

IN SEARCH OF NUBIAN MASTER-BUILDERS: AN ARCHITECTURAL DRAWING FROM THE CATHEDRAL IN FARAS

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Abstract: A makeshift drawing from the Cathedral in Faras may be a depiction of the ground plan of a church. Nevertheless, the naive appearance of the sketch and an almost complete lack of sufficient parallels from either Nubia or the Eastern Mediterranean make a proper examination of this assumption unfeasible. A reassessment of the architectural drawing from the cathedral, however, draws a wider perspective for a discussion of originality in Nubian architecture. The following paper presents the rather modest evidence available for a study of the nature of Nubian architecture from the point of view of its builders.

Keywords: Nubia, Faras/Pachoras, cathedral, architectural drawing, architectural practices, floor plan, originality, master-builders, architects, Old Nubian language, Nubian studies

Of the vast repertoire of impressive wall paintings from the Cathedral in Faras (ancient Pachoras) one drawing has escaped attention so far [see below, *Fig. 4*]. The drawing, which is now in the collection of Nubian paintings of the National Museum in Khartoum, appeared in print on the margin of Michałowski's *Die Kathedrale aus dem Wüstensand* (1967: 65), but without adequate commentary. A cursory look at it brings to mind an architectural plan, leading one to wonder whether it might not refer to a master plan and if so, then could it be an allusion to the use of blueprints by Nubians for developing architectural ideas.

Fifty years of archaeological research have expanded the overall view of Nubian

church architecture, but without addressing all the research issues. Many studies have focused on structural changes introduced in particular buildings (Gartkiewicz 1986; 1990; Godlewski 1990; 2006a; Żurawski 2014) or on the general line of formal evolution of architectural types (Adams 1965; 2009; Gartkiewicz 1982a; 1982b; Godlewski 1998; 2006b; Grossmann 1990). Yet it is important to interpret the nature of Nubian architecture from the point of view of its builders. This approach raises questions about the circumstances of the original conception and primary construction. Integrating building practices and design is fundamental to architectural studies and it should undoubtedly be examined in Nubia as well.

The present paper aims not to study the architecture as such, but to examine the process by which the initial idea was formed, as well as its transmission into an actual building. Nothing short of a sizable monograph could treat the subject in comprehensive fashion, hence the remarks here on creativity in Nubian architecture are quite basic. The author's approach

draws on discussions of originality in Byzantine architecture already in print (Bouras 2002; 2005; 2007; Buchwald 1992; Hadjistryphonos 2010a; 2010b; Mihaljević 2012; Ousterhout 1992; 1995; 1997; 1999), hence the need for some general remarks on Nubian church architecture, which precede the main discussion below.

NUBIAN MASTER-BUILDERS: EPIGRAPHIC EVIDENCE

The social status of architects and master-builders in Christian Nubia is under-recognized and much of our modest knowledge comes from epigraphic records. One indirect clue, fairly rare all things considered, comes from an inscription with the signature of the *architektôn* Petrou from the cathedral church in Qasr Ibrim [Fig. 1]. The archaeological context and paleography of this short text suggest a date in the 6th or 7th century (Łajtar and van der Vliet 2010: 22–24). Another important epigraphic reference to the functioning of the architectural profession in Nubia

comes from the interior of the Cathedral in Faras. Stefan Jakobielski rightly pointed out that the six names in commemorative inscriptions on the reused blocks of the south wall of the south aisle of the building were left there probably by the masons or master-builders constructing the so-called Cathedral of Aetios.¹ However, only one of them, Paulos, was identified as a *tektôn* (Jakobielski 1972: 181–186). Numerous early Byzantine sources show that this expression was often used as an abbreviated version of *architektôn* (Zanini 2007: 395).



Fig. 1. Signature of Petrou from the Qasr Ibrim church
(Qasr Ibrim Archive, courtesy of the Trustees of the British Museum)

¹ The inscriptions are part of a larger group of commemorative texts. The Greek examples addressed to Mary were published by Jadwiga Kubińska (1974: 126–130).

The term *architektôn* is rooted deeply in late antique tradition. It is generally assumed to mean a master-builder or even craftsman, rather than an architect (Downey 1948: 108; Mango 1986: 31; Meek 1952; Kostof 1977: 63–64; Papaconstantinou 2007: 43–44; Schibille 2009: 378). A similar meaning is also assigned to the word *technitês*, although it is also frequently translated as figure-painter, wall painter, mosaicist, mason, carpenter, and even military engineer (Ousterhout 1999: 44; Zanini 2007: 395–396). In some cases, *technitai* were also responsible for creating architectural designs.² In Nubia, three *technitai* were mentioned at the end of the 6th century in a building inscription from Ikhmindi (Bingen 1961; van der Vliet 2002: 191–194). However, the lack of context makes it difficult to identify issues connected with their building activity.

Written sources indicate that the social status and pay of the *architektôn* were considerably lower than those of the *mêchanikos*, who had to undergo comprehensive training in the liberal arts. The division of architectural professions appears to result from the learning profile outlined by both Pappus of Alexandria and Vitruvius (Downey 1948: 107; Papaconstantinou 2007: 43–45; Schibille 2009: 361–371; Zanini 2007: 393–394). The lack of references to *mêchanikoi* in Nubian texts is not surprising. Importantly, as observed by Enrico Zanini, *mêchanikoi* appear rarely and only in “elite” contexts, most frequently connected with the Byzantine court (Zanini 2007: 394).

Architectural terminology is often very confusing (for examples see: Papaconstantinou 2007: 43; Schibille 2009: 365). The understanding gleaned from many, mainly hagiographical sources is that planning the design and its execution were overlapping processes, in late antiquity as much as in Byzantine times. The line between the architectural professions is thus blurred significantly. The *Life of Porphyry*, for instance, confirms that working with plans was not necessarily reserved for *mêchanikoi*, who fulfilled the requirements both in theoretical education and manual dexterity. According to Mark the Deacon (*Life of Porphyry, bishop of Gaza* 75–78), the *architektôn* Rufinus from Antioch was able to use a plan prepared earlier (*skariphos*) and was responsible for laying it out on the ground. One should note, however, that the drawing of the plan was ascribed to divine intervention (Milson 2006: 245; Papaconstantinou 2007: 34–35). This procedure is recounted in several late antique and Byzantine sources (see Papaconstantinou 2007; for a selection of later sources and their interpretation, see Ousterhout 1999). This issue clearly illustrates that the modern distinction between the architect and master-builder should not be extrapolated to the medieval reality (Papaconstantinou 2007: 43).

In the light of the above, the masons from the inscriptions in Qasr Ibrim and Faras were master-builders or chief craftsmen, involved in organizing and managing construction sites, rather than qualified architects in the antique sense

² The most prominent example comes from the limestone massif in Syria, where inscriptions in the churches at Kaşr il-Benât, Ksêdjbeh, Bâbiskâ and Dâr Kita mention a *technitês* named Markianos Kyris. An architectural analysis shows that although he applied the same unit of measurement in three of the four churches, the plans of each of these buildings were based on a different geometric scheme. Furthermore, his methods apparently had origins in the works of antique mathematicians, such as Nicomachus of Gerasa. These implications suggest that Markianos Kyris was not only a simple mason, but rather a creative and well-skilled architect (Milson 2003).

(Łajtar and van der Vliet 2010: 24). However, their responsibilities cannot be clearly distinguished because of the ambiguity of late antique nomenclature and the lack of a broader context. Still, to judge by the modest epigraphic evidence, the work of master-builders and masons was appreciated in Nubian society, although no assumptions can be made regarding their involvement in designing based on just the names of architectural professions painted in church interiors. The presence of such signatures demonstrates that the master-builders identified themselves with their work. Moreover, their personal wish was to immortalize the fact that they were engaged in the process of creation.

The epigraphic evidence suggests that in the 7th century Nubians ceased to refer to individuals involved in the building process. Architects and master-builders of the later period remain essentially anonymous. One should note, however, that Nubian sources occasionally mention donors and even church owners (Łajtar and van der Vliet 1998: 40–53). A similar phenomenon can be observed also in the Byzantine sphere (Ousterhout 1999: 43–44; Zanini 2007: 394, 396; Papaconstantinou 2007: 45). It may be due to the conventional character of the written sources, which mention

hardly any information about the technical aspects of planning, or it could reflect important changes in the understanding of the architectural profession. The patron or donor undoubtedly replaced the architect as the person responsible for the process of creation of a particular building. An examination of written sources clearly illustrates that during the Middle Byzantine period (843–1204), the theoretical orientation of an architect educated in the Vitruvian tradition was converted into the practical perspective of a workshop-trained master-builder (Ousterhout 1999: 44–45). The architectural knowledge of the master-builders, or rather *oikodomoι*, was transmitted through participation in a kind of professional guild or, following Charambos Bouras (2002: 554), a “company of colleagues”. The term *oikodomis* is known also from Nubian sources, namely, the 12th century commemorative inscription of king Moses Georgios in the Cathedral in Faras. However, the king was evidently named as a builder of Ami and Zachari only metaphorically (Łajtar 2009: 89–97). Therefore, it is not entirely clear that this example could be interpreted as proof of a similar line of evolution of the architectural professions in Nubia and Byzantium.

SOME REMARKS ON ORIGINALITY IN NUBIAN ARCHITECTURE

Most studies of Nubian architecture follow the typological approach of a traditional view on the history of early Christian and Byzantine architecture.³ In consequence, attention is focused on similarity of the

architecture rather than its diversity. William Adams’s pioneering view of the general development in Nubian church architecture is a remarkable example of this approach. His influential and

³ For a critique of this approach in Byzantine studies, see Mihaljević 2012: 116; Ousterhout 1995: 168–169; 1999: 12.

much-quoted article of 1965 presents a conception of linear evolution from the longitudinal basilical layout to the isolated building interior of the central plan (Adams 1965), focusing however, as pointed out by Przemysław Gartkiewicz, mainly on the spatial arrangement of the interior and neglecting the importance of factors like dimensions, size, general proportions, and building techniques. Adams's unnatural division into four principal types seems to have been an oversimplification, which radically deformed an understanding of local creativity (Gartkiewicz 1982a: 55–59; 1990: 247–250).

Considering the geographical isolation of the Middle Nile Valley, contacts with other parts of the Christian *oikoumene* must need be a crucial issue in Nubian studies. Gradual diffusion may have had sufficient influence on the development of Nubian architecture and reasonable parallels can be drawn from socio-cultural phenomena taking place in other regions.⁴ Recent discoveries have cast a new light on the development of the architectural form of Nubian churches. A comparison of elements from Syro-Palestinian (Adams 2009: 437; Gartkiewicz 1990: 249, Fig. 147; Godlewski 2006a: 73; Schwarz 1990: 588–589), Egyptian (Adams 2009: 437; Gartkiewicz 1982a: Fig. 1; Grossmann 1990: 156), North African (Gartkiewicz 1990: 250; Godlewski 2006a: 73–74, Fig. 59), and even Armenian (Gartkiewicz 1990: 249–251, Fig. 145; Żurawski 2014: 110–111, Figs 8–9)⁵ architecture with

selected Nubian edifices reveals some significant similarities. Nonetheless, Włodzimierz Godlewski drew attention to the excessive dependence of previous scholars on the idea of external, mainly Egyptian influences in Nubian church architecture (Godlewski 2006b: 284). Even at an early stage of development, several Nubian churches evidently presented some original features. Tracing the process of construction shows that their builders drew upon several elements of a local Meroitic tradition, the most obvious one being the general appearance of a slanting bond resulting from extensive use of *spolia* (Gartkiewicz 1982a: 64; 1986: 246). Thus, it appears that Nubian architects were skillful enough to adapt foreign solutions to local aesthetics, resources and needs (Godlewski 1998: 129).

According to Godlewski, originality in Nubian architecture was mainly due to the patronage of kings and bishops (Godlewski 1998: 134). Indeed, it seems that Dongola in particular became a significant center of formal influence on Nubian church architecture as a whole (Godlewski 2006b: 285). The new solutions used in the main churches seem to have been diffused gradually into the hinterland. Building teams working on prominent edifices must have labored under significant influence from the local elites and their specific demands. A good example is undoubtedly the Cathedral in Faras, where transformations of architectural form have been attributed to particular bishops

⁴ A good example is Armenia, for instance. Not unlike Nubia, it lies on the fringes of the Mediterranean world. Ever since the publication of Josef Strzygowski's *Baukunst der Armenier und Europa* in 1919, the paradigm of local innovation and isolation has strongly influenced the conceptions of development of Armenian architecture. In her book, Christina Maranci (2001) demonstrates, however, that foreign influence was present in Armenia despite the geographical isolation.

⁵ The idea of Armenian influence was significantly criticized by Peter Grossmann (2001), who highlighted some formal and chronological difficulties.

(Godlewski 2006a).⁶ A more skeptical point of view was proposed recently by Adams, who claimed that in most cases, the connection between particular buildings and bishops or rulers known from epigraphic sources is problematic (Adams 2009: 436).⁷

The origins of the form of specific Nubian buildings, like the Upper Church in Banganarti, are debatable. However, hypothetical foreign influence should be confronted with the idea of local creativity. This unique building has no direct counterparts either in the Middle Nile Valley or in the Eastern Mediterranean, but this did not prevent the excavator, Bogdan Żurawski, from suggesting that the architectural layout shares features with several churches from the Byzantine sphere and even Armenia (Żurawski 2014: 108–112) [*Fig. 2 top left*]. The formal similarities emphasized by Żurawski should be interpreted, however, as examples of the application of particular solutions, rather than quotes from existing buildings. A significant illustration of the transmission of architectural ideas is the unique cruciform building in Dongola (Building B.III), erected probably in the second half of the 7th century. According to Godlewski, it may have become an archetype building for the much later Cruciform Church (CC) (Godlewski 2004: 200–204; Zielińska 2010: 702) [*Fig. 2 right*]. This assumption is based on the conviction that both edifices served a commemorative function. The Cruciform

Church belongs to the large group of cruciform *martyria* in the Mediterranean. However, a foreign idea here was executed in a local manner (Godlewski 1990: 531).

In the case of both the Upper Church in Banganarti and the Cruciform Church in Dongola, the pursuit of originality stemmed from their extraordinary functions. Their architects did not follow presupposed and typologically limited patterns, but relied on the meaning of specific structural elements. Clearly innovative spatial realizations of extraordinary requirements inspired greater creativity in design. Both edifices differ from the more or less repetitive nature of Nubian church architecture. Nonetheless, they illustrate simultaneous acquaintance with the local building tradition and flexibility to propose a new, distinct concept. In light of the above, it is apparent that well-qualified master-builders existed in Nubia alongside the simple craftsmen and masons, and that well-established design patterns were accompanied by new creations. Taking this line of thinking one step further, it is reasonable to assume that conceiving such innovative monuments could not have relied only on simple modules and standard designs.

A commission for church construction required the architect to create a detailed design that had to include suitable measurements and proportions. A thorough description of building techniques need not detain us here, but even a glance at the architectural layout

⁶ The issue of originality in church architecture is similarly understood by Peter Grossmann, who also sees changes in architectural form as the influence of donors. Grossmann's discoveries in the St Menas church (Die Grufkirche) in Abu Mina provide an extensive overview of various architectural practices (for some examples, see Grossmann 1989: 162–163; 2004a: 54–55, Fig. 17 A–B).

⁷ For example, in Dongola, none of the discovered churches are connected either with a foundation inscription or other texts related to the process of their construction (Godlewski 2006b: 264). Some assumptions, however, stem from the stele of Joseph found in the Monastery Church on Kom H (Jakobiński 2008: 283–285, Fig. 3).

of Nubian churches provides an extensive overview of advanced planning methods. The depth of mathematical and geometric knowledge is apparent, especially in the complexity of Dongolan church designs (Zagrodzki 1975). Similar proportions, metric systems, and building techniques were recognized at dozens of sites in various parts of the Christian world, such as Palestine (Chen 1985; 1990; Milson

1989; 2006: 243–271), Syria (Milson 2003; Waliszewski 2011), Illyria (Spremo-Petrovič 1971), Italy (Spremo-Petrovič 1962), Greece (Dufay 1985) and even Ethiopia (Campbell 2006). This suggests that architects arriving in Nubia at the time of its Christianization may have brought with them ready-made metrical tools. Donor Chen proposed a widely-discussed hypothesis that the repetition of standard

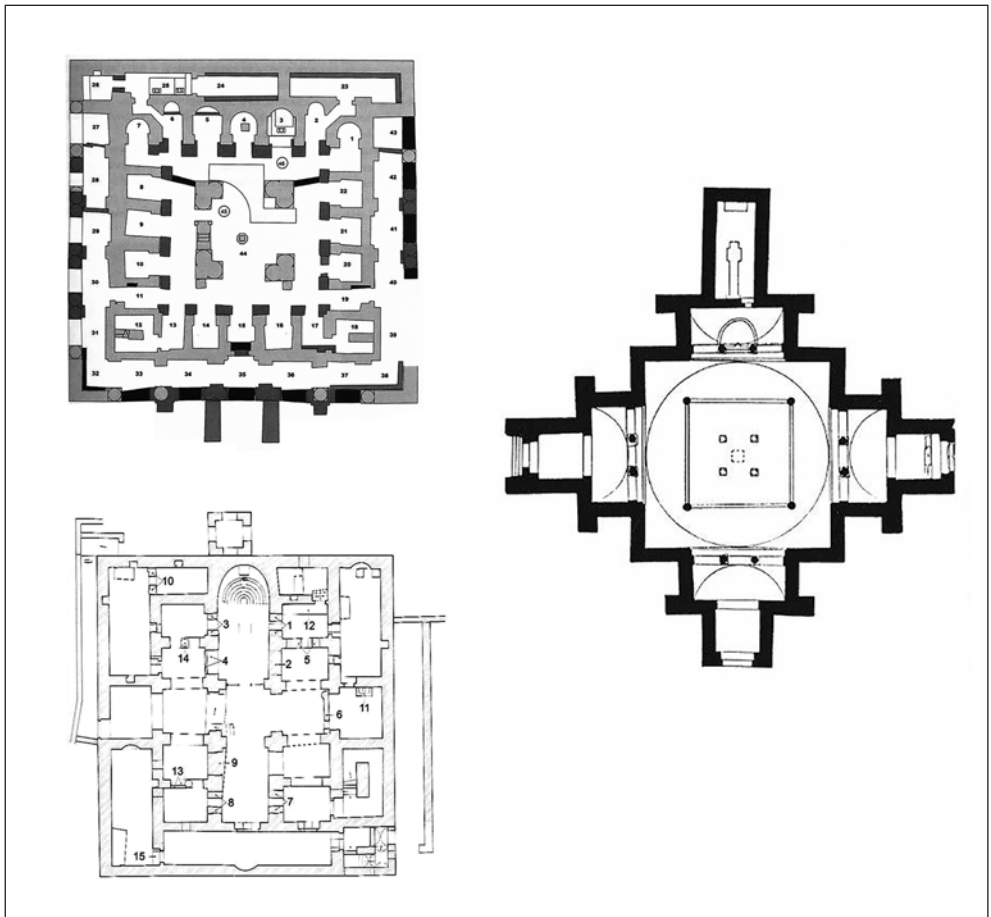


Fig. 2. Original Nubian church layouts: top left, Upper Church from Banganarti (Courtesy B. Żurawski); right, Cruciform Church (CC) from Dongola (Godlewski 1998: Fig. 7); bottom left, Late Cathedral from Faras (After Godlewski 2006a: Fig. 109)

lengths and proportions could have derived from the use of a now-lost ancient “handbook” of architecture (Chen 1990: 532).

Many scholars would agree that comprehensive solutions based on theoretical knowledge were used only in important foundations and even that was uncommon. It seems convincing that the repetitiveness of the architectural form of Byzantine churches, especially small community foundations, resulted from masons using prefabricated modules. This does not rule out the existence of mass-produced blueprints, which could have included numerical ratios inscribed on

them. A modular base may have permitted particular buildings to be enlarged in accordance with individual needs (Papaconstantinou 2007: 42–43). It seems that outside the main centers masons unitized their own, local measuring methods. Therefore, a deep rooting in local tradition may have been the source of the originality of provincial architecture.

A remarkable example of that practice has recently been noted at the site of Selib, where excavation of the church of St Menas uncovered a straight line (170 cm long) painted on the outside of the plastered north wall of the building. This line was undoubtedly a working sketch and was

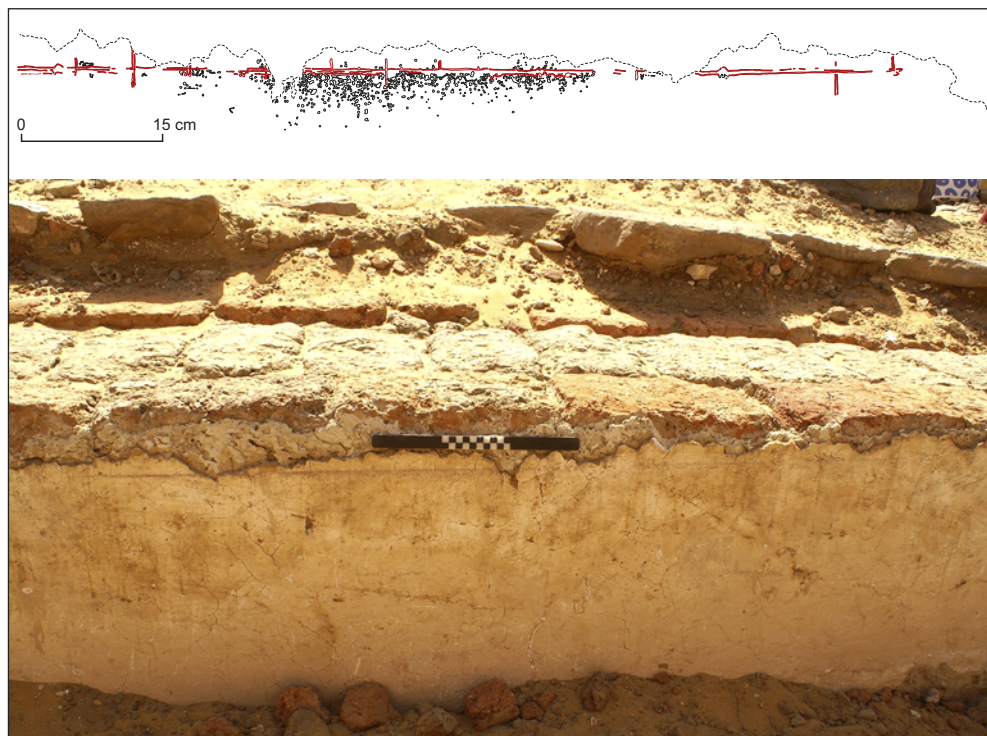


Fig. 3. Measure on the north wall of the St Menas Church in Selib (Photo and drawing A. Deptula; digitizing K. Makowski and P. Makowski)

used as a measure (A. Cedro and A. Deptuła, personal communication; for the church in general, see Deptuła 2015; Żurawski et al. 2013; 2014). The archaeological context suggests that the line was painted in the 6th or in the beginning of the 7th century (Deptuła 2015: 120–121). It was divided into smaller perpendicular sections (2–3 cm), the intervals between them being approximately the same (6–7 cm) [Fig. 3]. This value cannot be compared with any system of measurement known from the Mediterranean. It is not clear whether this unique scale was

used during the construction process, but its placement on the exterior wall of the church may suggest that it was in constant use by the local community. The measure from Selib undoubtedly belongs to an extremely rare set of working drawings with very few acknowledged parallels. A good example is, for instance, a standard module foot (0.3089 m) attached to an inscription on the Byzantine aqueduct at Bethlehem (Abel 1926: 284–285). Another example to be mentioned here is the 7th-century measuring rod from Shelomi (Dauphin 1982).

REEXAMINATION OF THE ARCHITECTURAL DRAWING FROM FARAS

The above remarks on Nubian church architecture place the architectural drawing from Faras in a broader perspective. The precise location of the sketch plan cannot be ascertained from the publication (Michałowski 1967: 65), but preserved catalogues and archival photos taken during the excavations lead to the conclusion that the drawing appeared on a plastered structure (No. 8), built between the northwestern pillar and the northern pilaster of the cathedral interior (unpublished catalogue by Stefan Jakobielski, digitized by Grzegorz Ochała) [Fig. 2 bottom left]. The date of the construction of this mud-brick wall cannot be determined exactly for lack of pertinent stratigraphic records (Godlewski 2006a: 124). Nevertheless, it can be linked to the last phase of refurbishment of the interior. Therefore, it cannot have been created before the 11th century. This date constitutes the *terminus post quem* for the creation of the drawing. The cathedral went

out of use slightly before the consecration of bishop Timotheos in 1372. However, even a partly buried ruin may have been visited periodically by pilgrims and travelers (Godlewski 2006a: 137). For that reason, the possibility that the drawing was executed even in the 15th century cannot be excluded, although such a late date is rather doubtful.

The drawing is part of a set comprising an inscription and a representation of a male figure. The elements of the composition are located close together and respect each other's lines. Had one wanted to separate the components, there would not have been any problem for there was ample space on the wall. Therefore, it seems that the integral proximity of the sketch and the graffito cannot have been accidental. It is not clear, however, whether all elements of the composition were executed at the same time or separately. The last line of the graffito is clearly adjusted to the upper part of the frame of the drawing, thus

suggesting that it was written after the plan had been drawn. However, this does not need to signify a significant time interval.

The sketch consists of a rectangular frame, which limits the apparently chaotic arrangement of irregular shapes, and of six rows of circles [Fig. 4]. Upon formal examination, the two features can be considered as separate levels of the composition. In the upper right part of the drawing, there are two adjacent and almost identical crosses. This pattern is repeated also in the lower part of the composition, where two crosses are apparently unfinished. The author may have painted them after executing the frame, and probably did not have enough space to fit their lower arms. Based on a few preserved lines, it can be assumed that the illegible shapes in the right part of the drawing are also smaller

and strongly deformed crosses. The final stage of the sketching consisted of drawing the circles. In a few places, they actually topped the crosses.

Neither the setting nor the form of the drawing points to a specific purpose. Moreover, the crosses are not regular in geometrical terms and rely on a linear rendering, in which simple lines do not indicate wall thickness. The sketch may be interpreted as something akin to an ideogram with no structural value. In any case, the draftsman certainly had the ability to create an abstract diagrammatic representation and knew how to prepare a horizontal projection. Moreover, the placing of the drawing in a relatively visible place suggests that the concept of a floor plan was also familiar to the people at large and widely understood.

The general form of the drawing does not allow for associations with extant monuments. Nevertheless, a closer examination of the plan shows that it consists of separate zones. Particular crosses could have symbolized specific parts of

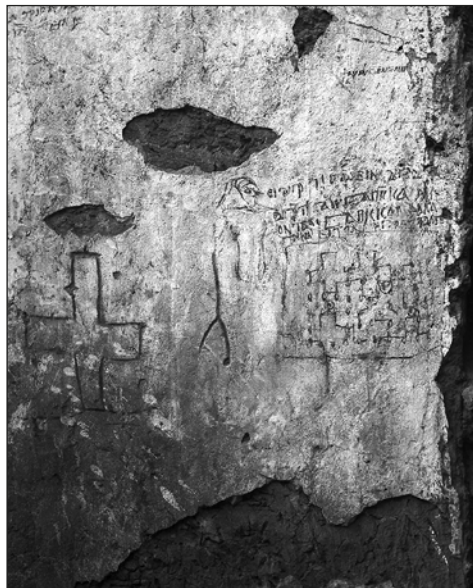


Fig. 4. Architectural drawing from the Cathedral in Faras: left, state after discovery; right, state in 2015 (Photo M. Niepokólczycki, archives of the Institute of Mediterranean and Oriental Cultures, Polish Academy of Sciences; drawing P. Makowski)

a church. Another striking feature are the six rows of small, more or less parallel circles. Particular circles correspond to one another. This arrangement cannot have been accidental, and probably alludes to the geometric proportions of an architectural form. These features impose obvious associations with the layout of a cathedral, whose interior was considerably overbuilt in the late period, and some parts of the church may have even functioned as separate chapels (Godlewski 2006a: 134).

Upon closer consideration, the architectural character of this makeshift drawing may raise doubts. For instance, images of crosses in a rectangular frame could have reflected a popular custom in the interior of Nubian churches and monasteries (see, for instance, Dobrzeniecki 1974). Moreover, the presence of a sixth cross, separate from the described ones, scratched in the plaster covering structure No. 8, suggests an apotropaic significance.⁸ Nevertheless, the makeshift character of the drawing detracts from the likelihood of both hypotheses.

While the Old Nubian graffito located directly above the discussed drawing has yet to be published,⁹ it was studied recently by Vincent W. J. van Gerven Oei (see the appendix below). Damaged plaster on the right side has affected the preservation of the text in this place. It should be noted that Old Nubian inscriptions were rather rare in the interior of the cathedral (Ochala 2014: 3, 38, Fig. 9a). On the whole, they seem to have been left foremost as an expression of individual piety.

The text consists of four lines. It is apparently a prayer left by a young woman who does not want to be married to her maternal uncle. It is undoubtedly very interesting from a social point of view,¹⁰ but relating it directly to the presence of the architectural drawing is difficult at best. If we assume that the graffito and drawing are integrally connected, we may suppose that the drawing is simply a reference to a specific church, in which the marriage ceremony was planned to take place. But the integral connection of a floor plan and a personal, even intimate prayer may express a more symbolic idea. A rendering of the concept of an architectural form of a church may be understood, for instance, as a reference to celestial reality. From a theological point of view, a church interior is a terrestrial representation of Heavenly Jerusalem. Fear of its loss may have prompted the young woman to place her prayer on the wall of the cathedral. Yet, if the graffito was added to the drawing after a significant time interval, the author's decision may have been dictated only by the visual attractiveness of the representation. In this case, the integral proximity of the two elements had to be determined by symbolic issues. Regardless of the chosen interpretation, the reason why the draftsman did not use a more conventional image of a church facade, but decided to utilize the representation of a floor plan, remains unclear.

The inscription is accompanied by a drawing showing the head and torso

⁸ For a consideration of the apotropaic meaning of the cross in Nubian wall painting, see especially Dobrzeniecki 1974. For a comprehensive study of apotropaic connotations in epigraphic records, see, for example, Łajtar and van der Vliet 2010: 271–276 with further references.

⁹ The Old Nubian inscriptions from the Cathedral in Faras, including the said text, are to be published by Adam Łajtar and Grzegorz Ochala from the University of Warsaw.

¹⁰ The linguistic and socio-cultural issues associated with the redaction of the graffito are beyond the scope of this paper.

of a male figure. The convention of the representation is hardly anything like that in the wall paintings. A similar manner of depicting the human figure can be observed in a drawing from the Upper Church in Banganarti (Żurawski 2014). The person there is shown in profile and is evidently turned toward the inscription. It may suggest that the depicted person is mentioned in the text or represents its author. In this context, the words of a young woman's prayer may be pronounced by this person, and at the same time, he may be offering the plan of a church to plead to God in her cause.¹¹

There is nothing surprising in the presence of a makeshift drawing in sacral space. In the Late Christian period, graffiti and inscriptions, occasionally accompanied

by sketched drawings, often covered the plastered walls of Nubian churches and monasteries. This phenomenon is well documented, for instance, in the Upper Church in Banganarti (Łajtar 2008: 328, Fig. 6; Osypińska and Żurawski 2014: 301–310, Figs 1–30). A makeshift scratched representation from its interior probably depicts a church facade (Żurawski 2014: 120, Fig. 26). A more elaborate depiction of a church facade appears also among the vast number of rock drawings in the region of Wadi Abu Dom. It cannot be said whether these schematic ideograms are symbolic representations of an “ideal church” or a direct reference to a specific edifice. According to Tim Karberg, the representation of the domed church in Wadi Abu Dom may allude to the monastic



Fig. 5. Representations of church facades: left, church from Wadi Abu Dom; right, church model from the Cathedral in Faras (Drawing after Karberg 2009: Fig. 12; photo C. Calaforra-Rzepka, published with permission from the National Museum in Khartoum)

¹¹ I owe this original idea to Alexandros Tsakos, who extensively commented on my paper on this subject during the International Medieval Congress in Leeds (4 July 2016).

church in Ghazali, which was probably the most important sacral building in the region of the Fourth Cataract (Karberg 2009: 138, Fig. 12) [Fig. 5 left].

Representations of architecture are present sporadically in the iconographical programs of the decoration of Nubian churches and monasteries. All of them, however, are connected with the symbolic sphere, rather than issues of architectural planning. The most remarkable example is found near a representation of St Onophrios in the Cathedral at Faras (Michałowski 1967: 153; Kubińska 1974: 150, Fig. 83) [Fig. 5 right]. Another one is held by an anonymous king in the niche of the Upper Church in Baganarti (Žurawski 2014: 138, Fig. 6). Both clearly point to a Byzantine tradition of illustrating architectural models of domed churches (Hadjityrphonos 2010a: 138–141). The question of their relation to architectural maquettes, which may have been used during the design process, is still debated (Marinković 2007).¹² Thus, it is not clear whether the depiction is an absolutely conventional representation or a simplified, but partly realistic reconstruction. Gartkiewicz claimed that the author of the architectural model in the St Onophrios

composition may have duplicated the general pattern of the visual form of the Nubian church, or even of the Cathedral in Faras. In his opinion, it could have also expressed a vision of a Byzantine domed church (Gartkiewicz 1990: 292–293, Fig. 172). In Baganarti, the architectural depiction represents a rotunda-shaped building. This type does not occur in Nubian architecture. According to Žurawski, this suggests that it is an image of a reliquary rather than a representation of a church.

More schematic depictions of architecture are known also from scenes of the Nativity, which are relatively common in Nubian iconography. Certainly in this case, the presence of architectural models illustrates the symbolic idea of the *Loca Sancta* representation rather than any visual reference to existing monuments (see especially Martens-Czarnecka 2011: 143–145; Michałowski 1967: 114–115; Mierzejewska 2010: 666; Weitzmann 1974: 37–38). Nonetheless, Małgorzata Martens-Czarnecka points out that despite a certain level of stylization of the form, architectural elements may have been an allusion to topographic features in Jerusalem (Martens-Czarnecka 2011: 145).

FLOOR PLAN REPRESENTATIONS IN A BROADER PERSPECTIVE

From a chronological point of view, the enigmatic drawing from the Cathedral in Faras does not have any good parallels either in Nubia or in the Eastern Mediterranean. The lack of architectural

blueprints, their visual representations or any other clear testimonies of planning practices after the 7th century is widely discussed in Byzantine studies.¹³ Therefore, there is no general agreement on how

¹² However, see the evidence for architectural models from Armenia (Maranci 2003: Fig. 5).

¹³ One theory is that churches were designed according to God's plan, hence there was no need for architectural drawings in historical sources (Ousterhout 1997: 44).

to interpret the task of using drawings and blueprints in the Middle Byzantine period. Robert Ousterhout maintains that master-builders probably did not use architectural plans. In his opinion, design layouts were marked with ropes and rods directly on the ground of a building site, rather than drafted (Ousterhout 1999: 58). This point of view, however, is controversial and supported mainly by literal analyses of textual sources (Mathews 2001).¹⁴ Researchers who disagree with Ousterhout's view hold that the size and the well-advanced form of Byzantine church architectural layout indicates that such buildings could not have been constructed without proper planning (Bouras 2005: 107; Hadjistryphonos 2010a: 121). Also, the existence of several churches with identical floor plans at different locations (Hadjistryphonos 2010a: 130; Mihaljević 2012: 101), and the originality of some architectural features in several churches, such as the Nea Moni mausoleum, suggest that their construction could have been successful only with advanced planning procedures (Bouras 2005: 104–105). Overall, in the light of extensive evidence of plan and architectural drawing usage, both in the Islamic world (Holod 1988) and in medieval Europe (Kostof 1977; Scheller 1995), it appears unlikely that the Byzantines remained complete dilettantes

in this respect despite the different socio-cultural circumstances.

An important argument in this discussion is the possibility that Byzantine intermediate blueprints have simply vanished. First, Byzantine mentality would have placed little artistic value on architectural drawings, hence architects would not have saved them. Secondly, blueprints could have been produced on fragile and unstable materials, such as papyrus¹⁵ and parchment which additionally could have been further used for other purposes (Hadjistryphonos 2010a: 122). Finally, it cannot be excluded that some architectural plans may have been prepared on ivory, ceramic or wooden tablets, made to be filled with wax and drawn on with a stylus.¹⁶ These important factors explain their absence from the archaeological record.

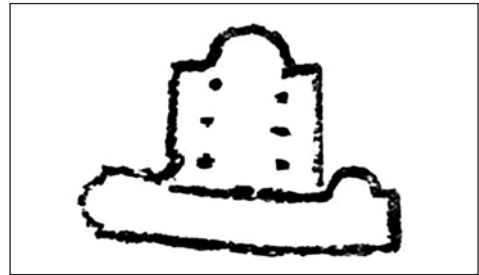


Fig. 6. *Makeshift plan of a church from Ohrid, Macedonia (Ousterhout 1999: Fig. 34)*

¹⁴ Ousterhout indicates, for instance, that the 10th century military treatise of Heron of Byzantium is a good illustration of the fact that the Byzantines did not understand the meaning of conceptual diagram and architectural drawing. Indeed, copying the ancient reflections of Apollodorus, Heron of Byzantium replaced the abstract, two-dimensional diagrams by much more realistic three-dimensional representations. Moreover, although this text was addressed to well-educated "engineers", the author removed the technical vocabulary which could have been unfamiliar to readers (Ousterhout 1997: 45; 1999: 65–66, Figs 37–39; Ghazarian and Ousterhout 2001: 141–143, Figs 4–6). However, it should be noted that his readership may not have come from the narrow social group of master-builders.

¹⁵ A few architectural drawings have been preserved on papyrus, e.g., the Papyrus Ghorab from the Eighteenth Dynasty (Hadjistryphonos 2010a: 114, Fig. 1) and a 2nd century papyrus house plan from Oxyrhynchos in Egypt (Papaconstantinou 2007: 38, Fig. 1).

¹⁶ For a significant parallel from the Roman period, see the Vindolanda writing tablets (Bowman and Thomas 1975).

There are, however, a few architectural drawings from late antiquity, which apparently confirm that plans were in use at least through the 7th century, when architects were still trained in the Vitruvian tradition. Among the best examples are two sketches found on reused bricks in the church of St Sofia in Ohrid [Fig. 6]. Both of them could have been schematic plans of the early Christian church, which preceded the Middle Byzantine foundation (Koco 1956: Fig. 1; Hadjistryphonos 2010a: 118–119, Figs 8–9). Ousterhout pointed out that if this identification is correct, then these unique drawings could belong to a small group of surviving architectural plans from the early Christian period (Ousterhout 1999: 62, Fig. 34). A more sophisticated example of architectural drawing from late antiquity was found on the marble floor of the Pompeion in Athens (Bouras 2007: 31–33, Figs 1–2; Hadjistryphonos 2010a: 119, Fig. 10). The regular proportions of the Athenian drawing suggests that it is an accurate representation of a church building. Drawings from Ohrid and Athens probably refer to particular blueprints. Their simplicity seems to support the hypothesis that the sketch from Faras is also a representation of an architectural plan.

There is need also to extend the present discussion to working drawings that testify to the planning and building procedures supported by the blueprints. A very intriguing example of such a drawing was discovered on the pavement of the birth house of Hathor in Dendera (Upper Egypt). This chamber is adjacent to the former pagan temple converted into a church. The drawing must have been prepared by masons who worked on

the design of the dome, as well as on the semi-domes above the center and niches of the triconch. It repeats the shape of a church precisely in 1:1 scale (Grossmann 2004b: 31–32, Fig. 4). A similar example was also discovered by German archaeologists in Resafa-Sergiopolis (Syria). An arrangement of a few curved lines incised on the floor of the Church of the Holy Cross from the 6th century clearly corresponds to the arcades of the nave. It proves that the design of the elevation was established after the floor was laid (Bayer 1986: 155–156, Figs 73–75; Ousterhout 1999: 64, Fig. 35). Drawings from Dendera and Resafa-Sergiopolis illustrate that the final design of a specific building was not necessarily fully conceived before initiating construction. Both of them are undoubtedly direct examples of advanced planning practices. However, they are not definite proof that master-builders used blueprints.

An even more elaborate example of a drawing belonging to the said group was discovered in the pyramid Beg. N8 in Meroe. During restoration work in the north chapel, an architectural scheme consisting of a network of lines based on the “Golden Section” was identified. A detailed analysis showed that it is possible to reconstruct both the procedure of planning and the initial dimensions of the pyramid (Hinkel 1982). Moreover, it suggests that the design processes and construction occurred simultaneously. It also proves that the pyramid’s master-builders probably knew how to use architectural drawings. At any rate, the drawing from Meroe is chronologically too remote to serve as a reference for the drawing from the cathedral.

Conceivably, the approach to architectural creation in the Byzantine world may have partly reflected the situation in Christian Nubia. However, examples of Armenian or, to put it more broadly, Caucasian architecture show that the problem of defining Nubian architecture cannot be interpreted only with regard to Byzantine examples. Both the Caucasus and Nubia were distanced from the cultural and geographical boundaries of the Byzantine world. Some researchers believe that the unique conditions in the Caucasus contributed to the continuity of the tradition of using architectural drawings long after it had vanished from the Eastern Mediterranean (Ghazarian and Ousterhout 2001: 150).

Indeed, unlike Byzantium, the textual and archaeological evidence from the Caucasus provides a broad context for architectural practices. The tradition of using architectural plans is confirmed in several written sources. The most widely discussed example is the *Universal History* of Step'anos Tarōnec'i, according to whom, when the Armenian architect Trdat was hired by Basil II (976–1025) to repair the dome of the Hagia Sofia, he presented a plan and prepared a model before beginning the work (Maranci 2003: 294–295). Archaeological records illustrate a more modest confirmation of the use of architectural plans. However, a drawing of the *muqarnas* vault on the south facade of the 13th century Astvatsankal Monastery gavit shows the complexity of the building planning practices implemented by

Armenian master-builders (Ghazarian and Ousterhout 2001: 144–153).

Consideration of these examples leads to the hypothesis that the social status of master-builders in the Caucasus was essentially higher there than in the Byzantine Empire. A relief from a small, 10th century church in Korogo, Georgia, testifies to the tradition of using architectural drawings (Ousterhout 1999: 70, Fig. 43; Hadjityrphonos 2010a: 119, Fig. 11; Khoshtaria n.d.) [Fig. 7]. It depicts a master-builder with a group of donors and the rescaled plan of a basilica church. This representation is part of a strong local tradition of showing architectural models in the hands of church patrons or founders. Many scholars have pointed out that this phenomenon alludes to an iconographic pattern well known in Byzantine iconography from at least the 6th century (Carile 2014; Djobadze 1976).



Fig. 7. Relief from the 10th century church in Korogo, Georgia (Photo courtesy D. Khoshtaria)

CONCLUSIONS

It is difficult to interpret the presence of an architectural scheme in the interior of the Cathedral in Faras. Its location may suggest that it functioned as a public drawing. On one hand, an image of this kind must have relied on a common system of conventions and symbols to communicate its meaning. On the other hand, considering that Nubians used to express their individual needs on church and monastery walls, it could be assumed that the makeshift character of the drawing represents abstract ideas that the viewers recognized.

Distinguishing between architectural design practice from schematic diagrams depicting architecture is apparently a difficult task. Upon further reflection, the drawing from Faras can be seen as a representation of a plan or blueprint, and may have served as a means of exploring an architectural idea. Moreover, the drawing in question seems to have been executed without any closer collaboration with the Church or state. It may have been made by an anonymous master-builder, whose personal desire was to immortalize his individual creativity. Assuming this interpretation, one may suppose that the representation of a floor plan was not significantly different from simple sketches or study drawings used by (also contemporary) architects to solve various design problems (Herbert 1988). Equally well, it may have been made by somebody who understood architectural plans or horizontal projection, and wanted to

refer to a particular building. This way of thinking can provide several reasonable hypotheses explaining the proximity of the drawing and the Old Nubian graffiti.

The drawing from the Cathedral in Faras is testimony of an architectural idea being transmitted into a visual representation. It seems particularly symptomatic that this drawing was executed between the 11th and 15th century, a period from which no direct traces survive of architectural practices or references to master-builders and architects in the Byzantine world. It is, however, an individual and separate trace of planning practices from Christian Nubia. In the light of current evidence, it is difficult to answer in affirmation that Nubian master-builders of the medieval period actually used blueprints. Future discoveries may yet allow us to explore this issue more extensively.

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APPENDIX

PRAYER OF A YOUNG WOMAN

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The graffito consists of four lines in Old Nubian and appears to be the prayer of a girl or woman who does not want to be married to her maternal uncle. The handwriting does not give any indication of the date because the paleographic dating method has no application to Old Nubian.

- 1 ϵΙ ΔΙΓῚῚῚ ΓΑ[Π]ΕΙΝ ΔἸἸἸἸἸ
 ΔΙΓῚῚῚ ΓΑḐἸ ΓΑΠῚῚῚ ἈΛ[ΛΑ]
 ΟΝ ῚΑΡΙ ΓΑΠῚῚῚ ΜΑΛΛΑ
 4 ΓΙΝΝΑ ΕΙῚῚῚ ΔΙΓḁῚῚ ῚῚῚῚῚ

Translation:

Oh testament of sin, give to me. Don't cause me to be the wife of (my) maternal uncle, binding (me) to the testament of exulted sin and turning (me) to the blessing of sin.

Grammatical commentary:

The graffito appears to be similar in structure to the one from El-Sabu' (DBMNT 1397) first published by Griffith (Griffith 1913: 60–62; Browne 1995). It has the following pattern: the first clause ends in the imperative ΔΙἸἸἸἸἸ “give (to me)” and the second ends in a causative followed by the negative imperative/vetitive -ῚῚῚῚ “do not cause/make...”, which is also found in the opening lines of DBMNT 1397.1–3 (van Gerven Oei 2015: 39).

ϵΙ: interjection

ΔΙΓῚῚῚ: “testament” (Browne 1996: 42).

The final *iota* is epenthetic and phonologically conditioned.

ΓΑ[Π]ΕΙΝ: ΓΑΠῚῚ “sin” (Browne 1996: 196).

The *pi* is uncertain, but considering the recurrence of the word in l. 2 and l. 3, the reading seems plausible. The ending -ΙΝ is a genitive.

ΔἸἸἸἸἸ: ΔΙἸ “to give (to first person)” (Browne 1996: 42), followed by second/third person imperative -Ὶ and command marker -ἸἸἸἸ. If this graffito follows indeed the same template as DBMT 1397, this is the final verb of the first clause and presumably the final word of the first line. Ll. 2 and 3 both end in a bare verb root marked with the predicative -ḁ. Both depend on the final verbal predicate in l. 4: ΔΙΓḁῚῚ ῚῚῚῚῚ ΔΙΓῚῚῚ: “testament”, see l. 1.

ΓΑḐἸ: ΓΑḐ “exultation” (Browne 1996: 26), here used as an adjective to ΓΑΠῚῚῚ. The final *iota* is epenthetic and phonologically conditioned. Considering the context, where “exultation” is used to qualify “sin”, and in l. 3 the author speaks of the “blessing” of sin, this should probably be taken as irony. Perhaps the words “exultation” and “blessing” were frequently associated with the bond of marriage, and are here juxtaposed with “sin” in order to lend rhetorical force and an anguished tone to the prayer.

ΓΑΠῚῚῚ: “sin”, see l. 1, followed by genitive -ἸἸ and accusative -Ὶḁ, an instance of case stacking, cf. DBMNT 1391.10.10 ḁἸἸἸḁ.

ἈΛ[ΛΑ]: probably from ḁἸἸ “to bind” (Browne 1996: 10).

Here to be taken in a negative sense, “to constrict”, *vel sim.* I reconstruct $\alpha\lambda[\lambda\alpha]$, with final predicative $-\alpha$.

ON : “and” (Browne 1996: 126), linking ll. 2 and 3.

ΤΑΡΙ : possibly related to the verb $\text{ΤΑΡΟΥ}/\text{ΤΑΡΙ}$ “to praise” and the noun $\text{ΤΑΡΟΥ}\tilde{\epsilon}$ “praise, blessing” (Browne 1996: 167), again used adjectively with $\text{ΕΑΠ}\tilde{\kappa}\alpha$ and parallel to l. 2 $\text{ΓΑ}\tilde{\delta}\tilde{\iota}$ $\text{ΕΑΠ}\tilde{\kappa}\alpha$.

$\text{ΕΑΠ}\tilde{\kappa}\alpha$: see l. 2 $\text{ΕΑΠ}\tilde{\kappa}\alpha$.

$\text{Μ}\tilde{\alpha}\lambda\lambda\alpha$: $\text{Μ}\tilde{\alpha}\lambda\lambda$ “to turn” (Browne 1996: 109), which usually has a negative connotation (“turning toward evil”). Note the rhyme: l. 2 $\alpha\lambda[\lambda\alpha]$... l. 3 $\text{Μ}\tilde{\alpha}\lambda\lambda\alpha$.

$\text{ΓΙ}\tilde{\iota}\tilde{\nu}\tilde{\nu}\alpha$: $\text{Γ}\tilde{\iota}$ “(maternal) uncle” (Browne: 1996: 28), followed by a genitive dependent on $\text{ΕΙ}\tilde{\tau}\tilde{\tau}\alpha$. The geminated *nu*

remains curious, but is maybe an orthographical indication of the long *iota*, see modern Nubian *gī*.

$\text{ΕΙ}\tilde{\tau}\tilde{\tau}\alpha$: $\text{ΕΙ}\tilde{\tau}\tilde{\tau}$ “woman, wife” (Browne 1996: 80), followed by the predicative $-\alpha$.

$\alpha\tilde{\iota}\tilde{\gamma}\tilde{\alpha}\tilde{\rho}\alpha$ $\tilde{\tau}\tilde{\tau}\alpha\tilde{\mu}\tilde{\eta}$: periphrastic vetitive construction with copula $\text{ΕΙ}\tilde{\nu}$ and regressive assimilation of the *nu*: $\text{ΕΙ}\tilde{\nu}\text{-}\tilde{\tau}\tilde{\alpha}\tilde{\mu}\tilde{\eta}$ > $\tilde{\tau}\tilde{\tau}\alpha\tilde{\mu}\tilde{\eta}$ preceded by the transitive/causative verb $\alpha\tilde{\rho}$ ending in predicative $-\alpha$ “do not cause”. The initial $\alpha\tilde{\iota}\tilde{\gamma}$ - should be interpreted as first person singular accusative, with voicing of accusative $-\kappa$ between vowels. The supralinear stroke on the second *alpha* clearly indicates that it is the beginning of a new syllable and thus excludes analysis as $\alpha\tilde{\iota}\tilde{\gamma}\tilde{\alpha}\tilde{\rho}\text{-}\alpha$ with the causative $\tilde{\gamma}\tilde{\alpha}\tilde{\rho}$.

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