäologie* 1: 90–152.

- Farajat, S., and Nawafleh, S. 2005 Report on the Al-Khazna Courtyard Excavation at Petra (2003 Season). *Annual of the Department of Antiquities of Jordan* 49: 373–93.
- Fischer, M. 1990 Das korinthische Kapitell im alten Israel in der hellenistischen und römischen Periode: Studien zur Geschichte der Baudekoration im Nahen Osten. Mainz: Philipp von Zabern.
- Foerster, G. 1995 *Masada: The Yigael Yadin Excavations 1963–1965: Final Reports*, Vol. 5: *Art and Architecture*. Jerusalem: Israel Exploration Society.
- Fuduli, L. 2015 Fragmenta Paphia: Elementi di decorazione architettonica da Garrison's Camp di Nea Paphos. Paphia 2. Catania: EDIARCH.
- Gabra, S. 1941 Rapport sur les fouilles d'Hermoupolis-Ouest (Touna el-Gebel). Cairo: Institut Français d'Archéologie Orientale.
- Gans, U. 1994 Hellenistische Architekturteile aus Hartgestein in Alexandria, *Archäologischer Anzeiger:* 433–53.
- Grawehr, M. 2015 Römische Bossenkapitelle aus Travertin und lunensischem Marmor. Mitteilungen des Deutschen Archäologischen Instituts, Römische Abteilung 121: 483–506
- 2017 Bossenstil und Baumaterial. Pp. 103–118 in *Werkspuren: Materialverarbeitung und handwerkliches Wissen im antiken Bauwesen*, ed. D. Kurapkat and U. Wulf-Rheidt. Diskussionen zur Archäologischen Bauforschung 12. Regensburg: Schnell und Steiner.
- Gutiérrez Behemerid, M. A. 1992 *Capiteles Romanos de la Peninsula Ibérica*. Valladolid: Secretariado de publicationes Universidad de Valladolid.
- Hausleiter, A. 2010 L'oasis de Taymâ'. Pp. 218–39 in *Routes d'Arabie: Archéologie et histoire du Royaume d'Arabie Saoudite*, ed. A. al-Ghabban, B. André-Salvini, F. Demange, C. Juvin, and M. Cotty. Paris: Somogy.
- Hellmann, M.-C. 2002 L'architecture grecque, Vol. 1: Les principes de la construction. Paris: Picard.
- Hermary, A. and Aupert P. 1982 Rapport sur les travaux de la mission de l'Ecole française à Amathonte en 1981, *Bulletin de Correspondance Hellénique* 106.2: 745–51
- Hermary, A., and Schmid, M. 1985 Le sanctuaire d'Aphrodite à Amathonte. Pp. 279–86 in Πρακτικά του Δευτέρου Διεθνούς Κυπριολογικού Συνεδρίου, Λευκωσία 20 25 Απριλίου 1982, I, ed. T. Papadopoullos and S. A. Chatzistyllis. Nikosia: Chorēgia Idrymatos A.G. Lebentē.
- Hesberg, H. von 1978 Zur Entwicklung der griechischen Architektur im ptolemäischen Reich. Pp. 137–45 in *Das ptolemäische Ägypten: Akten des internationalen Symposion 27.–29. September 1976 in Berlin*, ed. H. Maehler and V. M. Strocka. Mainz: Philipp von Zabern.
- Hoebel, F. 2014 Zwischen Orient und Okzident: Die Kultbauten im Areal Santa Barbara. Pp. 80–91in *Baalbek Heliopolis: 10000 Jahre Stadtgeschichte*, ed. M. van Ess and K. Rheidt. Darmstadt: Wissenschaftliche Buchgesellschaft.
- Irby, C. L., and Mangles, J. 1823 *Travels in Egypt and Nubia, Syria and Asia Minor During the Years 1817 and 1818.* London: T. White & Co.
- Japp, S. 2007 Public and Private Decorative Art in the Time of Herod the Great. Pp. 227–46 in *The World of the Herods*, ed. N. Kokkinos. Oriens et Occidens 14. Stuttgart: Steiner.
- Jaussen, A., and Savignac, R. 1909 Mission archéologique en Arabie (Mars-Mai 1907),

- Vol. 1: De Jérusalem au Hedjaz Médain-Saleh. Paris: Leroux.
- Kammerer, A. 1929, 1930 Pétra et la Nabatène. L'Arabie Pétrée et les Arabes du Nord dans leurs rapports avec la Syrie et la Palestine jusqu'à l'Islam, Paris.
- Kanellopoulos, C. 2001 Architecture of the Complex. Pp. 153–91 in *The Petra Church*, ed. Z. T. Fiema, C. Kanellopoulos, T. Waliszewski, R. Schick. American Center of Oriental Research Publications 3. Amman: American Center of Oriental Research.
- Kaplan, D. 2014 Doğu dağlık Kilikia Bölgesi Roma İmparatorluk Dönemi Detaylandırılmamış Korinth Başıkları. İstanbul: Yayınları.
- Kawanishi, H., and Tsujimura, S. 1988 Preliminary Report: Sixth Season of the Excavations at the Site of Akoris, Egypt, 1986. Kyoto: The Paleological Association.
- Kohl, H. 1910 Kasr Firaun in Petra. Leipzig: Otto Zeller
- Kolb, B., and Keller, D. 2000 Swiss-Liechtenstein Excavations at az-Zanṭūr, Petra: The Tenth Season. *Annual of the Department of Antiquities* 44: 355–72.
- 2001 Swiss-Liechtenstein Excavations at az-Zanṭūr/Petra: The Eleventh Season. *Annual of the Department of Antiquities* 45: 311–24.
- Laroche-Traunecker, F. 2000 Chapiteaux "nabatéens", "corinthiens inachevés" ou "simplifiés" ? Nouveaux exemples en Egypte. *Ktema*: 207–213.
- Lauter, H. 1998 Eine pompejanische Miszelle. *Mitteilungen des Deutschen Archäologischen Instituts, Römische Abteilung* 105: 403–408.
- Lembke, K. 2010 The Petosiris-Necropolis of Tuna el-Gebel. Pp. 231–54 in *Tradition and Transformation*. *Egypt under Roman Rule*. *Proceedings of the International Conference, Hildesheim, Roemer- and Pelizaeus-Museum, 3 6 July 2008*, ed. K. Lembke, M. Minas-Nerpel and S. Pfeiffer. Culture and History of the Ancient Near East 41. Leiden: Brill.
- Lewis, N. N. 2007 The Rediscovery of Petra, 1807–1818. Pp. 9–24 in *The World of the Nabataeans 2: International Conference >The World of the Herods and the Nabataeans Held at the British Museum, 17–19 April 2001*, ed. K. D. Politis. Oriens et Occidens 15. Stuttgart: Steiner.
- Lyttelton, M. B. 1974 *Baroque Architecture in Classical Antiquity*. London: Thames and Hudson.
- Lyttelton, M. B., and Blagg, T. 1990 Sculpture in Nabataean Petra, and the Question of Roman Influence. Pp. 91–107 in *Architecture and Architectural Sculpture in the Roman Empire*, ed. M. Henig. Oxford University Committee for Archaeology Monograph 29. Oxford: Oxford University Committee for Archaeology.
- Maiuri, A. 1958 Portali con capitelli cubici a Pompei. Rendiconti della Accademia di archeologia, lettere e belle arti, Napoli 33: 203–218.
- Matthiae, K. 1991 Die nabatäische Felsarchitektur in Petra. Klio 73: 226–78.
- Mavrojannis, T. 2015 The Roman Temples of Kourion and Amathous in Cyprus: A Chapter on the Arabian Policy of Trajan (100-117 A.D.). Pp. 457–502 in *Literature, Scholarship, Philosophy, and History: Classical Studies in Memory of Ioannis Taifacos*, ed. G. Xenis. Stuttgart: Steiner.
- McKenzie, J. S. 1990 *The Architecture of Petra*. British Academy Monographs in Archaeology 1. London: Oxford University Press.
- 2001 Keys from Egypt and the East: Observations on Nabataean Culture in the Light of Recent Discoveries. *Bulletin of the American Schools of Oriental Research* 324: 97–112.

- 2007 *The Architecture of Alexandria and Egypt, c. 300 BC to AD 700.* Pelican History of Art. New Haven: Yale University Press.
- McKenzie, J.; Greene J. A.; Reyes, A. T.; Alexander, C. S.; Barrett, D. G.; Gilmour, B.; Healey, J. F.; O'Hea, M.; Schibille, N.; Schmid, S. G.; Wetterstrom, W.; Whitcher Kansa, S. 2013 *The Nabataean Temple at Khirbet et-Tannur*, Vol. 1: *Architecture and Religion*. Annual of the 67. Boston: American School of Oriental Research.
- Mugnai, N. 2018 Architectural Decoration and Urban History in Mauretania Tingitana. Mediterranean Archaeology Studies 1. Rome: Quasar.
- Muheisen, Z., and Villeneuve, F. 2000 Nouvelles recherches à Khirbet edh-Dharih (Jordanie du Sud, 1996–1999). *Comptes rendus des séances de l'Académie des inscriptions et belles-lettres* 144: 1525–63.
- Negev, A. 1974 Nabatean Capitals in the Towns of the Negev. *Israel Exploration Journal* 24: 153–9.
- 1988 *The Architecture of Mampsis*, Vol. 2: *The Late Roman and Byzantine Periods*. Qedem 27. Jerusalem: Institute of Archaeology. Hebrew University.
- Nehmé, L. 2015 Les inscriptions associées aux tombeaux. Pp. 99–162 in *Les tombeaux nabatéens de Hégra*, ed. L. Nehmé. Paris: Academie des Inscriptions et Belles-Lettres.
- Netzer, E. 2002 *Nabatäische Architektur: Insbesondere Gräber und Tempel.* Antike Welt Sonderband. Mainz: Philipp von Zabern.
- Palaeological Association of Japan, ed. 1995 Akoris. Report of the Excavations at Akoris in Middle Egypt, 1981–1992. Kyoto: Koyo Shobo.
- Parapetti, R. 1998 Capitelli nabatei a Gerasa. *Mesopotamia* 33: 309–319.
- Patrich, J. 1996 The Formation of the Nabatean Capital. Pp. 197–218 in *Judaea and the Greco-Roman World in the Time of Herod in the Light of Archaeological Evidence*. ed. K. Fittschen and G. Foerster. Göttingen: Vandenhoeck und Ruprecht.
- Pensabene, P. 1993 *Elementi architettonici di Alessandria e di altri siti egiziani*. Repertorio d'arte dell'Egitto greco-romano C 3. Rome: L'Erma di Bretschneider.
- 2018 Tradizione architettoniche alessandrine nell'Egitto romano. *Sicilia Antiqua* 15: 407–422.
- Richardson, L. 1988 *Pompeii: an Architectural History*. Baltimore: John Hopkins University Press.
- Ronczewski, K. 1936 Kapitellfragmente aus Hermopolis. *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo* 6: 88–102.
- Rosenthal-Hegginbottom, R. 1982 *Die Kirchen von Sobota und die Dreiapsidenkirchen des Nahen Ostens*. Göttinger Orientforschungen, Reihe 2: Studien zur spätantiken und frühchristlichen Kunst. Wiesbaden: Otto Harrassowitz.
- Rubensohn, O. 1905 Aus griechisch-römischen Häusern des Fayum. *Jahrbuch des Deutschen Archäologischen Instituts* 20: 1–25.
- Sabottka, M. 1983 Ausgrabungen in der West-Nekropole Alexandrias (Gabbari). Pp. 195–203 in *Das römisch-byzantinische Ägypten: Akten des internationalen Symposions 26.–30. September 1978 in Trier*, ed. G. Grimm, H. Heinen and E. Winter. Mainz: Philipp von Zabern.
- Schlumberger, D. 1933 Les formes anciennes du chapiteau corinthien en Syrie, en Palestine et en Arabie. *Syria* 14: 283–317.
- Schmid, S. G. 2012 Petra als Hauptstadt der Nabatäer. Geschichte einer explosionsartigen Entwicklung, in: Pp. 134–41 in *Petra: Begleitbuch zur Ausstellung "Petra Wunder in der Wüste: auf den Spuren von J.L. Burckhardt alias Scheich Ibrahim"*. Basel: Schwabe.

- Schmidt, S. 2003 *Grabreliefs im griechisch-römischen Museum von Alexandria*. Abhandlungen des Deutschen Archäologischen Instituts, Abteilung Kairo 17. Berlin: Achet-Verlag.
- Schmidt-Colinet, A. 1980 Nabatäische Felsarchitektur: Bemerkungen zum gegenwärtigen Forschungsstand. *Bonner Jahrbücher des Rheinischen Landesmuseums in Bonn* 180: 189–230.
- Schmidt-Colinet, A. 1983 Dorisierende nabatäische Kapitelle, *Damaszener Mitteilungen* 1: 307–312.
- Seigne, J. 2006 Les monuments funéraires de Gerasa de la Décapole (Jordanie). Pp. 141–58 in *L'architecture funéraire monumentale: La Gaule dans l'Empire romain*, ed. J.-C. Moretti and D. Tardy. Archéologie et histoire de l'art 24. Paris: Editions du Comité des travaux historiques et scientifiques.
- Seigne, J., and Morin, T. 1995 Preliminary Report on a Mausoleum at the Turn of the BC/AD Century at Jarash. *Annual of the Department of Antiquities* 39: 175–91.
- Shaer, M. 2012 Bemerkungen zum nabatäischen Wanddekor, Pp. 244–7 in *Petra:* Begleitbuch zur Ausstellung "Petra Wunder in der Wüste: auf den Spuren von J.L. Burckhardt alias Scheich Ibrahim". Basel: Schwabe.
- Sinos, S. 1990 *The Temple of Apollo Hylates at Kourion and the Restoration of Its South-West Corner*. Athen: A. G. Leventis Foundation.
- Soren, D. 1987 *The Sanctuary of Apollo Hylates at Kourion, Cyprus*. Tuscon: The University of Arizona Press.
- Stucky, R. A. 1996 Die nabatäischen Bauten. Pp. 13–50 in *Petra Ez-Zantur I. Ergebnisse der schweizerisch-liechtensteinischen Ausgrabungen 1988–1992*, by A. Bignasca, R. Fellmann Brogli, R. Glutz, S. Karg, D. Keller, B. Kolb, Ch. Schneider, R. Stucky, J. Studer, I. Zanoni. Terra Archaeologica 2. Mainz: Philipp von Zabern.
- Tholbecq, L. 2007 Nabataean Monumental Architecture. Pp. 103–143 in *The World of the Nabataeans 2: International Conference >The World of the Herods and the Nabataeans</br>
 Key Held at the British Museum, 17–19 April 2001, ed. K. D. Politis. Oriens et Occidens 15. Stuttgart: Steiner.*
- Tholbecq, L., ed. 2017 Mission archéologique française à Petra (Jordanie): Rapport des campagnes archéologiques 2016–2017. Brussels: Presses Universitaires de Bruxelles a s h l
- Tkaczow, B. 2010 Alexandrie VIII: Architectural Styles of Ancient Alexandria: Elements of Architectural Decoration from Polish Excavations at Kom el-Dikka (1960–1993). Warsaw: Neriton.
- Tubbs, H. A., and Munro, J. A. R. 1891 Excavations in Cyprus, 1890. *Journal of Hellenic Studies* 12: 59–198.
- Vanderstar, P. 1997 *The Classical Orders in Hellenistic and Roman Cyprus*. D. Phil. Thesis, Oxford University.
- Venit, M. S. 2002 *Monumental Tombs of Ancient Alexandria: The Theatre of the Dead.* New York: Cambridge University Press.
- Vörös, G. 2013 Machaerus 1: History, Archaeology and Architecture of the Fortified Herodian Royal Palace and City Overlooking the Dead Sea in Transjordan: Final Report of the Excavations and Surveys 1807–2012. Studium Biblicum Franciscanum. Collectio maior 53. Milan: Edizione Terra Santa.
- Wadeson, L. 2013 The Development of Funerary Architecture at Petra: the Case of the

- Façade Tombs. Pp. 167–88 in *Men on the Rocks: The Formation of Nabataean Petra*, ed. M. Mouton and S. G. Schmid. Berlin: Logos Berlin.
- Wienholz, H. 2008 The Relative Chronology of the Roman Buildings in Baalbek in View of Their Architectural Decoration. Pp. 271–85 in *Baalbek-Heliopolis: Results of Archaeological and Architectural Research 2002–2005, German-Lebanese Colloquium: Berlin 2006*, ed. M. van Ess. BAAL Hors-Série 4. Beirut: Ministère de la Culture, Direction Générale des Antiquités.
- 2014 Geschichte Baalbeks in römischer Zeit, Pp. 146–57 in *Baalbek Heliopolis: 10000 Jahre Stadtgeschichte*, ed. M. van Ess and K. Rheidt. Darmstadt: Wissenschaftliche Buchgesellschaft.
- Wright, G. R. H. 1972 A Nabataean Capital in the Salamis Gymnasium and Its Possible Background. Pp. 175–8 in Πρακτικά του Πρώτου Διεθνούς Κυπρολογικού Συνεδρίου, Λευκωσία 1969, I. Nikosia.
- 1992 Ancient Building in Cyprus. Handbuch der Orientalistik. Leiden: Brill.
- Zayadine, F. 1987 Decorative Stucco at Petra and Other Hellenistic Sites. Pp. 131–42 in *Studies in the History and Archaeology of Jordan* 3. Amman: Department of Antiquities.