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Building-in Time: The Complicated Lives of Roman Civic Structures in Asia Minor
Zaman İçinde İnşaat: Küçük Asya'daki Roma Kentsel Yapılarının Karmaşık Yaşamları
Diane Favro
11

Kazı Verileri Işığında Olba'nın Erken Yerleşim Tarihi
The Early Settlement at Olba in Light of Evidence from Olba Excavations
Emel Erten
33

Victoria & Albert Museum'dan Sardes'e Uzanan Bir Yanlış Anlama
A Misunderstanding from the Victoria & Albert Museum to Sardis
Fikret K. Yegül
49

Gökçeada Uğurlu-Zeytinlik Yerleşmesinin Kalkolitik Dönem Hane Organizasyonu: Bileşik Bir Yapı Kompleksi Örneği
Chalcolithic Household Organization of Gökçeada Uğurlu-Zeytinlik Settlement: An Example of a Compound Building Complex
Erkan Gürçal - Burçin Erdoğu
67

Boncuklu Höyükte Deneysel Kerpiç Ev Yapımı ve Taban Sıvası Uygulamaları Üzerine Bazı Gözlemler
Some Observations on Building an Experimental Mud-Brick House and Plaster Floor Implementation at Boncuklu Höyük
Gökhan Mustafaoğlu
89

Ankara'dan Isis ve Harpokrates Betimli Sihirli Yüzük Taşları ve Amuletler
Magical Gems and Amulets with Isis and Harpokrates from Ankara
Melih Aslan - Yavuz Yeğin
113

Olba Kazıları Late Roman 1 Amphoraları ve Arkeometri Sonuçlarının Değerlendirilmesi
Evaluation and Archaeometric Results of Late Roman Amphorae 1 from Olba Excavations
Safiye Aydın - Erkan Alkaç - Murat Eroğlu - Yusuf K. Kadıoğlu
137

Olba'da Hıristiyanlığın İlk İbadethanesi: "Mağara – Kilise"
The First Sanctuary of Christianity in Olba: Cave-Church
Murat Özyıldırım – Yavuz Yeğin
175

Olba Su Kemeri
Cavidan Yegül Erten
Kağıt Üzerine Çini Mürekkebi Eskiz

IN MEMORIAM

CAVİDAN YEGÜL ERTEN

(1933-2020)

PRAEFATIO

Dünyanın Covid-19 salgını ile mücadele ettiği zamanlar yaşamaktayız. Bu koşullar altında, her ne kadar kaybettiklerimizin acısı ve kısıtlanan hayatlarımız bizleri olumsuz yönde etkilese de, bilimsel çalışmalarımızı sürdürüyoruz. Değerli meslektaşlarımızın katkılarıyla Seleucia'nın XI. sayısını sizlere yine zengin bir içerikle sunuyoruz.

Bu sayıda, her zaman olduğu gibi, Olba ile ilgili çalışmalara yer verdik. Kentin en erken arkeolojik verilerinin değerlendirildiği makalenin sadece Olba için değil, bölge arkeolojisi bakımından yankı uyandıracağını düşünmekteyiz. Olba Geç Roma seramik amphora örneklerinin incelendiği çalışma da özgün içeriğiyle ilgi çekici olacaktır. Olba'da yıllar önce saptanan Mağara Kilise ile ilgili değerlendirme, bölgenin Erken Hıristiyanlık Dönemi arkeolojisi bakımından aydınlatıcı niteliktedir.

Elbette ki, Seleucia'nın XI. sayısı sadece Olba çalışmaları ile kısıtlı kalmamakta; arkeoloji dünyası için ilgi çekici ve önemli başka makaleler de yer almaktadır. Bunlardan ikisi, prehistorya çalışmalarından oluşmakta; bir diğeri ise yüzük taşlarını ve amuletleri konu almaktadır. Küçük Asya'daki Roma mimarisinin ilgi çekici bir yönünü tanıtan bir başka makale, zaman içinde kentlerdeki anıtsal binaların sürdükleri hayatın detaylarını bize yansıtmaktadır.

Anadolu'daki eskiçağ yerleşim merkezlerinin sundukları tarihsel ve doğal dokunun 19. yüzyılda Batılı gezginlerin ve ressamların ilgisini çekmekte olduğunun güzel bir örneği, Sardes Artemis Tapınağı'na ait resimlerdir. Bunların Londra'daki Victoria and Albert Museum'da bulunan iki örneğini ayrıntılı olarak inceleyen ve müze-arkeoloji disiplinlerinin ilişkilerini sorgulayan makalenin ilginizi çekeceğinden kuşkumuz yoktur.

Bu sayıda sizlere duyurmak istediğimiz bir haber, Olba Kazıları Başkanlığı'nın Ardahan Üniversitesi Öğretim Üyesi Dr. Yavuz Yeğin'e devredilmiş olmasıdır. Olba'daki arkeolojik araştırma ve kazılarda 2001 yılından beri başkanlık görevini üstlenen Prof. Dr. Emel Erten'den sonra, Dr. Yavuz Yeğin'in de başarılı olacağına inancımız tamdır. Uzun zamandır Olba ailesinin bir bireyi olan Dr. Yavuz Yeğin'e en iyi dileklerimizi sunuyoruz.

Covid-19 salgınının bizlerden aldığı nice can içinde çok değerli bir yakınımızın da bulunmasından dolayı kederliyiz. Kazımızın ambleminin yaratıcısı, resimleriyle çok sayıda arkeolojik kitaba değer katan, nice arkeoloji tezinin çizimlerini yapan, tablolarında ören yerlerine yer veren Ressam Cavidan Yegül Erten'i 2020 yılında yitirdik. Onun aziz hatırası önünde saygıyla eğiliyoruz.

Editörler:
Prof. Dr. Emel Erten
Prof. Dr. Diane Favro
Prof. Dr. Fikret Yegül
Öğr. Gör. Dr. Murat Özyıldırım

PREFACE

Despite struggling with Covid-19 that continues to threaten the world and the limitations imposed by the pandemic, we managed to continue our scientific research and are pleased to present the new issue of Seleucia with contributions of our colleagues,

This volume contains a couple of articles on Olba such as the one on the earliest archaeological evidence from the site that will be interesting not only for the settlement history of the site but for the whole region. Another study on the Late Roman amphorae from Olba will attract attention of scholars working on pottery. The evaluation of the cave church which was discovered in Olba many years ago will be of particular importance for the history of early Christianity in the region.

"Seleucia" is not limited to the articles on Olba: Studies on different fields of archaeology and various regions are part of the eleventh issue; such as two articles on prehistory, one article on ring stones and amulets and another on Roman architecture in Anatolia with a very interesting approach to the changes during the lives of the civic buildings.

The interest of early travelers and artists in the historical and natural texture of ancient sites and monuments has always been an intriguing subject for Anatolian archaeology. The careful study of two watercolors of the Temple of Artemis at Sardis in the Victoria and Albert Museum in London asks timely questions to museum-archaeology relationships. We believe it will be of major interest to our readers.

An event we would like to announce is the transfer of the direction of Olba excavations from the former director Prof. Dr. Emel Erten to Dr. Yavuz Yeğin of Ardahan University. We wish success to Dr. Yavuz Yeğin who has been a member of Olba family for a long time.

Cavidan Yegül Erten, who contributed to many archaeological books and dissertations with her drawings and paintings as well as being the creator of the logo of the Olba excavations, an artist with an interest in archaeological sites that was reflected in her paintings, passed away during the pandemic of 2020. We will always remember her with love and respect.

Editors:
Prof. Dr. Emel Erten
Prof. Dr. Diane Favro
Prof. Dr. Fikret Yegül
Öğr. Gör. Dr. Murat Özyıldırım

Olba Kazısı Serisi

Seleucia

Makale Başvuru Kuralları

Seleucia, Olba Kazısı yayını olarak yılda bir sayı yayınlanır. Yayınlanması istenen makalelerin en geç Şubat ayında gönderilmiş olması gerekmektedir. Seleucia, arkeoloji, eski çağ dilleri ve kültürleri, eski çağ tarihi, sanat tarihi konularında yazılan, daha önce yayınlanmayan yalnızca Türkçe, İngilizce çalışmaları ve kitap tanıtımlarını yayınlar.

Yazım Kuralları

Makaleler, Times New Roman yazı karakterinde, word dosyasında, başlık 12 punto baş harfleri büyük harf, metin ve kaynakça 10 punto, dipnotlar 9 punto ile yazılmalıdır. Sayfa sayısı, kaynakça dâhil en çok on sayfa olmalıdır. Müze, kazı, yüzey araştırması malzemelerinin yayın izinleri, makale ile birlikte yollanmalıdır. Kitap tanıtımları, üç sayfayı geçmemelidir. Çalışmada ara başlık varsa bold ve küçük harflerle yazılmalıdır. Türkçe ve İngilizce özetler, makale adının altında, 9 punto, iki yüz sözcüğü geçmemelidir. Özetlerin altında İngilizce ve Türkçe beşer anahtar sözcük, 9 punto olarak "anahtar sözcükler" ve "keywords" başlığının yanında verilmelidir. Doktora ve yüksek lisans tezlerinden oluşturulan makaleler, yayına kabul edilmemektedir.

- Dipnotlar, her sayfanın altında verilmelidir. Dipnotta yazar soyadı, yayın yılı ve sayfa numarası sıralaması aşağıdaki gibi olmalıdır. Demiriş 2006, 59.

- Kaynakça, çalışmanın sonunda yer almalı ve dipnottaki kısaltmayı açıklamalıdır.

  Kitap için:
  Demiriş 2006 Demiriş, B., Roma Yazınında Tarih Yazıcılığı, Ege Yay., Istanbul.

  Makale için:
  Kaçar 2009 Kaçar, T., "Arius: Bir 'Sapkın'ın Kısa Hikayesi", Lucerna Klasik Filoloji Yazıları, Istanbul.

- Makalede kullanılan fotoğraf, resim, harita, çizim, şekil vs. metin içinde yalnızca (**Lev. 1**), (**Lev. 2**) kısaltmaları biçiminde "Levha" olarak yazılmalı, makale sonunda "Levhalar" başlığı altında sıralı olarak yazılmalıdır. Bütün levhalar, jpeg ya da tift formatında 300 dpi olmalıdır. Alıntı yapılan levha varsa sorumluluğu yazara aittir ve mutlaka alıntı yeri belirtilmelidir.

- Levha sayısı her makalede 10 adet ile kısıtlıdır.

- Latince - Yunanca sözcüklerin yazımında özel isimlerde; varsa Türkçe ek virgülle ayrılmalı, örneğin; Augustus'un, cins isimler italik yazılmalı, varsa Türkçe ek, italik yapılmadan sözcüğe bitişik yazılmalıdır, örneğin; *cavea*nın.

- Tarih belirtilirken MÖ ve MS nokta kullanılmadan, makale başlıkları ile yazar ad ve soyadlarında sadece baş harfler büyük harf olarak yazılmalıdır.

Olba Excavations Series

Seleucia

Scope

Seleucia is annually published by the Olba Excavations Series. Deadline for sending papers is February of each year. Seleucia features previously unpublished studies and book reviews on archaeology, ancient languages and cultures, ancient history and history of art written only in Turkish or English.

Publishing Principles

Articles should be submitted as word documents, with font type Times New Roman, font sizes 12 points for headings (first letters should be capitalized), 10 points for text, and 9 points for footnotes and references. The number of pages of each article should not be longer than ten pages, including the bibliography. If the study is on some material/materials from a museum or an excavation, the permission for publication should be submitted together with the article. The book reviews should not be longer than three pages. If there are sub-titles, the headings should be written bold with small letters. Abstracts written in both Turkish and English should appear below the heading of the article, should be size of 9 points and minimum count of words should be 200. Below the abstracts, a minimum of 5 keywords for both languages should be included (of size 9 points) below the headings "anahtar sözcükler" and "keywords". The articles produced out of master's theses or doctoral dissertations will not be accepted for publication.

- Footnotes should be given under each page. The ordering of author surname, year of publication and page number should be as follows: Demiriş 2006, 59.

- The reference list should appear at the end of the study and should explain the abbreviation given in the footnote.

  Book format:
  Demiriş 2006 Demiriş, B., Roma Yazınında Tarih Yazıcılığı, Ege Yay., Istanbul.

  Article format:
  Kaçar 2009 Kaçar, T., "Arius: Bir 'Sapkın'ın Kısa Hikayesi", Lucerna Klasik Filoloji Yazıları, Istanbul.

- Photographs, pictures, maps, drawings, figures etc. used in the article should be referred to in the text as (**Fig. 1**), (**Fig. 2**) as abbreviations, and an ordered list of these items should appear at the end of the article under the heading "Figures". All figures should be in JPEG or TIFF format with 300 dpi. If there are figures cited, the responsibility lies with the author and citation should be explicitly given. The number of figures for each article is limited to 10.

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Building-in Time: The Complicated Lives of Roman Civic Structures in Asia Minor

Diane Favro*

In memory of my dear sister-in-law, Cavidan Yegül Erten.

Abstract

The cities of Roman Asia Minor are known for impressive public buildings. Scholarship has frequently focused on an imagined final state for such structures, yet as enduring, costly undertakings these architectural projects lived complicated lives. They evolved from original creation through repairs, alterations, reuse, destruction, rebuilding, decay, and demolition over many years. Multiple acts of building in prominent locations disrupted urban activities, blocking traffic while generating noise and dust. Simultaneously, bustling construction sites and in-progress structures entertained the populace and continuously affirmed Roman cultural values.

Keywords: Construction, Asia Minor, Architectural drawings, Process, Building time.

Zaman İçinde İnşaat: Küçük Asya'daki Roma Kentsel Yapılarının Karmaşık Yaşamları

Öz

Roma Küçük Asya'sı etkileyici kentsel yapılarıyla tanınır. Bilimsel çalışmalar hep bu yapıların son ve bitmiş hallerine odaklanmakta; ancak uzun ömürlü ve pahalı girişimler sonucu oluşturulan bu mimari projeler aslında karmaşık hayatlar sürmektedirler. Söz konusu yapılar, özgün hallerini izleyen süreçte

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bakımlarla, yapılan devşirmelerle, tahribat ve ardından gelen onarımlarla, zaman içinde eskimeleriyle ve yıkımlarla değişmektedirler. Kimi kesimlerde, inşaat etkinlikleri kentsel yaşamı etkileyebilmekte; trafiği engellemekte, gürültü ve toz toprak oluşturmaktadır. Ama bir yandan da hareketli inşaat alanları ve yapımı sürmekte olan binalar, halkın ilgisini çekmekte ve Roma kültürel değerlerini sürekli olarak desteklemektedirler.

Anahtar Kelimeler: İnşaat, Küçük Asya, Mimari Çizimler, Süreç, Yapı Zamanı.

At the great Temple of Artemis at Sardis, one of the towering columns (no. 4) of the Hadrianic eastern porch directly addresses viewers. In an inscription in Greek encircling the bottom molding of the shaft the column proudly announces, "My torus and my foundation block are carved from a single block of stone, …of all the columns ['stones'] I am the first to rise" (fig. 1)[1]. Written just above a band carved in the form of a laurel wreath, the first-person boast emphasizes building process, identifying the column's position as "first" within a sequence and underscoring the technical prowess required in making the base from a monolithic stone rather than from several easier-to-handle individual pieces. By drawing attention to fashioning and lifting the block the words reveal that the fugitive act of constructing has meaning and, like victors in the arena, deserves recognition with a wreath. In addition, the "talking column" asserts its individual identity among all the other components of the temple, an important consideration in a large building project that had been underway for several centuries. Obviously, the Sardis column did not wish to wait for temple completion in order to be acknowledged. Interacting with construction activities on a daily basis, Roman viewers evaluated the act of building as much as the structure itself. Architectural works live complicated lives, evolving from original creation through repairs, alterations, reuse, destruction, rebuilding, decay, and demolition over many years. Each intervention attracts attention and disrupts daily life, especially in cities; each conveys meaning. Today researchers are broadening their inquiries to explore the rich life-worlds of structures, interrogating not only patronage and the reasons for alterations, but also the impact and multiple messages conveyed by the act of constructing throughout a structure's long existence. Evidence for building work is particularly rich in Roman Asia Minor, where competition among donors and cities incited *Baulust,*

1 For more on the inscription and its meaning see Yegül 2014; Yegül 2020, 189-193.

repeated earthquakes necessitated extensive rebuilding, and many ancient urban environments were not obscured by later overbuilding[2].

Completion versus Constructing: Building acts in time:

Past scholarly focus on an idealized state of completion for architectural works has diverted attention from the impact of on-going construction activities. Archaeologists faced with fragmentary remains logically have sought to understand the finished forms; art historians seeking to explore aesthetics and proportions wished to examine entire structures[3]. Taken to the extreme, such preoccupations result in reconstructions of past environments with projects from different periods all depicted as if newly completed at the same time. The privileging of a completed form has been reinforced by the long-held belief in an ideal state for architectural design. Renaissance architect Alberti famously argued that his original concept for a structure represented a building's perfect state and should not be altered in any way; thus, he wanted his idea to be evaluated, not the built work which was of necessity compromised by the contingencies of the real world.[4] Art historian Marvin Trachtenberg characterizes this attitude as "building-outside-time" since it emphasizes a single moment rather than the evolving life for a built work[5]. Architectural valuation based on an ideal form conceived by a single genius form-giver has echoed through architectural history and practice for centuries. In reality, few projects have singular authors or singular moments of conception or completion. Afterall, buildings are more than ideas, they are collective productions shaped by makers and users throughout their existence. Aligned with post-modernist thinking, Trachtenberg argues architectural form is defined and shaped by process and incessant revision rather than a singular perfected thought[6]. Citing the glorious Duomo

2 Research on the interpretation of building acts in antiquity Roman has centered on Rome and Italy due to the rich variety of ancient texts and inscriptions, as well as numerous post-antique investigations; see bibliographies in Reitz 2012. For expanded provincial examinations see Thomas and Witschel 1992; Zuiderhoek 2009; Ismaelli 2013.

3 In the History of Technology field attention has centered on innovation rather than usage, further isolating the consideration of building process; in response scholars are now advocating the exploration of technology-in-use; Edgerton 1999.

4 In the first century BCE Vitruvius praised the Roman architect's ability to conceptualize a building but did not privilege this moment over a completed work as did Alberti; Vitr. *De arch.*6.8.10; see Alberti *De Re Aedif.* 9.10-11.

5 Trachtenberg 2010.

6 Trachtenberg also uses term "durational aesthetics" to describe the flexible shaping and reshaping of forms over time; Trachtenberg 2010, 409-410.

of Florence as a successful example of multigenerational constructing, he proposes another temporal frame: "building-in-time." This idea shifts emphasis toward the evolution of a structure over its entire life. The difficulties are obvious. If transformations are always underway how, and when, can one evaluate a project? The Duomo is still undergoing physical changes to this day, yet as a historical monument, attention remains on its evolution in the Medieval and Renaissance periods.

As resources and crowding intensify in modern cities, architects today are drawing further attention to the life cycles of built works. Futurist thinker Stewart Brand was among the first to theorize contemporary architecture as constantly evolving in his 1994 book *How Buildings Learn: What Happens After They're Built*. This influential work underscores the need to think of buildings as costly collective investments whose impact extends throughout lengthy lives filled with physical alterations. As the book title indicates, Brand considers the moment of completion ("built") as a defining moment between building creation and subsequent alterations. This clear division is emphasized in historical studies by repeated use of the term "afterlife" in relation to individual structures and cities. The partitioning of construction activities into pre-life, life, and afterlife is problematic, as it implies a privileged time in a structure's existence, as well as a notable difference between building creating and repeated altering. If we are to consider the act of building-in-time, all constructing should be seen as having value and the potential to convey meaning.

Deconstructing Completion:

Determining when an ancient building was finished is challenging, and not always defining. Roman calendars marked the dedication day of temples (the *dies natalis* or birthday) celebrated annually, a common practice in the capital city of Rome; legal contracts required structures be useable and dictated payment dates accordingly[7]. However, rituals and legalities did not always equate with completion of the design. Many factors could cause a slowing or halt in building activity -- from a shortage of funds, materials, or workers to disasters or diminished motivation. Famously, Vergil tells us queen Dido's ardor for Aeneas the building of Carthage to a standstill: "the works are broken off and idle —(leaving) great menacing walls and cranes that touch the sky" (Verg. *Aen*.4.88-89). Often, incomplete structures were dedicated or pressed into service while work was still underway. In general,

7 Stuart 1905; Marano 2013.

Roman building patrons, whether private or governmental, seemed less preoccupied with completion than those of the twenty-first century. Few expressed concerns if work stretched out or was never fully completed. In 42 BCE the first emperor Augustus vowed a temple to Mars destined for his new Forum in Rome; it was not dedicated until 2 BCE, when the complex was still incomplete (Suet. *Aug.* 29.2). Knowing that the lawyer Severus Cassius closed legal cases expeditiously Augustus allegedly quipped that he wished Severus, "would prosecute my forum" (Macrob. *Sat.* 2.4.9). The anecdote emphasizes the lengthy time of construction and the patron's joking acceptance.

In Roman Asia Minor civic architectural benefactions were numerous and well-documented in inscriptions and texts, serving as a popular means for wealthy individuals, families, and cities to gain fame[8]. Yet the large temples at Aizanoi, and Cyzicus, as well as basilicas, theaters, baths, temporary spectator facilities, and many other civic projects in the east never attained an identifiable moment of completion even though put in use as was the Artemis Temple of Sardis[9]. Benefactors who pledged projects when seeking office, did not necessarily follow through, postponing major undertakings or leaving them incomplete when their term ended. Large buildings requiring support from numerous patrons were especially problematic; if one donor did not provide the funds in a timely manner, the segments by others could not proceed as Pliny noted occurred with the theater of Nicaea (Plin. *Ep.*10.39). Orphaned works begun by one individual did not appeal to other donors and thus remained incomplete. Similarly, bequests were not always honored as evidenced by numerous court cases. In addition, the Lex Falcidia of 40 BCE guaranteed heirs received one-quarter of an estate, at times resulting in a shortfall in bequests[10]. Donors apparently assumed their heirs or the city would take custodial responsibility for the maintenance of civic projects. Few did. As a result, many large structures decayed rapidly, ultimately requiring large scale interventions. Extensive reworking of a building raised the question of naming. Ulpian documented a provision urging provincial governors to be sure an original donor's name remained in place (*Dig.* 50.10.2). Even

8 Zuiderhoek estimates that approximately 58% of benefactions in Asia Minor went for public building; Zuiderhoek 2009, 77.

9 For a discussion of the Artemis Temple at Sardis as a pre-modern ruin see, Yegül 2020, 240-241.

10 Ng 2015, 108-110.

the emperor became involved. Antoninus Pius advised cities to use funds to maintain existing structures rather than to erect new ones. In addition, he incentivized private benefactors to rework extant buildings by allowing them to place their own names and amount spent on projects, as long as they also preserved the name of the original donor[11]. The number of references in the *Digest* to underfunded architectural bequests reveals the complex legal problems that arose in such situations, as well as recurring problems. By the third century CE many donors preferred to fund spectacles which seemed more enduring than structures which took too long to create, declined over time and could be appropriated by other benefactors[12].

Experiencing Live Buildings / Experiencing Buildings' Lives:

Setting aside the moment of completion as a major event in the life of a built work allows for the expanded examination of constructing itself as an important, on-going, impactful process. From the breaking of the ground for a new project onward, structures experience a continuous process of becoming. Such a conceptualization is in line with ancient thinking about built environments as, like humans, aging and evolving while retaining their distinct personalities. Plutarch famously described the ancient city as,

> *like a living thing,… a united and continuous whole. This does not cease to be itself as it changes in growing older, nor does it become one thing after another with the lapse of time, but is always at one with its former self in feeling and identity, and must take all blame or credit for what it does or has done in its pubic character, so long as the association that creates it and binds it together with interwoven strands preserves it as a unity. To create a multiplicity, or rather an infinity, of cities by chronological distinctions is like creating many men out of one because the man is now old, but was in his prime before, and yet earlier was a lad* (Plut. *Mor.*559).

By considering buildings as living, attention shifts from one moment to ongoing acts of formation, similar to the evolving (and fugitive) characteristics of human beings over time.

11 *Dig.* 50.10.7.2. This rescript specifically mentioned reworking in marble, implying material aggrandizement was important. Some rebuilding projects resulted in rededication, though the criteria for doing so varied; Ng 2015, 120; Thomas and Witschel 1992, 165-166; Ng and Swetnam-Burland 2018, 4-11.

12 Ng 2015, 106-116;

Large Roman public projects experienced repeated moments of intense building activity, hiatus, and slow evolution over many years, ending ultimately with demolition or destruction. The work varied over the seasons due to changes in climate, labor and supply lines, as well as natural and civil disruptions[13]. Competition for resources and workers increased in Asia Minor during the late first and second centuries. Dio Chrysostom emphasized that the architectural beautification of Nicea, Caesarea, Nicomedia, Smyrna, Ephesus, Tarsus and Antioch, among other cities, inspired him to undertake an extensive renovation of his hometown Prusa (Dio Chrys. *Or.* 40.11, 47.12). For maximum impact, public works usually centered on civic centers and major thoroughfares, though also included infrastructure projects. Documenting when and how building activities progressed in any specific city is hard[14]. Facts on the ground are scant, especially as one phase of construction regularly hid or removed evidence of a previous one; clear information about workers' tasks is rare. Fortunately, the field of construction archeology is now providing protocols, tools, and comprehensive data recording to facilitate understanding of how ancient architectural projects evolved and the effect of construction activities on urban environments[15]. For example, archaeologists are reassessing evidence not only of individual buildings, but also of the surrounding areas. Seemingly unremarkable piles of blocks are investigated as possible supports for large machinery such as cranes or as counterweights; dislocated pavers or those with holes are examined to see if they accommodated guy ropes and capstans (fig. 4). Assemblages of architectural components at ancient sites are carefully evaluated for evidence of Roman architectural salvaging and its impact. Initial studies indicate the careful dismantling, cleaning, sorting, storing of building pieces, and removal of debris added to construction time and the number of workers in action at the building site[16]. Arguably,

13 A local benefactor of the theater at Hierapolis provided agricultural laborers to work on the project, a clear indication of seasonal, unskilled labor on major Roman structures; *IGR* IV 808. The mobility of workers is evidenced by instances of workers wishing to break their contracts for various reasons as recorded at Miletus; Zuiderhoek 2016, 34. A few Roman poems, texts, and inscriptions mention the length of time taken to erect a project, usually emphasizing speed as a notable achievement; most refer to Rome; Reitz 2012, 335-337.

14 Few sites are preserved well enough to allow detailed analysis of sequential building activity for a building or a city; for a recent pan-urban examination of architectural interventions in Seleucid Sardis see Kosmin 2019.

15 Dessales 2017.

16 Off site, the reuse of materials reduced labor for quarrying and transporting stones; Barker 2010; Ismaelli and Bozza 2016; Ng and Swetnam-Burland 2018; Yegül 2020, 12-13.

the reuse of architectural components in other structures allowed parts of the original work to live on in other projects.

In Roman cities, much of life was lived in public spaces. Amid other urban distractions, construction work drew attention, creating both disturbances and distractions especially as most large building projects occurred in civic nodes and along major streets. All projects impeded movement. In fora throughout ancient Anatolia people altered their daily routes to pass around piles of materials, gangs of workers, and various equipment. The high volume of construction traffic generated on thoroughfares was obstructive, noisy, and dangerous. Heavily laden wagons delayed or blocked circulation, with tottering loads of stones, dirt, timbers, debris, and heavy machinery threatening to tumble on unsuspecting pedestrians[17]. Firsthand descriptions come largely from Rome but resonate with the experiences of city dwellers in Asia Minor. Juvenal asked, "if the axle that's transporting rocks from Liguria collapses and spills an upturned mountain on top of the masses, what will be left of the bodies? Who will be able to find any limbs or bones?" (*Sat.* 257-260). Building activities regularly impinged on thoroughfares. Martial describes the situation in Rome where "…lofty scaffolding rises in the middle of the road" (*Spect.*2). Particularly intrusive in the cities of Asia Minor was the pervasive up-grading of street facades with shady stone colonnades. Dio Chrysostom praised street colonnades as "stately edifices" that hid existing "wrecks of houses" from view[18]. As this comment implies, most street porticos were not erected when the streets were created but later insinuated into densely built urban contexts. As a result, street-colonnade construction was unsettling, time consuming, and expensive. To avoid narrowing roadways, builders dismantled preexisting structures, frequently using the debris to create raised sidewalks. Increased preference for monolithic columns resulted in the need for ever larger lifting mechanisms such as wheel cranes (fig. 2). Street porticos appear as unitary designs in modern plans and perspective views, yet in most cases were composed of individualized segments with portions funded by different patrons over long periods of time[19]. Such was the case at Soloi-Pompeiopolis in Cilicia. Throughout the Antonine and Severan periods

17 Juv. 3.254-260; Favro 2011.

18 Dio Chrys. *Or.*47.15; Burns 2017, 15-16, 73-77, 167-195.

19 A notable exception to the piecemeal construction of street porticos was the great project of Herod at Antioch on the Orontes. Re-erected columns at Perge and other sites in Turkey today convey the unifying impact of colonnaded streets even when erected by various donors; Burns 2017, 121-132, 311-321.

benefactors erected colonnade segments along the broad, much-travelled route to and from the harbor[20]. With multiple donors and no obvious master design beyond a loose unity of column spacing and height, the Soloi colonnades overtly displayed variations in ornamentation, column treatments, and stages of finish (fig.3).

When in full operation ancient construction sites were messy, rowdy affairs. Laborers of all kinds filled the surrounding ground level. Some carved, mixed materials, or fashioned and repaired tools while seated on the ground or standing at benches (fig. 2). Others cast guy ropes or manned the capstans to lift heavy loads as shown on the relief of Theodosius' obelisk in Constantinople (fig. 4). On high, workers operated cranes or scampered over tenuous scaffolds. Architects and head masons supervised activities (fig. 5). No evidence indicates the Romans erected barricades to hide these activities from view, a common modern practice aimed at minimizing the theft of materials, distraction of workers, and pollution. The amount of dust and noise at ancient construction sites was considerable. The cutting, carving, and finishing of hard stones such as marble and limestone for civic buildings in Asia Minor created clouds of particulates. During the second century CE the marble works near the harbor of Ephesus generated so much powder the city prohibited sawing near the water in an attempt to prevent silting[21]. On-site carving and the smoothing of stone surfaces filled the lungs of residents with dust. Building noise was equally polluting, with chisels and hammers repeatedly hitting hard stones, animals braying, and workers continuously shouting. Statius describes a construction site at the capital city, "The lofty crane rumbles as it is set in motion, and an incessant din runs through Mars' seven hills, drowning the diffuse noises of great Rome… [and one] hears the countless clashes of bronze and the Forum resounding with harsh blows" (Stat. *Silv.*1.1.61-64). An engaging wall-painting from a tomb recently discovered in Jordan conveys the bustle, diverse activities, and raucous sounds created during the establishment of Capitolias, one of the cities of the Decapolis. Along with animals and supervising deities the scene includes over 260 figures of varied ethnicities busy at work, each with a valuable role in the complicated undertaking. Short comments written above their heads convey the challenges and

20 Borgia 2010; 284-285.

21 *SEG* 19.684. Yegül calculates that approximately 11 tons of dust, particulates and chips would be removed in the fluting of a single column at the Temple of Artemis at Sardis; Yegül 2020, 257.

dangers faced by construction laborers along with thoughts about fellow workers and dangers faced including: "[you are] thick, stupid" and "Alas for me, I am dead"[22]. Such depictions of construction underway, and presumably such candid sentiments, are uniquely Roman[23].

Acts of building interrupted movement, hampered breathing, assaulted the ears, and generated other disturbances, but also provided entertainment. Trains of vehicles bringing materials to monumental projects recalled the ceremonial parades that punctuated urban life[24]. Ancient spectators gawked at the huge stones and gigantic beams carried through the streets much as they did the floats in religious pageants. At building sites, they watched with awe as marvelous contraptions such as lifting towers and gigantic cranes raised heavy stones and laborers bustled like bees atop teetering scaffolding. Many onlookers enjoyed the pleasurable spectacle of others hard at work, while possibly hoping to experience the excitement of an argument or accident. The ancient attraction of engineering equipment is revealed by Roman public displays. The emperor Augustus exhibited a giant ship that brought an Egyptian obelisk to Rome, a precursor to that carried to Constantinople (Plin. *HN* 36.69-70). In Asia Minor, a sarcophagus (3rd c. CE) along the road leading into Hierapolis prominently displayed a relief showing a complex water-powered stone-cutting saw made by M. Aurelios Ammianos who, the inscription tells us, was as skillful as Daedalus (fig. 6)[25].

Less impressive but more prolific evidence of architectural process is preserved with the numerous carved markings still visible on ancient buildings. Since archaic Greek times, laborers inscribed assembly drawings on stone structures while work was under way. These included setting lines, letters, numbers, and symbols to designate alignments between blocks, circles to indicate the size of flutes, lines for axes, and other markings to facilitate

22 The realistic work scene from Capitolias contrasts with early Imperial depictions in the west showing men lifting impossibly large blocks to construct a city wall as in the famous relief from the Basilica Aemilia in Rome. In the provincial context of Capitolias ethnicities are portrayed and distinctions between gods and humans emphasized; the deities overseeing the project comment in Greek, while the workers communicate in Aramaic using the Greek alphabet; Haron *et al* 2019. The official comprehensive publication of the paintings is currently in preparation.

23 While pre-Roman Greek artists depicted various technologies in progress, they did not illustrate building construction; Ulrich 2008, 47.

24 A sense of the spectacle proffered by construction parades is conveyed by Josephus' mention of 1,000 wagons carrying stones for Herod's rebuilding of the temple at Jerusalem; Joseph. *AJ*.15.390; see also Favro 2011.

25 Ritti *et al* 2007.

the execution and putting together of stone architecture[26]. Parallel to these images were sophisticated, large design drawings like those revealed by Haselberger at the Temple of Apollo at Didyma dating to the third century BCE[27]. Well over 100 design images depicting such features as pediments, arcades, moldings, column entasis, and other features have been discovered, with more documented every year. The largest concentration comes from Asia Minor, possibly an outgrowth of Hellenistic sophistication in stone building as well as to the ever-increasing numbers and sizes of projects in the Roman era. At buildings under construction architects and master masons inscribed full size designs where they could be readily consulted, usually on readily accessible flat walls. For example, at the theater of Miletus Roman workers put drawings for the upper arcade on the lower exterior *skene* wall (fig. 7)[28]. To make the images more legible when in use carvers applied chalk or vegetal dyes as found on the *adyton* wall of the Apollo Temple at Didyma. These engaging on-site drawings helped builders to visualize abstract shapes at full size, adapt architectural types and proportions to specific conditions, and test design alternatives. At the same time, they provided intriguing evidence about building process. When work stopped at a site or construction was on hiatus the etched lines remained, invoking Roman spectators to contemplate how they functioned in the process of imagining and assembling the stone structure[29].

Other architectural features of ancient buildings likewise continued to reveal the process of constructing long after work had halted. For example, at many sites one can still see carefully smoothed sections at block joints, sample fluting, or similar guides for masons. Projecting bosses on large blocks used to secure ropes for hauling, moving, and lifting are especially noticeable[30]. Post-antique observers have assumed workers, architects and patrons intended the meticulous working drawings, bosses, and other in-progress features employed during the building process were meant to be covered or smoothed away in the final stages of building, interpreting

26 Inglese 2016; Corso 2016.

27 Haselberger 1985.

28 Capelle 2019 and 2017.

29 Such drawings, as well as architecture-related graffiti, were especially prevalent at Aphrodisias where an on-going boom in imperial building brought hundreds of craftsmen to the city; Chaniotis 2012, 199-200.

30 Currently scholars are reassessing the functional and decorative uses, and meanings of "lifting" bosses, rustication, and other treatments that convey a sense of the incomplete; Grawehr 2019; see also Yegül 2020, 36-49.

their presence as indications of incompletion due to insufficient funds, negligence, or worse[31]. Reassessing these in a broader context of cultural meanings associated with construction reveals positive associations. While a usable building always remained a goal, displays of building processes and had value. Such engaging features attracted Roman viewers. Alignment lines and symbols provoked thoughts about how the pieces came together. Sophisticated architects' drawings underscored the complex technical and mathematical skills required in construction. Lifting bosses cast shadows that moved throughout the day, animating the built work. Atop one such protrusion on a column (no. 17) at the Artemis Temple of Sardis a graffito interacts, calling out, "finish me!" (fig. 8)[32]. The frequency, endurance, and popularity of constructing elements inspired their decorative use. For example, on long walls a master mason might orchestrate stones with bosses to create patterns. Inside elite houses of the western empire artists painted images of ornate columns with bosses casting shadows[33]. Given the repeated alterations to all stone structures, evidence of constructing was an essential part of every building's identity. Rather than negatively indicating incompleteness on the way to a completed state, displays of process celebrate the structure and its city as always in a state of becoming. Such a conceptualization helps explain why an architect felt free to draw full-scale architectural elements on the finished floor of Basilica at Aphrodisias even though they were for the construction of a different building[34].

Reinforcing Cultural Meanings:

Every public act reflects and projects cultural meanings. The activities necessary to erect the numerous large stone civic structures in Asia Minor were not conceived specifically as propaganda. However, construction work underway literalized and reaffirmed potent aspects of Roman identity. Associations with military engineering and logistical skills were obvious.

31 Nicholas Revett and Louis-François Cassas, along with other early recorders of ancient buildings in the Near East, chose not to depict bosses or other evidence of unfinished work which they equated with the carelessness of "idle easterners;" Grawehr 2019, 229-230.

32 The word MECKEAC (alternatively translated as "prepare me") occurs two more times on the temple's columns; Yegül 2020, 106-107, figs 2.208-211.

33 Examples of painted columns with imaginative bosses on the drums can be found at residences in Rome, Boscoreale, Oplontis, and Narbonne.

34 Stinson 2016. Large-scale architectural drawings on horizontal surfaces allowed masons to carve and compose blocks on the ground before lifting them in place, however this placement obstructed valuable working space around a building under construction.

Numerous men undertaking coordinated tasks echoed the complex maneuvers of soldiers; the towering lifting towers and cranes recalled weapons familiar to an urban population with military experience and associations. Even in times of peace legions were familiar, moving throughout the provinces and themselves building infrastructure projects. Aurelius Victor noted that Hadrian directly based his projects in the provinces on the example of military legions mustering "…into cohorts workmen, stone-masons, architects, and, of men for … building and beautifying …"[35]. This listing of individuals with different skills, education, and social status reinforced Roman ideas about shared participation toward a common goal, whether a military campaign or erecting an attractive, successful city. When speaking to the residents of Smyrna in the first century CE the philosopher Apollonius of Tyne noted that just as sailors had to cooperate in order to dock a ship successfully, all those who considered the common good prospered (Philostr. *V.A.*4.9).

What better evidence of such collective spirit than civic building projects which served the many and simultaneously brought individuals prestige and economic advantages? Close examination of patronage and costs by Zuiderhoek indicates that collectivist projects were especially frequent in the Greek-based cities of the Roman east. While numerous elite benefactions are known from inscriptions, many structures were paid in whole or part with city funds raised through general taxation, specific subscriptions, and other municipal revenues. Non-elite residents may not have seen their names on public structures, but their taxes, their work, and their support for office holders and other patrons ensured they had a stake in public construction[36]. After all, the notion of a part-to-whole relationship was literalized in both donations and the buildings themselves. At the second-century Temple of Zeus Lepsynus in Euromos different benefactors paid for individual columns (fig. 9). Inscriptions proudly recorded donors' names on each shaft, including five celebrating gifts from a father and daughter (*CIG* 2714). The overt identification of patrons for separate components drew attention to the project as a collective effort, as well as to architecture as a joining of pieces and thus back to thoughts of building formation. Ad hoc funding in many cases extended construction time and thus further

35 Aul. Vict. *Caes.*14.5. The strong association of the military and building is explicit in the reliefs of Trajan's Column in Rome; Reitz 2012, 328-332. The military's role in promoting technology transfer across the empire was significant.

36 Zuiderhoek 2009.

emphasized major works as always being "in progress." At Euromos blank plaques and smooth temple columns patiently still await workers to carve the flutes and inscribe a donor's name.

The erecting, repairing, and reworking of public buildings continuously affirmed the health and status of a city as a whole, as well as the Empire. Though aware of both linear and circular time, in general the Romans displayed a foreshortened perspective. Many followed Stoic precepts, including the emperor Marcus Aurelius who wrote, "that it is only the present moment that a man lives" (*Medit.* 12.26)[37]. Urban residents of Asia Minor aimed for useable, attractive finished civic buildings for their cities, but did not fixate on a completed moment. Individually and together, the building (noun) and building (verb) repeatedly conveyed a strong economy, collective involvement, and commitment to shared values. By the late Empire the connotations of construction work changed. The advent of Christianity shifted attention toward achieving a desired afterlife rather than living in the moment. Architectural construction gradually became a metaphor for building a devout life and erecting a strong church as literally and figuratively shown on a Byzantine ivory relief (fig. 10)[38]. Two clerics bearing a relic ride through the hippodrome of Constantinople toward a church where laborers are at work atop the roof, demonstrating the continuance of architectural process as a bearer of meaning.

37 The "short sightedness of the now" may in part explain the Roman disinterest in provisions for architectural maintenance; Shaw 2019, 10.

38 Chatterjee 2018.

Figure 1: Wreath and inscription on the base of the so-called "Talking Column" (no. 4) at the Temple of Artemis, Sardis; photo by F. Yegül ©Archaeological Exploration of Sardis/ President and Fellows of Harvard College.

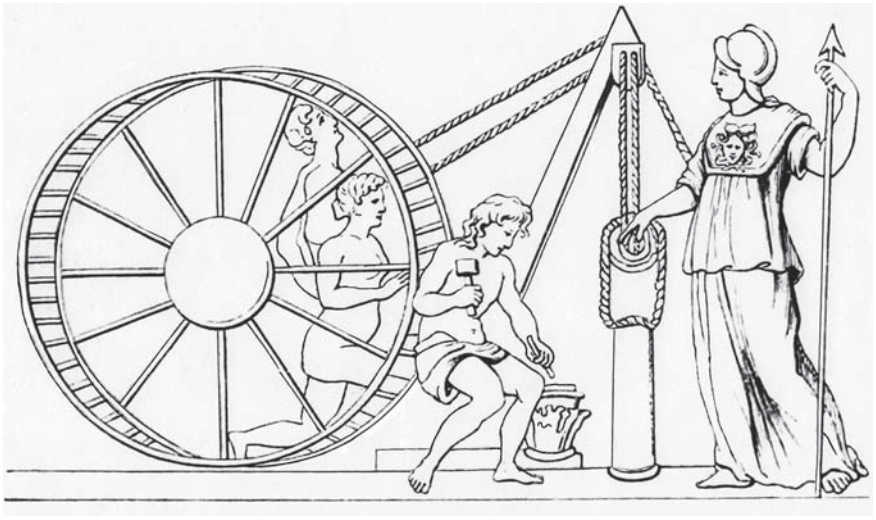

Figure 2: Relief of Lucceius Peculiaris showing a worker carving a column capital at ground level and a tread wheel crane lifting a monolith under the guidance of the goddess Minerva, Capua; drawing in public domain from E.K. *Guhl, Das Leben der Griechen und Römer nach antiken* (1872), p.727.

Figure 3: Colonnades added to the main thoroughfare of Soloi-Pompeiopolis by different donors; Vassia Atanassova – Spiritia, cc-by-sa 3.0 license.

Figure 4: Relief showing workers using ropes and capstans to move the Obelisk of Theodosius in the hippodrome of Constantinople (c. 390 CE), northeast face of the obelisk base; photo by author.

Figure 5: Aeneas watches laborers busy building the city of Carthage under the careful direction of several supervisors; reproduction of the Vatican Virgil of c. 400 CE; public domain, Wikimedia.

Figure 6: Relief showing marble saw mechanism on the sarcophagus of M. Aurelios Ammianos, Hierapolis; image after photo of K. Grewe in Ritti *et al* 2007.

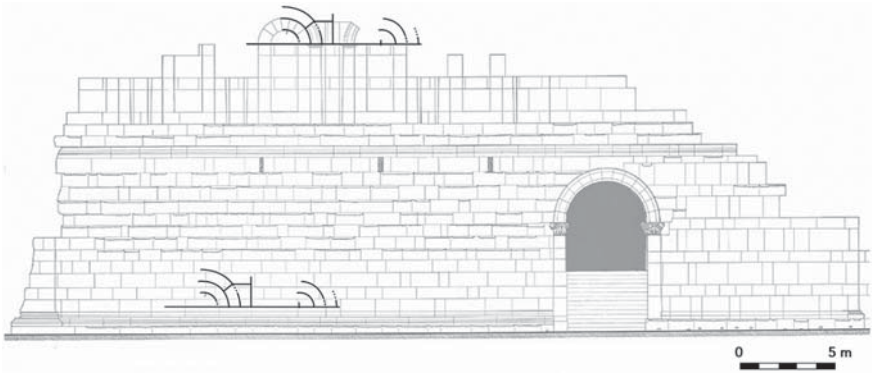

Figure 7: Dark lines indicate the ancient line drawings of arches carved on the lower west wall of the theater at Miletus and the intended placement of elements above; after J. Capelle 2019.

Figure 8: Lifting boss with graffito "finish me" on columm (no.17) of the Temple of Artemis, Sardis; photo by F. Yegül ©Archaeological Exploration of Sardis/President and Fellows of Harvard College.

Figure 9: Columns with donor inscriptions at the Temple of Zeus Lepsynos, Euromos; C. Raddato, published on 24 January 2019 under cc-by-sa license.

Figure 10: So-called Trier Ivory showing clerics bringing relics to Constantinople riding through the hippodrome of Constantinople towards a church under construction; Chris 73 cc-by-sa 3.0 license via Wikimedia Commons.

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Seleucia | Sayı XI | Mayıs 2021

Building-in Time: The Complicated Lives of Roman Civic Structures in Asia Minor
Zaman İçinde İnşaat: Küçük Asya'daki Roma Kentsel Yapılarının Karmaşık Yaşamları
Diane Favro
11

Kazı Verileri Işığında Olba'nın Erken Yerleşim Tarihi
The Early Settlement at Olba in Light of Evidence from Olba Excavations
Emel Erten
33

Victoria & Albert Museum'dan Sardes'e Uzanan Bir Yanlış Anlama
A Misunderstanding from the Victoria & Albert Museum to Sardis
Fikret K. Yegül
49

Gökçeada Uğurlu-Zeytinlik Yerleşmesinin Kalkolitik Dönem Hane Organizasyonu: Bileşik Bir Yapı Kompleksi Örneği
Chalcolithic Household Organization of Gökçeada Uğurlu-Zeytinlik Settlement: An Example of a Compound Building Complex
Erkan Gürçal - Burçin Erdoğu
67

Boncuklu Höyükte Deneysel Kerpiç Ev Yapımı ve Taban Sıvası Uygulamaları Üzerine Bazı Gözlemler
Some Observations on Building an Experimental Mud-Brick House and Plaster Floor Implementation at Boncuklu Höyük
Gökhan Mustafaoğlu
89

Ankara'dan Isis ve Harpokrates Betimli Sihirli Yüzük Taşları ve Amuletler
Magical Gems and Amulets with Isis and Harpokrates from Ankara
Melih Aslan - Yavuz Yeğin
113

Olba Kazıları Late Roman 1 Amphoraları ve Arkeometri Sonuçlarının Değerlendirilmesi
Evaluation and Archaeometric Results of Late Roman Amphorae 1 from Olba Excavations
Safiye Aydın - Erkan Alkaç - Murat Eroğlu - Yusuf K. Kadıoğlu
137

Olba'da Hıristiyanlığın İlk İbadethanesi: "Mağara – Kilise"
The First Sanctuary of Christianity in Olba: Cave-Church
Murat Özyıldırım – Yavuz Yeğin
175

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