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AN INCISED TEMPLATE OF AN ARCHITECTURAL POSTAMENT FROM CIBYRA

KIBYRA'DAN MİMARİ BİR POSTAMENTE AİT KAZILI BİR ŞABLON

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Abstract: It is understood that the drawings incised on a block inside the late-period walls adjacent to the Agora of Cibyra were the models of a postament which is widely used as an architectural element in monumental buildings, especially during the construction activities of the IInd century A.D. It is known from the literature that wooden patterns were used as models in the course of the construction of ancient buildings. Some detailed architectural drawings incised in the stone have survived. However, this template in Cibyra is unique, providing evidence of ancient architectural design and practice with its perfect profiles and dimensions which defined the manufacturing phases for a single architectural element employed in construction.

Keywords: Cibyra • Architectural Models • Templates • Roman Technical Drawings

Öz: Kibyra Agorası'nın bitişiğindeki geç döneme ait bir bloğun üzerine kazınmış çizimlerin anıtsal binalarda, özellikle MS II. yüzyılda gerçekleştirilen imar faaliyetleri boyunca yoğun olarak kullanılan anıtsal binalarda mimari eleman olarak kullanılan postamentin modelleri olduğu anlaşılmaktadır. Mevcut literatürden anlaşıldığı üzere antik binaların inşasında ahşap kalıplar model olarak kullanılmaktaydı. Taşa kazınmış bazı detaylı mimari çizimler günümüze ulaşmıştır. Ancak Kibyra'daki bu şablon mükemmel profilleri ile antik mimari tasarım ve uygulamanın ve inşa sürecinde kullanılan tek bir mimari elemanın üretim aşamalarını belirleyen boyutların bir kanıtını sunması bakımından ünik bir örnektir.

Anahtar Kelimeler: Kibyra • Mimari Kaliplar • Şablonlar • Roma Dönemi Teknik Çizimleri

In the 2013 season of the excavations at Cibyra, a limestone block carrying incised drawings was found in the course of excavations conducted in the Agora 1st Terrace Street in the city center (Fig 1). When the block was cleaned, on the finely polished front face it was found that the surface carried incised templates depicting the dimensions and profiles of a postament (Fig. 2).

On the both sides of the 1st Terrace Street, there are porticoes with opus spicatum flooring (Fig. 3). The different sizes, dimensions and profiles of the columns, postaments and Corinthian capitals used in these porticoes on the east and west sides of the Terrace Street indicate that architectural materials from the neighbouring buildings were reused in its construction. Fifty postaments of different profiles and sizes, ranging from 55 to 86 cm in height, were exposed in the east and west wings of the Terrace Street, of which, 88 meters of 116 m in total length have been excavated to date[1] (Fig. 4).

When the other architectural elements on the street are examined, it is seen that architraves and cornices are uniform. These elements are probably not reused, but are architectural blocks carved for the Agora. The heights of the columns vary between 317, 317, 230 and 268 cm and the capital

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1 Özüdoğru 2015, 48-49.

heights are between 38, 45, 48, 48 and 40 cm. The architrave widths of 248, 250, 260, 269, 250, 230, 230 cm. indicate their different sizes. Therefore, there are different measures between the column centers. However, the width between the centers of the *in-situ* postaments and the length of the longest architraves show that in the first design phase, the measure of the intercolumniation was 270 cm.

Damaged architraves and some intercolumnium dimensions were narrowed during subsequent re-use. In some repairs, this is understood from the *in-situ* postaments, even in the middle of the intercolumnium in which an extra column was erected to support a possibly cracked architrave (Fig. 5). The common elevation of the portico, which should be in the underside of the architraves, is provided by the combinations formed by considering the height of the postaments, columns and capitals. When necessary, a few cms. deep chiselling was performed on the top of the capitals in order to maintain the measurement of total height of the elevation.

The template block that carries the incised drawings is a rectangular prism shaped architectural piece carved from local limestone. It was found in the outer wall of Shop No. 7 on the eastern wing of the Agora's 1st Terrace Street. The outer walls of the shop were also designed to form part of a fortification wall 120-180 cm in thickness. The fortifications surrounding the agora was built with reused blocks from the ruins of the buildings in the adjacent area, to form an inner fortress in Late Antiquity (Fig. 3, Fig. 6).

There are two separate models which in fact define the same postament which are incised as 2 mm deep lines on the smoothly polished front surface of the 105x85 cm dimensions and 38.5 cm thick limestone block. The right-hand profile model depicts the first stage of the rough work in carving the postament block. The blocks when removed from the quarry were first processed into postaments in accord with this profile. The model incised on the left defines the finished and polished final profile of the same postament (Fig. 7). The distance of the two models from each other records the widths of the profiles on the postament and the profile diameters of the Attic base; the height of both models is also the height of the postament. The height and width dimensions indicate that the piece of stone was initially cubic in shape. Also drawn in the profile on the left model, on the upper torus of the Attic base of the postament, is the columns' base profile, of approximately 48 cm. diameter (Fig. 8, Fig. 9).

When the height of the torus, trochilus and plinth on the model is examined, it is seen that the proportions in the profile are identical to the definitions provided by Vitruvius since the height of the base section is equal to the bottom radius of the column:

> *"First take the column diameter (48 cm) and divide it into two equal parts. This gives the total height of the base. If the base is Attic, take this segment and divide it into three equal parts; one third is plinth (8 cm). Then take the remaining, divide into four equal parts; Upper quarter is upper torus (4 cm). Then take the remaining three quarters and divide into two equal parts; lower half lower torus (6 cm). The remaining (6 cm) is the scotia, which is compressed between two filets and toruses, and which the Greeks call trochilus[2]".*

Radius / Base height = 24 cm.

Plinth = 24/3 = 8 cm.

Remaining 16 cm / 4 = Upper torus = 4 cm.

Remaining 12 cm / 2 = Trochilus 6 cm, Lower torus = 6 cm.

2 Vitruvius 3.5.1-2; Carpo 2003, 449, Fig. 2.

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

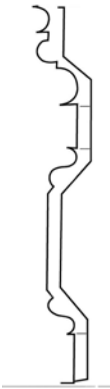

Fig. 7

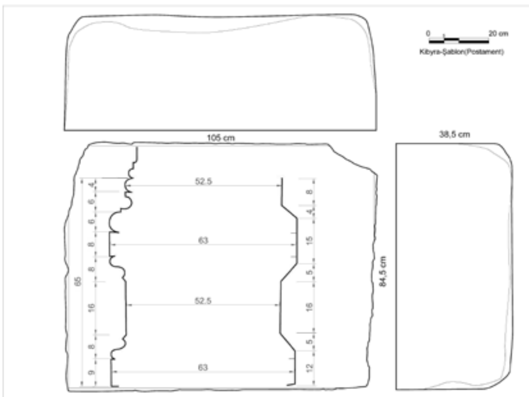

Fig. 8

Fig. 9

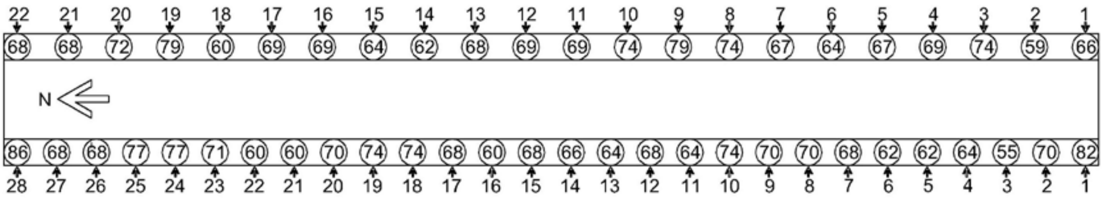

Fig. 10

When designing the postament on the template, the square-based prismatic body and the Attic base section are not considered separately, and the crown profile of the body is also designed as the plinth of the base [3]. The fact that other postaments with different dimensions and profiles are employed of the same form is a prominent feature of the architectural remains in Cibyra. The prismatic section under the base ends with an S profile starting from the plinth, a triangular in section line, a flat rectangular, a triangular in section thin line again, the symmetry of the upper S profile and again with plinth. When describing the profiles between the plinths, the term "S profile" seems to be more practical because a similar profile is seen more in the sima section of the structures[4] and the profile is more curved than the cyma recta or cyma reversa[5]. The thin triangle line that separates the S profiles and the flat rectangular part from each other is lost in practice and processed as a flat line.

In researching these models, which are very important finds concerning the design and practice of ancient architecture, it is necessary to emphasize that the "ground plans" are the oldest known examples of surviving architectural drawings in studies related to the visual representations of structural forms. The first example of these special floor plans with the most simplified forms is that

3 In a similar example in Attouda, the body crown and the Attic base plinth are separate; they are separated by a deepened cyma reversa. This is considered a feature dated to the Early Imperial Period: Söğüt 2017, 249, Fig. 9.

4 Erder 1967, 21.

5 Closely similar use of this particular profile is in the stoa of Assus: Edlund-Berry 2005, 5, Fig.2.

painted on a wall at Çatalhöyük in the VIIth millennium B.C.[6]. In ancient Mesopotamian and Egyptian civilizations, these designs emerged in the 3rd millennium B.C.; Although those that were drawn on papyrus and leather are today lost, many examples drawn on terracotta and limestone have survived[7]. Architectural drawings surviving from ancient Greek civilization are not as common as those from Mesopotamia and Egypt[8], while explanations of architectural practices are uncommon in surviving Greek historical and literary sources.

In accordance with this perception, although it was mentioned in ancient sources of construction from a full-scale model, called a *paradeigmata*[9], J. J. Coulton claimed that most of the work of Greek architects, involved practical aspects of the building during construction. Coulton argued that Greek architectural drawings did not form any part of the design or construction process, but, instead, the stonemason was the "*central agent*" of the art of architecture, because he worked on the basis of the verbal explanations given to him by the architect[10]. In a statement he presented, following these theses, J. J. Coulton argued that there was no significant difference between the *architectones* (architect) and the stonemason, with in the center of the architectural activity, maybe a third character, such as Mausolus, Eumenes or Attalos, as the "*patron*" and a possible factor influencing the particular design in order to transform the idea into an object[11].

This position, which is widely accepted, and that the Greek architectural drawings were relatively insignificant in the construction and design of a building, was opposed by both Spiro Kostof and Lothar Haselberger. While Kostof reiterated the thesis of J. Bundgaard's which Coulton also influenced, even though he said "architectones was at least initial but nothing more than master-carpenter[12]", he argued that architectural components could not be built correctly without drawings, and he supported this anti-thesis with the examples of *anagrapheis* (drawings) that are mentioned in the Greek written sources[13]. While Haselberger discovered that there were a series of sketches inscribed on stone blocks used in the construction of the Temple of Apollo in Didyma in the IVth century B.C.[14]. This very rare and prominent discovery proved Kostof's point concerning the necessity for these drawings, but also invalidated Coulton's claims under the influence of Bundgaard. Haselberger then concluded from the discoveries of these incised sketches of architectural elements of the temple, that they were greatly used in the design process to detail the component parts of the temple[15].

In the Roman Imperial Period, there is little more information and evidence concerning architectural drawings[16]. In the most important surviving written source from this period, the Ten Books

6 Kostof 2000, xvii.

7 Corso 2016, 48-49; Heisel 1993, 8-153, Tafel 1-15; Kostof 2000, 7. For a larger and detailed catalogue see: Corso, A., Il Disegnio Nell'Architettura Antica, Venezia, 2018.

8 Heisel 1993, 154-183.

9 Coulton 1983, 458.

10 Coulton 1977, 54; Coulton 1983, 457.

11 Coulton 1983, 453.

12 Kostof 2000, 12.

13 Kostof 2000, 12-15.

14 Haselberger 1980;

15 Haselberger 1985, 132.

16 Heisel 1993, 184-226; Corso 2016, 15-34.

on Architecture, Vitruvius chose to explain the visual forms and to explain the dimensions and proportions in words instead of through drawings[17]. The classical columnar system which is first defined by Vitruvius and then called the *"rule of orders,"* is based upon precisely determined norms and standards in which every component has a specific form and name[18] and Vitruvius's use of Greek terms indicates that the standards of Greek architecture were adopted by the Romans at the end of the Hellenistic period[19]. Coulton emphasized the simplicity of design during the Roman period through this tradition and he says that "*any architect who knows basic Greek architecture can easily design according to Vitruvius's rule of proportions*"[20]. The builders, who take these rules as their guideline, formed their own models and plans with hand and eye skills by making their own arrangements according to the location, material and tools of the building[21]. In the Roman period, simple plans, those which Vitruvius called in Greek *schemata*, in Latin *formae*[22] which do not require much detail were sometimes prepared, as a record for legal reasons[23], and were widely used by architects. And the purpose and necessity of architectural drawings should be considered essential in the construction of large buildings[24].

Another discovery highlighting the importance of incised working architectural drawings was made by Haselberger, this time in Rome. This important discovery made by Haselberger, was through establishing that the architectural drawings in the courtyard in front of the Mausoleum of Augustus, were drawings that recorded the right corner of the Pantheon's pediment, which has once again shown how important and illustrative these incised architectural drawings as evidence of architectural working practice were and are[25].

So far, the transformation of an architectural idea into a design, ideas for ground plans or large-scale designs of buildings, these and the recovered examples have been briefly presented. Many of the examples presented are profile sections of architectural elements, such as the entablature, arch, pediment, of several parts of the building, such as those found in the recently discovered Basilica of Aphrodisias[26], It is more difficult to transfer complex three-dimensional architectural elements, such as capitals, bases and postaments, rather than architectural designs, into two-dimensional drawings that will be a reference for production of these architectural elements[27]. For this reason, stone or wooden models which are defined as *paradeigma* or *anagrapheus* were employed, to better reflect the plasticity, proportions and dimensions of the architectural elements that make up the buildings[28].

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17 Carpo 2003, 452.

18 Carpo 2003, 447.

19 Vitruvius, 3.1.1 analogia, 3.1.5 monades, 3.1.6 pseudodipteros, 3.3.2 picnostyle etc.

20 Coulton 1983, 462.

21 Edlund-Berry 2005, 10.

22 Corso, 2003, 16, 49.

23 Corso 2016, 45-46.

24 Coulton 1983, 457.

25 Haselberger 1994, 326, Abb. 6, 329, Abb. 14; Haselberger 1995, 86-88.

26 Stinson, 226, Fig. 14.2, 232, Fig. 14.10,234, Fig. 14.12.

27 Carpo Ibid. 454.

28 Steskal 2007, 373; Haselberger 1984, 97; Coulton 1983, 455.

The fact that the examples were found in the construction areas near the buildings generally shows that detailed plans and detailed drawings of the building elements were used in the construction projects of these archaeological structures, and these are incised in an area that can be seen in the construction area and are of an accurate size or scale for use by the architects and craftsmen in the course of making and carving these elements. These drawings, which are generally incised on the architectural elements in the construction area, have rarely survived to the present day because they are unnecessary after construction has ended. As archaeological evidence, new finds such as the Cibyra example continue to be found in several excavations and the earliest examples of these can be dated to the IVth century B.C.[29]. The continuity and reflections of knowledge, culture, aesthetics and technology in the Greek and Roman periods are evident in all cities,[30] with the influence of Classicism in Italy even after centuries, at the heart of the Renaissance, and with this same consequence: A simple postament drawing which is similar to Cibyra find, consisting of two plinths and a cyma reversa was found at the Franciscan Church of Santa Maria in Aracoeli in Rome, and its section dates from the XVIth century A.D.[31].

Conclusion

Postaments are usually square-based blocks that are used for the monumentalisation of structures by increasing the distance between the stylobate and the architrave. Since it is technically difficult to produce the mono-block column bodies, postaments have been used both to raise the column and to enhance the appearance of the facade with their horizontal profiles. These architectural elements, which are foreign to Classical and Hellenistic orders, began to be employed in the Early Imperial Period, and became widely used, especially from the IInd century A.D. onwards[32].

After the destruction of Hellenistic Cibyra in the earthquake of 23 A.D., the city began to undertake intensive reconstruction activities which increased, especially during the IInd century until the middle of the IIIrd century A.D. In a discovered inscription, Antoninus Pius was named as "*soter* and *euergetes*" and this may indicate that Cibyra may have seen further destruction in the middle of the earthquake waves that hit the neighbouring regions of Phrygia and Lycia, and in consequence reconstruction arrangements were made[33]. There are no differences in the architraves and cornices used in the agora. They are dated to between the late Antonins and the early Severans[34] and they should have been produced at the same time in the construction phase of the IInd century, especially for the Agora, rather than being taken from other structures and reused. It is also possible that the existing postaments and the ones in the pattern and profile were designed in this construction phase.

Re-used architectural elements show that the aesthetic understanding of architecture turned into an uninterrupted continuity from the Imperial Period until the VIIth century A.D. With this under-

29 For Anatolian examples see: Corso Ibid. 40; (Priene Athena Temple): Haselberger 1997, 81-82, Fig. 6; Heisel 1993, 158-159; Koenigs 1983, 165-168, Fig. 1; (Didyma Apollo Temple): Haselberger 1980, 191-215; 1984, 111-119; 1991, 99-113; 1997, 77-94; For Egypt, Greece and Lebanon examples see: Corso Ibid,41-47.

30 Edlund-Berry 2005, 10.

31 Bolgia 2003, 437, Fig. 1.

32 Alp 2006, 18-19, Lev. 64, No. 9, Lev. 68a, Lev. 93; Söğüt 2017, 249, Fig.9; Richard 2011, 76, Fig. 5.

33 Özüdoğru 2018, 20-21.

34 Kaya 2011, 45-47.

standing, different postaments produced for other structures, their profiles and heights were arranged in the appropriate ranges according to the column and capital heights, and perhaps, even in different architrave widths, during the reconstruction in the Cibyra Agora, (Fig. 10; the numbers in the circle indicate the postament height). In the measurements made, it is seen that there is not an example that matches the profiles in the template block even if there are those are close to the height in the postaments in the Agora. It is not possible to understand which of the existing postaments match each other, and which was designed specifically for Agora. Similar examples to the postaments in Cibyra are found around monumental structures such as Basilica, Stadion. Therefore, the possibility that this template could have been made for some other structure than the Agora should not be ignored. While the Terrace Street and shops were rebuilt in the changes and additions after a second earthquake disaster in Cibyra, which was recorded in 417 A.D.[35], the template block was also reused, as simply building material in the outer wall of the shops in the east wing of the street.

The template as a whole has the property of being a work providing definition for the production of an architectural element. It has been produced with an excellent ratio and drawing technique which, with its incised models, provides a unique piece of evidence for the planning and practice of architectural construction work in antiquity.

[35] Özüdoğru 2018, 21.

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