BYZANTINE ROCK-CUT ARCHITECTURE IN CAPPADOCIA AND BEYOND: THE STATE OF SCHOLARSHIP

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ABSTRACT

As outcomes of an alternative mode of architectural expression, rock-cut sites are found ubiquitously in Byzantium. Caves and carved spaces assume a diverse set of functions and meanings in the life and death of Byzantine society. Accordingly, a substantial sum of surviving evidence of Byzantine material culture is related to the hewn-out spaces; however, rock-cut architecture has been often associated with a lowly status in the early scholarship and excluded from the general narratives of Byzantine history. Growing interests in the various aspects of carved settlements and new approaches to rupestrian landscapes started to alter this general picture in the current research and necessitated a work of synthesis, focusing on the study of Byzantine rock-cut architecture. This review is intended to make a critical assessment of this particular assemblage of archaeological material and discuss the phenomenon as comprehensively as possible. Here, I regard rock-carving as a primary way for Byzantine society to transform and engage with its surrounding environment and lay special emphasis on the relationship between rock-cut and masonry architectural traditions. I examine the practical reasons and sacred associations that may have motivated the Byzantine use of carved spaces. I survey the advantages and pitfalls of the study of rock-cut material and maintain that, due to their excellent state of preservation, carved spaces potentially have much to contribute to the research on spatial practices, economic activities, daily life, and so forth. This critical historiographic discussion highlights the key concepts that changed the research trajectory and reviews the interpretative tools and future directions. Considered together, the literature discussed here underlines that the study of rupestrian landscapes with appropriate tools and theoretical frameworks admits a fuller and more nuanced understanding of Byzantium.

KEYWORDS

Carved architecture, caves, rupestrian settlements, landscape, methodology

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To our modern eyes, rock-cut spaces and natural caves may appear to be marginal sites.* The former contain the marks of now-gone dynamic cultural interactions and traces of human intervention in rugged terrains, while the latter bear witness to an even more distant, geological past. Yet, for millennia, rocky and cavernous landscapes nurtured the human imagination with otherworldly scenery and provided shelters for humankind in the depths of the earth almost wherever the geology of an area allowed. Providing a natural shelter, caves were used as temporary or permanent dwellings, burial grounds, and ritual places; they also enriched the human imagination in relation to many mythical stories and divine revelations that they had staged.[1] Byzantium was no exception. Seen as products of an alternative mode of architectural expression, carved spaces constitute a weighty sum of the surviving Byzantine material evidence. In this paper, I present a critical overview of the state of scholarship on Byzantine rock-cut architecture in Cappadocia and beyond.[2]

Rock-cut architecture is a common phenomenon throughout the eastern Mediterranean; however, Cappadocia has been treated most extensively in the scholarship.[3] The situation is not surprising given the rich material concentrated in the region, yet similar practices in other areas should not be overlooked. The regions with rock-cut architecture traditions in the Middle Ages include, but are not limited to, Palestine, the Caucasus, Phrygia, Cyprus, Latmos, Thrace, Dobruja, Bulgaria, Serbia, Thessaly, Laconia, southern Italy, and Sicily.[4] The long list provides extensive coverage of the area that can be broadly defined as Byzantium's cultural sphere.

In the following pages, I first survey the motivations for the creation, use, and transformation of Byzantine rock-cut spaces and briefly examine their positioning in Byzantine mentalities, with an emphasis on the notion of the sacredness of caves. The second section focuses on the potentials and inherent problems of the study of rock-cut architecture as a particular type of material evidence. The next two sections

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1 Ömür Harmanşah, *Place, Memory, and Healing: An Archaeology of Anatolian Rock Monuments* (Abingdon: Routledge, 2015), 122.

2 Throughout the paper, I use "carved architecture" and "rock-cut architecture" interchangeably to emphasize human intervention in the creation of architectural spaces in the living rock. In its adjectival form, "carved" is a neutral and inclusive term that also implies small-scale alterations. The spaces themselves are alternatively defined as "rock-cut," "rock-hewn," "carved," or "hewn-out." "Cave-like" and "speluncar" specify the characteristics of natural caves; they are used to refer to relatively less-worked rock surfaces and amorphous forms of some carved spaces.

3 The following list of publications gives only a selection of the studies that have shaped the scholarship on Byzantine Cappadocia: Guillaume de Jerphanion, *Une nouvelle province de l'art byzantin: les églises rupestres de Cappadoce* (Paris: Paul Geuthner, 1925); Nicole Thierry and Jean Michel Thierry, *Nouvelles églises rupestres de Cappadoce: Région du Hasan Dagi* (Paris: C. Klincksieck, 1963); Marcell Restle, *Die byzantinische Wandmalerei in Kleinasien* (Recklinghausen: Bongers, 1967); Cosimo Damiano Fonseca, ed., *Le aree omogenee della civiltà rupestre nell'ambito dell'impero bizantino: la Cappadocia* (Galatina: Congedo, 1981); Lyn Rodley, *Cave Monasteries of Byzantine Cappadocia* (Cambridge, New York: Cambridge University Press, 1985); Nicole Thierry, *La Cappadoce de l'antiquité au moyen âge* (Turnhout: Brepols, 2002); Catherine Jolivet-Lévy, *La Cappadoce: un siècle après G. de Jerphanion* (Paris: Geuthner, 2015); Robert Ousterhout, *Visualizing Community: Art, Material Culture, and Settlement in Byzantine Cappadocia* (Washington, D.C.: Dumbarton Oaks, 2017).

4 Among others, for Palestine, see Joseph Patrich, Benny Arubas, and B. Agur, "Monastic Cells in the Desert of Gerasimus near the Jordan," in *Early Christianity in Context: Monuments and Documents*, eds. Frédéric Manns and Eugenio Alliata (Jerusalem: Franciscan Printing Press, 1993); Joseph Patrich, *Sabas, Leader of Palestinian Monasticism: A Comparative Study in Eastern Monasticism, Fourth to Seventh Centuries* (Washington, D.C.: Dumbarton Oaks, 1995); Haim Goldfus, Benny Arubas, and Eugenio Alliata, "The Monastery of St. Theoctistus (Deir Muqallik)," *Liber Annuus* 45 (1995); for Phrygia, see Caroline Henriette Emilie Haspels, *The Highlands of Phrygia: Sites and Monuments* (Princeton: Princeton University Press, 1971); Bedia Yelda Olcay Uçkan, Yalçın Mergen, and Mete Mirmiroğlu, *Frigya (Phrygia) Bölgesinde Bizans Dönemi Kaya Mimarisi* (Eskişehir: Eskişehir Tepebaşı Belediyesi, 2010); Seçkin Evcim, "Frigya Bölgesi'nde Bizans Dönemi Kaya

are reserved for critical historiographic discussions. I discuss the key sources that changed the research trajectory in the study of Byzantine rupestrian landscapes and highlight critical scholarly tendencies, above all in Cappadocian studies. This is followed by an examination of the recent interpretative frameworks that offer fresh ways to approach the same old material. I conclude with a final assessment and a brief consideration of the way forward. This paper is intended to review Byzantine rock-cut architecture as comprehensively as possible, even though such an undertaking is inevitably selective and dependent on the nature of the published material. In line with the theme of this special issue, I hope to have achieved a critical work of synthesis that would place the historical landscape of Cappadocia and advancements in Cappadocian studies into a larger picture of the rock-cut architectural tradition in Byzantium and life in medieval rupestrian environments.

MOTIVATIONS FOR CARVED ARCHITECTURE

In Byzantium, many rocky sites, whether featuring natural caves or not, were enhanced by additional carvings to correspond better to their users' specific spatial needs. The insistence on the creation of rock-cut spaces almost wherever the qualities of available rock outcrops are adequate, indicates a preference over alternative construction media. Expectedly, both practical and spiritual reasons can be credited for Byzantine carved architecture.

Practical Reasons

The unavailability or inconvenience of alternative construction materials may have led to the creation of hewn-out architecture. The abundance of rock-cut spaces in Cappadocia, for instance, is generally explained in terms of a necessity in a region with suitable geological conditions and limited timber resources. It has also been suggested

Mimarisi," *ODU Journal of Social Science Research* 6, no. 3 (2016); Bedia Yelda Olcay Uçkan, and Seçkin Evcim, "Phrygia in the Byzantine Period and the Continuity of the Rock-Cut Architecture Tradition of the Region," in *Phrygia in Antiquity: From the Bronze Age to the Byzantine Period*, ed. Gocha R. Tsetskhladze (Leuven: Peeters, 2019); for Cyprus, see Cyril Mango and Ernest J. W. Hawkins, "The Hermitage of St. Neophytos and Its Wall Paintings," *Dumbarton Oaks Papers* 20 (1966); for Latmos, see Anthony Kirby and Zeynep Mercangöz, "The Monasteries of Mt Latros and Their Architectural Development," in *Work and Worship at the Theotokos Evergetis, 1050–1200*, eds. Margaret Mullett and Anthony Kirby (Belfast: Belfast Byzantine Enterprises, 1997); Urs Peschlow, "Mount Latmos," in *The Archaeology of Byzantine Anatolia: From the End of Late Antiquity until the Coming of the Turks*, ed. Philipp Niewöhner (New York: Oxford University Press, 2017); for Thrace, see Feridun Dirimtekin, "İnceğiz Mıntıkasındaki Mağara-Manastır ve Kiliseler," *Türk Arkeoloji Dergisi* 7, no. 2 (1957); Semavi Eyice, "Trakya'da Bizans Devrine Ait Eserler," *Belleten* 33, no. 131 (1969); Semavi Eyice and Nicole Thierry, "Le monastère et la source sainte de Midye en Thrace turque," *Cahiers Archéologiques* 20 (1970); for Dobruja, see Silviu Anghel, "Early Rock-Carved Monasteries in the Northwestern Balkans. An Introduction," in *Western Monasticism Ante Litteram: The Spaces of Monastic Observance in Late Antiquity and the Early Middle Ages*, eds. Hendrik Dey and Elizabeth Fentress (Turnhout: Brepols Publishers, 2011); Georgi Atanasov, "Encore une fois sur la datation et l'organisation des moines dans le monastère rupestre de Murfatlar," *Pontica* 53 (2020); for Bulgaria, see André Grabar, "Les fresques d'Ivanovo et l'art des Paléologues," *Byzantion* 25–27, no. 2 (1957); Antoniy Handjiyski, *Rock Monasteries*, trans. Marguerite Alexieva (Sofia: Septemvri State Publishing House, 1985); for Serbia, see Cosimo Damiano Fonseca, ed., *Le aree omogenee della civiltà rupestre nell'ambito dell'impero bizantino: la Serbia* (Galatina: Congedo, 1979); Danica Popović, Branislav Todić, and Dragan Vojvodić, *The Dečani Desert: The Sketae and Kellia of the Monastery of Dečani* (Belgrade: Institute for Balkan Studies of the Serbian Academy of Sciences and Arts, 2011); Svetlana Popović, "The Last Hesychast Safe Havens in Late Fourteenth and Fifteenth Century Monasteries in the Northern Balkans," *Zbornik Radova Vizantološkog Instituta* 48 (2011); for Thessaly, see Donald M. Nicol, Meteora: *The Rock Monasteries of Thessaly* (London: Variorum, 1975); for Laconia, see Sharon E. J. Gerstel, "Mapping the Boundaries of Church and Village: Ecclesiastical and Rural Landscapes in the Late Byzantine Peloponnese," in *Viewing the Morea: Land and People in the Late Medieval Peloponnese*, ed. Sharon E. J. Gerstel (Washington, D.C.: Dumbarton Oaks, 2013); Ludovic Bender, "Ermitages et monastères rupestres de la Laconie byzantine (XIe-XVe siècle): Archéologie, topographie et paysages" (PhD diss., University of Fribourg, 2016); for southern Italy, see Luigi Abatangelo, *Chiese-cripte e affreschi italo-bizantini di Massafra* (Taranto: Cressati, 1966); Mario Rotili, *Arte bizantina in Calabria e in Basilicata* (Cava dei Tirreni: Di Mauro, 1980); Roberto Caprara, *Le Chiese rupestri del territorio di Taranto* (Taranto: Comune di Taranto, 1981); Mario Tommaselli, *Chiese rupestri di Matera e del suo territorio* (Lecce: Capone, 2002); for Sicily, see Aldo Messina, *Le chiese rupestri del Siracusano*, (Palermo: Istituto siciliano di studi bizantini e neoellenici, 1979); Aldo Messina, *Le chiese rupestri del Val di Noto* (Palermo: Istituto siciliano di studi bizantini e neoellenici, 1994); Aldo Messina, *Le chiese rupestri del Val Demone e del Val di Mazara* (Palermo: Istituto siciliano di studi bizantini e neoellenici Bruno Lavagnini, 2001).

that the soft volcanic tuff can be carved rather easily, but it is not very resistant to the elements. The properties of the rock in the region are, therefore, more fitting to create self-supporting carved spaces than masonry walls.[5]

The paucity of alternative construction materials as an all-encompassing reason for carved architecture should be dismissed. The scarcity of timber resources may indeed have played a role, yet it is not uncommon for a rupestrian site to incorporate wooden structures as a part of its spatial arrangement.[6] In fact, timber is also needed for the scaffolding to carve and decorate rock-cut spaces higher than 2.25 m.[7] Additionally, many rock-cut complexes are located within forested areas with abundant timber resources, especially in the Balkans. Moreover, many others have been hewn out in the vicinity of ancient or modern stone quarries in regions with well-established masonry architectural traditions.[8] After all, carved and masonry elements are more often than not found together at the same site.

The relatively stable microclimate inside the rock-cut spaces is recognized as another motivation for carved architecture, since the surrounding rock mass functions as a thick layer of insulation, especially in the harsh winters and hot summers of central Anatolia.[9] One should also consider that the cool and damp environment of the caves would not be ideal in the northern regions, such as Thrace and the Balkans.

Lastly, the relative security provided by the somewhat hidden, carved-out spaces is relevant to the discussion of practicality, particularly in Byzantine Cappadocia. A plethora of rock-cut sites in the region feature secondarily carved refuge areas accessed via narrow tunnels secured by heavy doors.[10] More puzzling are the so-called underground cities: they are complex, multilevel settlements with several winding corridors blocked by rolling, stone doors, some also provided with wells and ventilation shafts.[11]

5 Robert Ousterhout, *A Byzantine Settlement in Cappadocia* (Washington, D.C.: Dumbarton Oaks, 2005), 10; Fatma Gül Öztürk, "Rock-Cut Architecture," in *The Archaeology of Byzantine Anatolia: From the End of Late Antiquity until the Coming of the Turks*, eds. Philipp Niewöhner (New York: Oxford University Press, 2017), 149.

6 Among others, the cave-church complex in the Monastery of St. Theoctistus in the Judean desert is accessed through a six-story tower with wooden floors, abutting the southern cliffside: Goldfus, Arubas, and Alliata, "The Monastery of St. Theoctistus," 252–56. Simpler arrangements in the carved living cells exist, such as the wooden flooring inside the *hesychasterion* of St. Sabas the Great, outside the same monastery: Patrich, *Sabas*, 126. In Cappadocia, the church at Zindan Monastery near Göreme appears to be covered by a timber roof: see Ousterhout, *Visualizing Community*, 385. Timber floors are attested in the church in Eğri Taş Cemetery Complex and the transverse hall of the Direkli Kilise Complex, both in Peristrema: see Ousterhout, *Visualizing Community*, 374–76; Rodley, *Cave Monasteries*, 85–87. In southern Italy, the survey in the valley of Madonna della Scala in Massafra suggests abundant use of wood for construction of adjacent structures and furniture inside the hundreds of carved units: see Franco Dell'Aquila, "Evoluzione delle fasi di escavazione ed elementi architettonici degli insediamenti rupestri," in *Quando Abitavamo in Grotta. Atti del I Convegno internazionale sulla civiltà rupestre* (Spoleto: Fondazione Centro italiano di studi sull'alto medioevo, 2004), 53. Finally, in Eastern Thrace, the large beam holes above the carved façade of Asmakayalar Complex near Bizye indicate an extensive wooden porch: see Eyice, "Trakya'da Bizans Devrine Ait Eserler," 335.

7 Fatma Gül Öztürk, *Rock Carving in Cappadocia from Past to Present* (Istanbul: Arkeoloji ve Sanat Yayınları, 2009), 55.

8 For example, Zindan Monastery in Cappadocia was founded at the site of an ancient stone quarry near Göreme: see Ousterhout, *Visualizing Community*, 385. In Dobruja, the tenth-century rock-cut monastery at Basarabi (Murfatlar) was carved out in a limestone quarry, most likely used for the construction of the nearby Stone Dyke. The chronological relationship between the two functions at the site is not entirely clear: Florin Curta, "The Cave and the Dyke: A Rock Monastery on the Tenth-Century Frontier of Bulgaria," *Studia Monastica* 41, no. 1 (1999): 145; Atanasov, "Encore une fois." Many of the rock-cut spaces in eastern Thrace are located next to still-functioning limestone quarries and are currently at risk due to invasive quarrying activities.

9 Öztürk, "Rock-Cut Architecture," 149.

10 For the Çanlı Kilise settlement, for example, see Robert Ousterhout, *A Byzantine Settlement in Cappadocia* (Washington, D.C.: Dumbarton Oaks, 2005), 103–5, 204–5.

11 Roberto Bixio, ed., *Cappadocia: Schede Dei Siti Sotterranei/Records of the Underground Sites* (Oxford: Archaeopress, 2012), 61–63, 85–109, 138–46; Ousterhout, *Visualizing Community*, 345–49.

Although more than forty such sites are known, their dating and historical context remain rather obscure. Often associated with the Arab incursions, especially between the seventh and ninth centuries, these subterranean redoubts, probably serving various purposes year-round, must have been used as temporary shelters by the inhabitants of the settlements on the ground in times of turmoil.[12]

The above-listed practical reasons neither fully apply to the vast and diverse geography where we find Byzantine rock-cut architecture nor are sufficient to explain the preference for carved architecture over built in a particular setting. In many cases, the choice for carved architecture can be better related to Byzantine mentalities instead of purely practical reasons. The following subchapter concentrates on Byzantine perceptions to understand the specific spatial paradigms through which Byzantines engaged with their surrounding cavernous environments.

Mentalities

The meanings assigned to carved monuments and caves are essential to appreciate Byzantine rock-cut architecture. Unfortunately, the human-made carved spaces in the rocky landscapes are rarely, if ever, mentioned in Byzantine literature. Additionally, even though rock carving in Byzantium was not limited to religious structures, references to civil and military rock-cut architecture are almost completely absent from the available textual evidence. By contrast, the sacred associations of caves, whether fully formed by nature or altered by individuals, are strongly present in sources regarding Byzantine mentalities. Veronica Della Dora emphasizes the evocative character of natural *topoi* that refer to constantly reimagined biblical stories and saints' lives, transforming the entire surface of the earth into "a living icon."[13] Either human-made or formed by nature, the extraordinary rock formations and cavities on the crust of the earth were essential elements of this complex system.

In this framework, Byzantines assigned new meanings to the preexisting rock monuments in their living environments and found ways to integrate them into their own realities. One such instance was Charonion in Antioch, an ancient rock monument on the western slope of the Staurin Mountain. This impressive ancient site was reimagined by the sixth-century inhabitants of a then-Christian city, who attributed some apotropaic powers to the monument, according to the concerns of their own time.[14] Likewise, in Byzantine Anatolia, many rock monuments, originally dedicated to the Phrygian goddess Matar, acquired cross incisions at a later date and were recontextualized by their medieval users.[15] The shifting meanings attributed to rupestrian sites continued to exist in medieval Anatolia beyond Byzantium. Around the late twelfth century, the cave to the west of Arabissos (Afşin), with an already existing Early Byzantine cult association, started to be identified as the site of the Companions of the Cave by the Muslim inhabitants of the region. It then became an important pilgrimage site and witnessed the construction

12 J. Eric Cooper and Michael J. Decker, *Life and Society in Byzantine Cappadocia* (London: Palgrave Macmillan, 2012), 31–42. For the historical context of Cappadocia as the eastern borderland of the Empire, see John F. Haldon and Hugh Kennedy, "The Arab-Byzantine Frontier in the Eighth and Ninth Centuries: Military Organisation and Society in the Borderlands," *Zbornik Radova Vizantološkog Instituta* 19 (1980); England et al., "Historical Landscape Change in Cappadocia (Central Turkey): A Palaeoecological Investigation of Annually Laminated Sediments from Nar Lake," *The Holocene* 18, no. 8 (2008).

13 Veronica Della Dora, *Landscape, Nature, and the Sacred in Byzantium* (Cambridge: Cambridge University Press, 2016), esp. 1–2, 58–60.

14 The iconographic analysis points out that the open-air sanctuary was originally related to the Anatolian cult of the Mother Goddess and the Syrian cult of Atargatis. However, the only surviving account of the Charonion, written by John Malalas (c. 490–578?), ascribes the carving to a plague outbreak during the reign of Antiochus IV (175–163 BCE): Hatice Pamir, "An Underworld Cult Monument in Antioch: The Charonion," in *Overturning Certainties in Near Eastern Archaeology. A Festschrift in Honor of K. Aslıhan Yener*, eds. Çiğdem Maner, Mara T. Horowitz, and Allan S. Gilbert (Leiden: Brill, 2017).

15 Haspels, *The Highlands of Phrygia*, 253–54; Bedia Yelda Olcay Uçkan and Seçkin Evcim, "The Other Beliefs in Byzantine Phrygia and Their Reflections in Rock-Cut Architecture," in *Identity and the Other in Byzantium*, eds. Koray Durak and Ivana Jevtić (Istanbul: The Koç University Stavros Niarchos Foundation Center for Late Antique and Byzantine Studies, 2019), 187.

of the complex of Eshab-ı Kehf in the early thirteenth century under the Rum Seljuk State.[16]

The cavernous landscapes trigger the human imagination with their peculiar formations and intimidating darkness that does not immediately reveal itself. In Byzantine perceptions, the sacredness of caves did not so much rely on their physical aspects but rather originated in two interrelated notions: biblical and monastic caves. Cave spaces evoked holiness, either via the biblical stories that they have staged or via their relationship with anchorite saints. Their sanctity was almost invariably highlighted with anthropogenic carvings, painted decorations, or the construction of churches.

Biblical Caves

In the Judeo-Christian context, the holiness of caves derives, above all, from the lives of the Old Testament prophets and Christ himself. Biblical stories refer to them as places of revelation, where encounters with the divine took place; they also respond to more practical needs as burial places or hidden shelters to take refuge inside.[17] Eastern Christianity further associates cave spaces with the decisive events of Christ's life on earth: he was born in a cave at Bethlehem, buried in a cave in Jerusalem, and ascended to heaven from another one on the Mount of Olives. Yet the New Testament bears no reference to such a model. "The triad of caves" was formulated by Eusebius of Caesarea (circa 265–339/340), who linked the three events of paramount importance for Christianity with cave spaces.[18] The tradition that Christ was born in a cave at Bethlehem was already established by the second century, and the site probably became the center of a local pilgrimage. In the case of the other two, however, Eusebius himself related Christ's Entombment and Ascension to the sacred caves. The Gospels suggest a rock-cut tomb rather than a natural cave for the former, and the cave on the Mount of Olives was previously associated with Christ's teaching, not the Ascension.

The sites of the caves of Christ's Nativity, Sepulcher, and Ascension were remodeled with the construction of large basilicas as part of the Constantinian building projects in the Holy Land, for which Eusebius' writings provided ideological and spiritual grounds.[19] During her pilgrimage after 325, Constantine's mother Helena initiated the construction of Christian basilicas at Bethlehem and on the Mount of Olives outside Jerusalem. The sacred caves were officially recognized and enhanced with the major fourth-century Christian shrines: the Churches of the Nativity, Holy Sepulcher, and Eleona.[20] Around the same time, many other cave spaces in the Holy Land were mapped on much-frequented pilgrimage routes and became places to relate the present to the biblical past.[21] In this way, caves arguably assumed a function very much like those of Christian martyria, and similarly, they were gradually annexed to the ecclesiastical buildings.[22]

16 Oya Pancaroğlu, "Caves, Borderlands and Configurations of Sacred Topography in Medieval Anatolia," *Mésogeios* 25–26 (2005): 275–76.

17 Della Dora, *Landscape, Nature, and the Sacred*, 176, 190.

18 Peter W. L. Walker, *Holy City, Holy Places?: Christian Attitudes to Jerusalem and the Holy Land in the Fourth Century*, Oxford Early Christian Studies (Oxford: Clarendon Press, 1990), 184–94.

19 Walker, *Holy City, Holy Places?*, 184–88; Slobodan Ćurčić, "Cave and Church: An Eastern Christian Hierotopical Synthesis," in *Hierotopy: The Creation of Sacred Spaces in Byzantium and Medieval Russia*, ed. Alexei Lidov (Moscow: Indrik, 2006), 217.

20 Robert Ousterhout, *Eastern Medieval Architecture: The Building Traditions of Byzantium and Neighboring Lands* (New York: Oxford University Press, 2019), 29–30.

21 Della Dora, *Landscape, Nature, and the Sacred*, 186, 189.

22 Slobodan Ćurčić defined this juxtaposition as the cave-and-church formula and observed persistence in its application in Byzantine architecture, with a significant peak in the Late Byzantine period as a result of the revival of eremitical practices: "Cave and Church," 218–21.

As stages of biblical stories, caves occupy an important place in the Byzantine visual vocabulary.[23] In Byzantine iconography, cave-like elements often appear in scenes from the life of Christ. In line with the threefold meaning of caves, in Byzantine images representing the Nativity of Christ, the spatial setting is a grotto, and in the compositions of the Resurrection, Christ is often depicted ascending from the cave-like underworld. In the scenes representing the Baptism of Christ, the banks of the Jordan River assume a cave-like appearance, and in the images of Christ's Crucifixion, a small cave on Golgotha Hill represents the tomb of Adam. They often mark the surrounding space in the scenes depicting certain miracles, such as the raising of Lazarus. Finally, in the Late and post-Byzantine icons of the Pentecost, apostles are depicted seated around the personification of the world before Christianity, surrounded by darkness in the form of a cave-like pit.

Owing to their perceived sanctity in relation to Christ's life, caves were associated with the most sacred space in a Byzantine church: the sanctuary. The church space was loaded with symbolic meanings; each spatial compartment represented another *topos* in which biblical stories took place. In line with its semi-circular form and restricted accessibility, the sanctuary of a church was identified with two defining events of Christ's earthly presence: the caves in which he was born and ultimately buried. The eighth-century Historia Mystagogica, attributed to Patriarch Germanos (715–730), eloquently formulated the relationship between the apse of a church and two holy caves:[24]

> The conch is after the manner of the cave of Bethlehem where Christ was born, and that of the Cave where He was buried as the Evangelist saith, that there was a cave "hewn out of the rock, and there laid they Jesus."[25]

The cave analogy of the church sanctuary persisted until the last centuries of Byzantium. In the fifteenth century, Symeon of Thessaloniki (d. 1429) identified the prothesis with the cave of Christ's Nativity in Bethlehem, isolated and not far from the church's altar that signified the tomb of Christ in Jerusalem.[26] By this means, the symbolic association of biblical caves with the familiar space of the church was consistently present throughout the Byzantine period.

Monastic Caves

Non-biblical caves acquired sacred meanings through the presence and activities of holy men who lived and were eventually buried in them. The confining nature and sensorially restrictive interiors of the caves made them perfect environments for the eremitic way of life. Seclusion in the wilderness of a cave signified the ascension of two rungs of the Ladder of Divine Ascent of John Climacus: the renunciation of the secular and isolation from the world. Consequently, living in an isolated cave became a much-frequented path in ascetical practice.[27] The

23 Bruce Foltz, "Nature Godly and Beautiful: The Iconic Earth," *Research in Phenomenology* 31, no. 1 (2001): 138; Della Dora, *Landscape, Nature, and the Sacred*, 180–81.

24 Ćurčić, "Cave and Church," 216.

25 Ἡ κόγχη ἐστὶ κατὰ τὸ ἐν Βηθλεὲμ σπήλαιον ὅπου ἐγεννήθη ὁ Χριστός, καὶ κατὰ τὸ σπήλαιον ὅπου ἐτάφη, καθώς φησιν ὁ εὐαγγελιστὴς ὅτι ἦν σπήλαιον λελατομημένον ἐκ πέτρας καὶ ἐκεῖ ἔθηκαν τὸν Ἰησοῦν: F. E. Brightman, "The 'Historia Mystagogica' and Other Greek Commentaries on the Byzantine Liturgy," *The Journal of Theological Studies* 9, no. 34 (1908): 258; translated excerpt from Cyril Mango, *The Art of the Byzantine Empire, 312–1453: Sources and Documents* (Toronto: University of Toronto Press, 1986), 142.

26 PG 155: 348A–B: see Vasileios Marinis, *Architecture and Ritual in the Churches of Constantinople: Ninth to Fifteenth Centuries* (New York: Cambridge University Press, 2014), 32, 117.

27 Alice-Mary Talbot, "Caves, Demons and Holy Men," in *Le Saint, Le Moine et Le Paysan: Mélanges d'histoire Byzantine Offerts à Michel Kaplan*, eds. Olivier Delouis, Sophie Métivier, and Paule Pagès (Paris: Publications de la Sorbonne, 2016), 710. For a recent text-driven analysis of the life of recluses in Byzantium and the cave cells in which they enclosed themselves, see Alice-Mary Talbot, *Varieties of Monastic Experience in Byzantium, 800–1453* (Notre Dame: University of Notre Dame Press, 2019), esp. 113–15, 134–47.

deliberate choice of the saints and holy men to seclude themselves in caves for a significant period of their lifetimes appears as a common literary motif in a large number of hagiographies.[28]

For the Byzantine ascetics who emulated the Old Testament prophets and Christ's earthly presence, caves were ideal settings of spiritual resurrection to imitate Christ's triumph over death.[29] In the context of monasticism, a major practice related to this notion was reclusion in one's own eternal resting place.[30] As a result, many holy men were buried inside their former cave cells that eventually became commemorative places for their followers. The Christian use of cavernous and rock-cut sites as burial grounds and commemorative places was a longstanding one. Already in the early third century, Christian catacombs were hewn out into underground tufa outside the city limits of Rome; other Early Christian communal underground cemeteries developed in Naples, Syracuse, Alexandria, etc. In fourth-century Rome, as elsewhere in the Empire, Christian basilicas were built above the catacombs containing the venerated tombs of the protomartyrs.[31] The perception of caves as marginal settings providing a stage for resurrection exists beyond the Christian imagination: Koranic parable of the Companions of the Cave recreates the Christian story of the Seven Sleepers of Ephesus, narrating the miraculous awakening of a group of young believers who were put into a centuries-long sleep inside a cave. In both Christian and Islamic contexts, the story bears clear eschatological references, evoking the awaited resurrection of the dead on the Day of Judgment.[32]

The dual role of caves in the life of ascetics as abodes and burial places had been present since the very emergence of the eremitical architype in Egypt. According to the Life of St. Paul of Thebes, written by Jerome around the year 374, St. Antony the Great was urged to advance into the Egyptian desert at the age of ninety to find St. Paul the First Hermit, who lived there in complete isolation, allegedly for around one hundred years. Arriving at his cave-dwelling, Antony had a brief acquaintance with the holy man, but he soon understood that he was summoned to bury his dead body properly in a tomb, later excavated there by two lions.[33] A similar encounter was narrated in the Life of St. Sabas the Great: having led by divine guidance, the saint found an elderly hermit in a hardly accessible cave on the western bank of the Jordan River. The anchorite had been in confinement in the same cave for thirty-eight years, and shortly thereafter, he passed away. Sabas buried him there and walled up the entrance.[34] In the Middle and Late Byzantine periods, many other recluses expressed their wishes to be buried inside their cave dwellings, and some even prepared their burial grounds themselves.[35]

Encounters with wild creatures were inevitable when hermits took shelter in caves, the lairs of untamed animals. The anchorite saints' combats and, at times, peaceful encounters with wild animals in the gloomy darkness of caves and their expulsions of demons were common hagiographic *topoi*.[36] They were believed to have changed these uncanny environments into sacred topographies with their presence and unceasing prayers.[37] This rhetorical pattern con-

28 Della Dora, *Landscape, Nature, and the Sacred*, 198.

29 Ćurčić, "Cave and Church," 217–18; Della Dora, *Landscape, Nature, and the Sacred*, 195.

30 Talbot, "Caves, Demons and Holy Men," 712.

31 Richard Krautheimer. *Early Christian and Byzantine Architecture*, 4th ed. (New Haven: Yale University Press, 1986), 30–35; Ousterhout, *Eastern Medieval Architecture*, 7–9, 14.

32 Pancaroğlu, "Caves, Borderlands and Configurations," 264–65.

33 Della Dora, *Landscape, Nature, and the Sacred*, 196–98.

34 *Life of St. Sabas the Great, in Cyril of Scythopolis, Lives of the Monks of Palestine*, trans. Richard M. Price, Cistercian Studies Series 114 (Kalamazoo: Cistercian Publications, 1991), 116–17.

35 Talbot, "Caves, Demons and Holy Men," 713.

36 Talbot, "Caves, Demons and Holy Men," 715–17.

37 Della Dora, *Landscape, Nature, and the Sacred*, 201.

formed well with the role of holy men in the transformation of inhospitable rugged environments into inhabitable lands: "the wilderness *topos*" in the monastic foundational stories.[38] Caves, just like mountains and deserts, functioned as natural elements by which holy men's interventions, and subsequently the extent of their monastic establishments, were rendered visible in the natural topography.[39] Functioning as a church, a reclusion cell, or a burial place of a venerable hermit, a cave often constituted the core of the monastic sacred space.[40] On many occasions, being directly associated with the lives of holy men, caves, in a way similar to relics, attracted pilgrims and achieved economic significance for monastic communities.[41]

The idea of *acheiropoiesis*[42] further enhanced the perceived sanctity of caves, as they were created by God in the form of churches or abodes for the use of anchorites. It is commonplace in the saints' lives that holy figures find natural caves, with divine guidance, already in a suitable condition to dwell in or transform into churches with minor adjustments. An illustrative example of divine revelation of a God-made church is narrated in the Life of St. Sabas the Great, penned by the sixth-century monk and hagiographer Cyril of Scythopolis.[43] One night, walking alone in the gorge of the Great Lavra, the saint saw a pillar of fire reaching up to heaven. He waited on the spot with constant prayer, and when the day broke, he found a cave in the form of a church at the place where the fiery pillar was standing in his vision. The cave had "an apse made by God" in the east and a wide southern entrance providing sufficient illumination. He then "set the cave in order with divine assistance" to celebrate the liturgy. The cave church first acquired the name "Theoktistos," meaning erected by God; it is now dedicated to St. Nicholas of Myra.[44] It assumed a central role in the saint's life, his ascetic practice, and the choice of his burial ground. After he died at the age of ninety-four, Sabas was not buried in the cave church, but rather on the spot where he had the vision.[45]

The initial transformation of a cave into a functioning church necessitated minimal intervention, although subtly carved and painted details were skillfully executed in many rock-cut churches. In the typikon of the Hermitage of the Holy Cross in Cyprus (1214), St. Neophytos himself narrated the foundational story of his monastic establishment.[46] After an unsuccessful attempt to travel to Mount Latmos, the

38 Alice-Mary Talbot, "Founders' Choices: Monastery Site Selection in Byzantium," in *Founders and Refounders of Byzantine Monasteries*, ed. Margaret Mullett (Belfast: Belfast Byzantine Enterprises, 2007), 50–52.

39 Nikolas Bakirtzis, "Locating Byzantine Monasteries: Spatial Considerations and Strategies in the Rural Landscape," in *Experiencing Byzantium*, eds. Claire Nesbitt and Mark Jackson (Farnham: Routledge, 2013), 131–32.

40 Svetlana Popović, "The Byzantine Monastery: Its Spatial Iconography and the Question of Sacredness," in *Hierotopy: The Creation of Sacred Spaces in Byzantium and Medieval Russia*, ed. Alexei Lidov (Moscow: Indrik, 2006), 166–67.

41 Bakirtzis, "Locating Byzantine Monasteries," 117.

42 The term *acheiropoieton* usually refers to a group of icons that are believed to have been brought into being miraculously instead of being made by human hands. The idea ascribes authenticity and miraculous powers to such images. Twelve *acheiropoieta* are listed in The Letter of the Three Patriarchs, a document that is now accepted to date from the period immediately after Iconoclasm. See Annemarie Weyl Carr, "Acheiropoieta," in *The Oxford Dictionary of Byzantium*, ed. Aleksandr Petrovich Kazhdan (New York: Oxford University Press, 1991); Maria Vassilaki, "Icons," in *The Oxford Handbook of Byzantine Studies*, eds. Robin Cormack, John F. Haldon, and Elizabeth Jeffreys (New York: Oxford University Press, 2008), 761.

43 *Life of St. Sabas the Great*, trans. Cyril of Scythopolis, *Lives of the Monks of Palestine*, 110–11.

44 The church has an almost square layout with an entrance from the south. The sealed shaft in the adjacent ossuary connects the church space to the tower of Sabas, as described in the *vita*; Patrich, *Sabas*, 72.

45 *Life of St. Sabas the Great*, trans. Cyril of Scythopolis, *Lives of the Monks of Palestine*, 192.

46 John Thomas and Angela Constantinides Hero, eds., *Byzantine Monastic Foundation Documents: A Complete Translation of the Surviving Founders' Typika and Testaments* (Washington, D.C.: Dumbarton Oaks, 2000), 1350–52.

saint decided to pursue the solitary life he desired on his native island. In 1159, he began to alter a natural cave in a mountain valley near Ktima that would later become the core of his Enkleistra. The initial project followed a very simple scheme: he widened the cave, carved away the unsound parts, excavated his tomb inside, and set an altar dedicated to the Holy Cross. As the Enkleistra gained the support of the bishop of Paphos, the monastic foundation expanded along the entire cliff from 1170 onwards and received its renowned painted decorations in 1183.[47] St. Neophytos was not an experienced carver. After he had finally decided on a suitable place to settle, it was initially enough to enlarge the natural cave, smooth its rock walls, and set up an altar.

The distinction between a cave and a church space is more fluid in the Life of St. Petar of Koriša, composed by Teodosije of Chilandar around 1310, almost a century after the saint's death. Having driven out a demonic snake, Petar secluded himself in a cave in the Koriša River Valley and started to "venerate the snake's cave, like God's church;" this would later also become his eternal resting place.[48] The hagiographer did not specify the transformation of the cave into a church during the saint's lifetime, yet it received the first painted decoration sometime in the thirteenth century, and a small church was built on the terrace in the east. In the mid-fourteenth century, a larger masonry church building incorporated the cave as a side chapel.[49] Once a natural cavity inhabited by wild creatures, the snake's cave received sacred meanings through its contact with the saint and assumed an essential role in the formation of a monastic community.

In the final analysis, non-biblical caves received sacred associations through their interaction with holy men. They provided ideal grounds to fight against and win victory over demons. Cave spaces were sanctified with unceasing prayers and regarded as an integral part of a wild landscape on which interventions of holy men were rendered visible. Time and again, they were perceived as God-made churches that were miraculously found in untamed nature. The relatively easy conversion of a natural cave into a church manifests the perceived similarities between the two spaces. Minor alterations often sufficed for their initial transformation into functioning spaces that would later become the core of monastic establishments.

ASSESSING ROCK-CUT ARCHITECTURE

The Byzantine perception of carved spaces is essential for an understanding of rock-cut architecture and rupestrian settlements in Byzantium. In addition, the material remains themselves present some characteristics that deserve a separate discussion. In this section, I focus on the creative processes and workmanship behind the creation of both secular and religious rock-cut spaces. This is followed by a discussion of methodological problems of assessing rock-cut architecture in historical contexts.

47 Mango and Hawkins, "The Hermitage of St. Neophytos," 124, 205–6.

48 Danica Popović, "The Cult of St. Petar of Koriša, Stages of Development and Patterns," *Balcanica* 28 (1997): 186–89; Ćurčić, "Cave and Church," 222–23.

49 Popović, "The Cult of St. Petar of Koriša," 197–98, 205–6.

An antithesis or alternative to built architecture

Rock-cut architecture developed in karst formations or volcanic landscapes, as in Cappadocia, in most cases enlarging natural caves and carving away precarious parts to transform them into functioning spaces. The creation of hewn-out spaces is essentially different from other traditional construction practices: it requires a process of subtraction rather than building over, hence occasionally referred to as negative architecture.[50] Their structural characteristics differ from masonry buildings: rock-cut walls and upper structures are supported by the rock mass surrounding the excavated space instead of by columns, piers, and buttresses. A rock-cut dome, for example, created by the removal of the rock beneath, is in effect "weightless."[51] Nonetheless, these self-supporting interiors often mimic the elements of built architecture. Columns, piers, pilasters, arcs, vaults, domes, and many other structural elements, as well as carved imitations of liturgical furniture, are crammed into rock-cut spaces, often without responding to the practical necessities that their conventional forms suggest.[52]

In most cases, the complexity of carved spaces and intricate details suggest a professional involvement, although it is rarely attested in written evidence. One such instance is found in southern Italy, in the Life of St. Elias Speleotes (d. 960), written probably a generation after the saint's death. When the number of the monks increased in the monastery, founded by the saint in the north of Melicucca in Reggio Calabria, God revealed a spacious cave to the brethren through the movements of a colony of bats. In keeping with the above-discussed idea of *acheiropoiesis*, the cave was "a church prepared for them by God," yet it was not illuminated well enough. The complexity of the project perplexed the monks, and eventually, God sent a certain Cosmas, who was experienced in these matters. Having examined the site carefully, Cosmas hired stonecutters to carve a large opening on the southern wall of the cave.[53] The story implies that the monks needed an experienced carver to supervise the project and only thereafter became able to use the cave properly.

The rock-cut spaces express greater experimentation compared to the built ones, largely on account of their particular structural system that allows a variety of solutions.[54] This freedom enabled carvers to create distinctive, often unique, compositions in the rock-cut medium, adapting some spatial qualities and architectural details of masonry buildings. The overuse of structural elements in the rock-cut spaces with certain deviations from masonry architecture defined the architectonic character of the carved environment and enhanced the architectural verisimilitude.[55] Along these lines, the complex arrangement of non-functional rock-cut details can be regarded as an indication of the creativity of the carv-

50 Nicola Masini, "Metodologie di Rilievo e di Analisi della Cultura Costruttiva dell'Architettura Ipogea," in *Quando Abitavamo in Grotta. Atti del I Convegno internazionale sulla civiltà rupestre: Savalletri di Fasano (BR), 27–29 novembre 2003*, ed. Enrico Menestò (Spoleto: Fondazione Centro italiano di studi sull'alto medioevo, 2004), 98; Öztürk, "Rock-Cut Architecture," 152; Ousterhout, *Visualizing Community*, 24. For traditional rock carving techniques, see Öztürk, *Rock Carving in Cappadocia*. For a reconstruction of operational chains in job sites of carved spaces through ethnoarchaeological studies and close examination of tool marks, see Anaïs Lamesa, "Methods for Rock-Hewn Worksite Analysis. The Church of Göreme N°4b (Cappadocia): A Case Study," *Anatolia Antiqua* 28 (2020): 23–45.

51 Among others, as formulated by Rodley, *Cave Monasteries*, 224.

52 Among many others, for the imitation of masonry structural elements in Cappadocia, see Ousterhout, *Visualizing Community*, 10; in Phrygia, see Uçkan and Evcim, "Phrygia in the Byzantine Period." In eastern Thrace, the so-called monastery of St. Nicholas near Medeia not only incorporates rock-cut architectural elements emulating masonry forms but also displays a rich sculptural decoration of column capitals, corbels, and transenna panels, all neatly carved on the rock walls: see Eyice and Thierry, "Le monastère et la source sainte de Midye."

53 *Life of St. Elias Speleotes*, AASS Septembris III, 864–65, par. 42–43. For the English translation of the passage, see Ann Wharton Epstein, "The Middle Byzantine Sanctuary Barrier: Templon or Iconostasis?" *Journal of the British Archaeological Association* 134, no. 1 (1981): 43–44.

54 Loredana Francesca Tedeschi, "Analisi Tecnica del Monumento: per una lettura degli strati in negative," in *Puglia tra Grotte e Borghi. Insediamenti rupestri e insediamenti urbani: persistenze e differenze. Atti del II Convegno internazionale sulla civiltà rupestre: Savalletri di Fasano (BR), 24–26 novembre 2005*, ed. Enrico Menestò (Spoleto: Fondazione Centro italiano di studi sull'alto medioevo, 2007), 260.

55 Ousterhout, *Visualizing Community*, 483–84.

ers, who aimed to capture the appearance of masonry interiors in a cavernous environment.[56] Similarly, carved furniture explicitly marks the liturgical space of rock-cut churches. Despite their reduced scale, at times too small to be functional, these carved elements are very exact in detail. The emphasis on the structural details and impractical liturgical furniture bespeaks the symbolic and commemorative role of carved architecture.[57]

The resemblance to conventional built architecture finds expression in the painted decoration inside carved spaces, as well. In Cappadocia, for instance, many rock-cut interiors are simply decorated with red linear paintings to replicate a masonry appearance or highlight the carved details.[58] By the same token, painted imitations of marble revetments are found in many carved churches in distant areas of the Empire. Imitation of regular masonry, whether painted or incised on plaster, and faux marble panels also decorate the built structures. This preference in the decorative program indicates similar concerns in the surface treatment of both rock-cut and masonry monuments.

Rock-cut architecture incorporates the spatial concepts of the masonry building traditions into new designs, rather than adhering to specific models or creating direct copies. The deviations from the masonry forms signify the carver's extensive knowledge of the material and aptitude for variation. The essence of such creative mimeses that formulate the multiple relations between rock-cut and masonry structures can be better conceptualized with the notion of the "image paradigm." Weighty with "literary and symbolic meanings and associations," image paradigms function as image ideas to be reproduced and recreated in visual culture.[59] Seen in this way, each imitation includes, by its nature, a creative process.

An outstanding manifestation of this intended imitation is displayed in the surviving Byzantine rock-cut churches. The carvers and painters of rupestrian churches transform the rocky terrains to project the spatial characteristics of ecclesiastical buildings. Carved architecture rematerializes the church space in an alternative medium, as it was defined in the medieval mind. For example, the three-dimensional quality of the vaulting system of a cross-in-square design is often abandoned in rock-cut architecture, possibly an adaptation in response to the natural light laterally entering the carved spaces.[60] While the central dome in a masonry church building is a lofty space, well-illuminated from the windows around the dome-drum, it generally constitutes the darkest part of an elaborately carved chapel. In order to cope with the problem, the hierarchical order of the vaults is discarded in the rock-cut cross-in-square churches, and in many cases, shallow drum-less domes are applied, if not flat ceilings. The design, therefore, is reconfigured for the conditions, maintaining, at the same time, the spatial concept, the "image-paradigm," of a cross-in-square church.

In brief, the architectural elements and spatial properties of masonry structures were often rematerialized in carved spaces. By this means, Byzantines established a close affinity between carved and built architecture. As a result of this complex set of relations, the two were almost on equal terms.

56 Öztürk, "Rock-Cut Architecture," 152.

57 Ousterhout, *Visualizing Community*, 484–89.

58 Öztürk, "Rock-Cut Architecture," 152; Ousterhout, *Visualizing Community*, 191–98.

59 Alexei Lidov, "Hierotopy: The Creation of Sacred Spaces as a Form of Creativity and Subject of Cultural History," in *Hierotopy: The Creation of Sacred Spaces in Byzantium and Medieval Russia*, ed. Alexei Lidov (Moscow: Indrik, 2006), 42–43.

60 Robert Ousterhout, "The Ecumenical Character of Byzantine Architecture: The View from Cappadocia," in *Byzantium as Oecumene*, ed. Euangelos K. Chrysos (Athens: National Hellenic Research Foundation, 2005), 220–21.

This perceived similarity is manifested in Byzantine art, as well. Visual references to the physical realities of carved architecture are rarely encountered in Byzantine images. Even in some donor portraits, the patrons of rock-cut churches are depicted holding masonry models.[61] The substitution of masonry architecture for carved can be read as an evenness between—hence the interchangeability of—the two architectural expressions in the Byzantine perception.

Pearls and pitfalls of the study of rock-cut architecture

The diversity of rock-cut material and the creative processes involved is hardly surprising, considering their contextual variety in Byzantium. That being said, certain potentials and pitfalls remain consistent in the study of carved architecture. On the one hand, rock-cut spaces tend to survive in better conditions compared to their built counterparts, offering valuable information to understanding the past. On the other hand, the traditional methodologies of history and archaeology usually remain insufficient to interpret these monuments.

Surrounded by large rock masses, carved spaces are more resistant to both natural and human-induced destructions. The stone blocks, bricks, and revetments of the masonry structures are almost invariably reused in the construction of new buildings when the needs of a society change. On the contrary, rock-cut monuments do not provide precious construction material to spoliate easily, since they are essentially formed through subtraction from the bedrock. Moreover, as a result of their unique structural system, superstructures of carved spaces have a greater chance of survival than those of masonry buildings. Their preservation allows for a more nuanced understanding of daily life, economic activities, liturgy, and beyond.

The state of preservation at the rupestrian sites permits the study of utilitarian spaces and agricultural installations that medieval archaeology often remains unable to identify on account of the scarcity of sealed and undisturbed stratigraphy. As examples, I will address Byzantine kitchens, stables, and winemaking facilities. Rooms that are specifically designed for cooking are easily recognizable in rock-cut form, with their distinctive elevation, and many examples have been identified as such in Byzantine Cappadocia.[62] They are separate, rectangular rooms, equipped with shelves, mushroom-shaped ovens, and *tandır* ovens (circular cooking pits on the ground) and typically roofed by either conical or pyramidal vaults that terminate with a smoke hole. A specialized room for food preparation points to a more developed spatial arrangement than a simple hearth used for both heating and cooking and under-

61 In the thirteenth-century Kırkdamaltı Church at Peristrema, for example, the female donor, Lady Tamar, presents a masonry model to St. George that bears no reference to the amorphous form of the carved church itself: see Veronica Kalas, "Rock-Cut Architecture of the Peristrema Valley: Society and Settlement in Byzantine Cappadocia" (PhD diss., New York University, 2000), 154–55; Ousterhout, *Visualizing Community*, 241–42. However, the donor portraits in the rock-cut churches near the village of Ivanovo in northern Bulgaria reveal two remarkable exceptions: in the narthex of Tsurkvata, Bulgarian Tsar Ivan Alexander (1331–1371) is represented holding the model of a rock outcrop with some architectural details. Similarly, the female donor in the so-called demolished church presents a rock church to the patron saints: Handjiyski, *Rock Monasteries*, 22–23; Tania Velmans, "Les fresques d'Ivanovo et la peinture byzantine à la fin du moyen âge," *Journal des savants* 1 (1965): 381–82.

62 Veronica Kalas lists 23 rock-cut kitchens in Cappadocia and mentions one example outside the region, carved below the medieval city of Ani: Veronica Kalas, "The Byzantine Kitchen in the Domestic Complexes of Cappadocia," in *Archeology of the Countryside in Medieval Anatolia*, eds. Tasha Vorderstrasse and Jacob Roodenberg (Leiden: Nederlands Instituut voor het Nabije Oosten, 2009). Another as-yet-unpublished rock-cut kitchen is preserved in Kaynarca Village in eastern Thrace.

lines the social status of the inhabitants.[63] Similarly, a large number of medieval rock-cut stables are preserved in Cappadocia. The height and articulation of mangers indicate which type of livestock was kept inside. The size, design, and placement of the stables provide information about the number of animals, the wealth of their owners, and pastoral activities at large.[64] A series of other utilitarian spaces, exceptionally well-preserved in rock-cut form, allows further contextualization of the quotidian life and economic activities in agrarian settlements—rock-cut winemaking facilities, for example, are characterized by two interconnected basins in the most basic layout: a treading floor for pressing and a smaller collecting vat at a slightly lower level to drain the grape must. Larger wineries may include multiple treading floors and collecting vats, separate fermentation vats, and storage units.[65]

It is evident in the above examples that rock-cut architecture offers many insights into the relatively less-explored areas of everyday life in Byzantium. For instance, during the survey at Erdemli in Kayseri, 44 winemaking facilities were documented around the so-called Saray Monastery on the southern bank of the valley, a three-leveled rock-cut complex dating to the eleventh century, while the agrarian settlement itself is located on the opposite side. The complex, presumably the residence of a large landowning family, seems to have controlled the agricultural production of the village, the primary economic activity of which was viniculture.[66] Another example of a deliberately planned rupestrian wine production area has been discovered in the medieval village of Mavrucandere in southern Cappadocia. The 14 extant rock-carved wine presses in close proximity to one another suggest a roughly calculated annual production of 17,000 liters of wine if each collecting vat was filled only once a year. Either controlled by a rural aristocratic family or a group of small landowners, the large-scale wine production in Mavrucandere indicates an economy based on viniculture, possibly related to the wine trade in the region or to provisioning the Byzantine army.[67]

As it is better preserved, rock-cut religious architecture provides evidence to study church interiors. The furniture in built churches was made of either perishable or precious materials and simply removed from its original context, leaving almost no trace behind. The furniture in the carved churches, however, is often hewn out from the bedrock and has a better chance of survival. Even after their removal or destruction, the traces on the rock walls are indica-

63 Kalas, "The Byzantine Kitchen in the Domestic Complexes of Cappadocia," 117. The courtyard complexes in Cappadocia with extant kitchens have no dining halls with carved furniture. Fatma Gül Öztürk argues that they may have been used to cook not for the household but for larger communities, perhaps occasionally for the military camps, as their unexpectedly large scale implies: see Fatma Gül Öztürk, "The Unusual Separation of Cappadocian Refectories and Kitchens: An Enigma of Architectural History," *METU Journal of the Faculty of Architecture* 29, no. 1 (2012).

64 Filiz Tütüncü cataloged the rock-cut stables in the Çanlı Kilise, Açıksaray, and Selime-Yaprakhisar settlements in Cappadocia. Based on her observations on still-in-use examples in the region, she classified the mangers and proposed some standards for three different groups of domesticated animals—sheep and goats, cattle and donkeys, and mules and horses: see Filiz Tütüncü, "The Land of Beautiful Horses: Stables in Middle Byzantine Cappadocia" (MA thesis, Bilkent University, 2008), esp. 44. For a more recent study of horse breeding in the Middle Byzantine period that combines the textual and archaeological evidence, including the rock-cut stables in Cappadocia, see Filiz Tütüncü-Çağlar, "Tracing the Hoof-Prints of Byzantine History: Horses and Horse Breeding in the Middle Byzantine Period," in *Questions, Approaches, and Dialogues in Eastern Mediterranean Archaeology*, eds. Ekin Kozal, Murat Akar, Yağmur Heffron, Çiler Çilingiroğlu, Tevfik Emre Şerifoğlu, Canan Çakırlar, Sinan Ünlüsoy, and Eric Jean (Münster: Ugarit-Verlag, 2017).

65 Many open-air rock-cut winemaking installations survive from the Late Antique and Byzantine periods, especially in Lycia, Cilicia, and the Levant. Among others, see Adnan Diler, "The Most Common Wine-Press Type Found in the Vicinity of Cilicia and Lycia," *Lykia* 2 (1995); Ümit Aydınoğlu and Erkan Alkaç, "Rock-Cut Wine Presses in Rough Cilicia," *Olba* 16 (2008); Rafael Frankel, "Presses for Oil and Wine in the Southern Levant in the Byzantine Period," *Dumbarton Oaks Papers* 51 (1997). The winemaking facilities in Byzantine Cappadocia, however, are covered by rock-cut ceilings, generally with a ventilation hole.

66 Nilay Çorağan Karakaya, "Kayseri'nin Yeşilhisar İlçesi, Erdemli Vadisi'ndeki Bizans Dönemine Ait Sosyal İçerikli Yapılar," in *Uluslararası Katılımlı XV. Ortaçağ ve Türk Dönemi Kazıları ve Sanat Tarihi Araştırmaları Sempozyumu*, eds. Zeliha Demirel Gökalp, Nilgün Çöl, Zeynep Ertuğrul, Selda Alp, and Hasan Yılmazyaşar (Eskişehir: Anadolu Üniversitesi, 2012), 151–52; Ousterhout, *Visualizing Community*, 313–17.

67 Nilüfer Peker, "Agricultural Production and Installations in Byzantine Cappadocia: A Case Study Focusing on Mavrucandere," *Byzantine and Modern Greek Studies* 44, no. 1 (2020).

tive of the former arrangements. The extant rock-cut furniture in Byzantine carved churches (benches, water basins, *templa*, altars, *ambones*, and many others) is instrumental in reconstructing the interior arrangements, understanding the regional liturgical variations, and assessing the functional nuances in individual ecclesiastical monuments.[68] Well-preserved sanctuaries of the carved churches provide archaeological evidence to determine the various functions that the side rooms flanking the apse might have served.[69] Similarly, the discussion of the evolution of the Byzantine sanctuary barrier largely benefits from the rock-cut examples in Cappadocia and southern Italy.[70]

In the remainder of this section, I discuss the inherent problems of the study of rock-cut material that complicate a historical interpretation, above all, complex chronologies. Most of the rock-cut sites are rural in character, and except for a few fortunate cases, directly related written evidence to interpret carved architecture is absent. In this regard, the hagiographic literature and *typika* afford historical information to understand how some of the rock-cut monasteries were established, yet the reconstruction of the successive phases of carving, decoration, use, and repair is not always entirely possible. The textual evidence about Cappadocia, for example, almost fully fades out for the period after Late Antiquity to which most of the surviving carved spaces are dated. In the absence of datable inscriptions, the chronology largely relies on the stylistic comparison of wall paintings, carved decoration, and architecture; none of them can provide firm results.[71] Even though a relative chronology may be suggested in most cases, it is often difficult to estimate the time intervals between the subsequent phases and even more complicated to date the initial carving.

The continuous use of rock-cut spaces poses another difficulty. As they preserve their fundamental integrity over time, many carved spaces were converted to new functions and continuously used beyond their initial context of creation. They are easily sculpted into new purposes and transformed, both in reality and perception. The tenth-century funerary inscription of the priest Anton in the monastery near the village of Krepcha in Bulgaria casting a curse on whoever attempts to convert the rock-cut church into a granary indicates that the practice neither necessarily required a long period after the establishment of the site nor is exclusively a modern one.[72] Many carved spaces were later repurposed for wine production or to function as sheepfolds, stables, dovecotes, and beyond. Sadly, the adaptation of new functions often causes a loss of evidence. Additionally, the later carvings are hard to pinpoint in many cases, unless they create a recognizable irregularity.

The traditional methodologies of archaeology do not reveal much when it comes to Byzantine rock-cut architecture. Along with artifact analysis, micromorphological studies (microscopic examination of thin sections prepared from undisturbed blocks of sediments) are applied in prehistoric caves to detect occupation layers, as well as to understand the paleoenvironment and post-depositional history of a

68 Sue-Anne Wallace, "Liturgical Planning in Some Cappadocian Churches: A Re-Evaluation Following Recent Excavations in Central Anatolia," *Mediterranean Archaeology* 3 (1990); Sue-Anne Wallace, "Byzantine Cappadocia: The Planning and Function of Its Ecclesiastical Structures" (PhD diss., Australian National University, 1991); Natalia Teteriatnikov, *The Liturgical Planning of Byzantine Churches in Cappadocia* (Roma: Pontificio Istituto Orientale, 1996); Nicole Lemaigre Demesnil, *Architecture Rupestre et Décor Sculpté En Cappadoce (Ve–IXe Siècle)* (Oxford: Archaeopress, 2010), 151–56; Ousterhout, *Visualizing Community*, 169–75.

69 Neslihan Asutay-Effenberger, *Byzantinische Apsisnebenräume: Untersuchung zur Funktion der Apsisnebenräume in den Höhlenkirchen Kappadokiens und in den mittelbyzantinischen Kirchen Konstantinopels* (Weimar: VDG, Verlag und Datenbank für Geisteswissenschaften, 1998).

70 Epstein, "The Middle Byzantine Sanctuary Barrier." For a comprehensive study of sanctuary barriers in Cappadocian churches, see Neslihan Asutay-Effenberger, *Templonanlagen in den Höhlenkirchen Kappadokiens* (Frankfurt am Main: Peter Lang, 1996). For the templa in the rupestrian churches of southern Italy, see Franco Dell'Aquila and Aldo Messina, "Il Templon nelle chiese rupestri dell'Italia Meridionale," *Byzantion* 59 (1989).

71 Öztürk, "Rock-Cut Architecture," 151.

72 Handjiyski, *Rock Monasteries*, 14–15.

site.[73] By contrast, undisturbed archaeological stratigraphy is rare in Byzantine carved spaces, where the methodology has never been applied.

It has been remarked that hewn-out spaces do not provide actual stratigraphy but merely post-occupation accumulations.[74] Although cave archaeology is a well-established field,[75] only a few among the Byzantine rupestrian sites have been the subject of archaeological excavations and systematic stratigraphic documentation. Among them, the excavations at the five rock-cut hermitages in the southern section of the Jordanian Desert stand out. The stratigraphic data helps to reveal daily life in these Early Christian rock-cut *lavrai* beyond the hagiographic sources. On the one hand, the ceramic chronology enabled excavators to identify and date several phases of occupation; on the other hand, the archaeological finds revealed relatively high levels of living conditions and a more diverse diet than the literary evidence indicates.[76]

François-Xavier Fauvelle-Aymar and colleagues argue that the stratigraphy of rock-cut monuments can be analyzed through the carving phases, presence or absence of sedimentation layers, and deposits of the removed rock.[77] Elsewhere, a comparative analysis of carving techniques is considered to be useful in determining subsequent phases. Certain surface treatments may also indicate a rough chronology, albeit far from being definite.[78] Likewise, adopting a "traceology" approach and with the assistance of ethnoarchaeology, Anaïs Lamesa defines negative stratigraphic units and constructs a Harris matrix to determine the carving phases of Göreme church 4b.[79] Indeed, carved spaces offer rich material to be analyzed with non-destructive methods of archaeology. However, the interpretation of layers of past human activity on rupestrian walls requires a methodology different than the one employed in the archaeology of built architecture, since carved spaces are created with successive phases of elimination and modeling of the rocky material.[80] The imprints on a rock surface, resulting from the removal of the material, present a key to identifying a relative chronology and analyzing life at a rock-cut site. For this reason, "an autoptic reading" is essential to observe the uniformity of a hewn-out site and particularly the type of irregularity on the rock, distinguishing at the same time the differences between the marks of natural and anthropogenic origin.[81] Nicola Masini describes the interruptions and disturbances on carved elements as indications of an interface between one carving phase and another. Seen in this way, the analysis of successive layers on a rock-cut wall is similar to the archaeological interpretation of aerial imagery that reconstructs the overlapping and intersecting layers of a landscape, identifying ruptures, anomalies, and continuities in certain patterns.[82]

73 Panagiotis Karkanas, "Cave Sediment Studies in Greece: A Contextual Approach to the Archaeological Record," in *Stable Places and Changing Perceptions: Cave Archaeology in Greece*, eds. Fanis Mavridis and Jesper Tae Jensen (Oxford: Archaeopress, 2013).

74 Ousterhout, *Visualizing Community*, 271.

75 See, for example, Fanis Mavridis and Jesper Tae Jensen, eds., *Stable Places and Changing Perceptions: Cave Archaeology in Greece* (Oxford: Archaeopress, 2013). This edited volume presents methodological advancements in the scholarship of cave spaces in modern Greece with a broad chronological focus from prehistory to Late Antiquity. Byzantine use of cave spaces, however, was only mentioned in passing.

76 Many fragments of storage jars, jugs, bowls, table *amphorae*, fragments of windowpanes, glass bottles, iron nails, and basketry finds, as well as organic remains revealing the hermits' dietary habits, were discovered during the excavations: see Patrich, Arubas, and Agur, "Monastic Cells."

77 This methodology was applied to establish a relative chronology for the rock-cut churches of Lalibela in Ethiopia, although it was not possible to give precise dates with the material at hand: Fauvelle-Aymar et al., "Rock-Cut Stratigraphy: Sequencing the Lalibela Churches," *Antiquity* 84, no. 326 (2010).

78 Öztürk, "Rock-Cut Architecture," 151.

79 The harder inclusion hidden in the rock necessitated a change of design during the carving, and the church was left partly unfinished. This methodology may not be equally effective in all rock-cut spaces, less so in the finely finished ones. Lamesa, "Methods for Rock-Hewn Worksite Analysis."

80 Masini, "Metodologie di Rilievo," 98.

81 Tedeschi, "Analisi Tecnica del Monumento," 261.

82 Masini, "Metodologie di Rilievo," 99, 106.

Relatively less exposed to the natural elements, the interior spaces of rock-cut monuments need to be considered as complex stratigraphic accumulations. I think the difficulty lies in the fact that at rupestrian sites, more than others, many processes subtract the physical material, while few others add to it. The careful reconstruction of each layer of natural and human activities in carved spaces—whether sedimentation, rockfall, erosion, or carving, plastering, painting, repainting, maintenance, or any other residues of past use—contributes to our understanding of their former lives. An archaeology-oriented approach is responsible for a change in the interpretation of rock-cut sites as complex landscapes serving both the religious and secular needs of past societies. In the third section below, I further discuss the effects of this relatively recent development on the scholarship on Byzantine Cappadocia.

CHANGING SCHOLARLY TENDENCIES IN CAPPADOCIAN STUDIES

Modern scholars have long been puzzled by the rupestrian landscapes in which man-made interventions are intertwined with natural elements. The perceived sanctity of caves in the textual sources and physical realities of outstanding rock formations, at times, have evoked scholarly misconceptions. What appears to be unusual and otherworldly introduced spiritual connotations and eventually contributed to the construction of the monastic myth around many rock-cut settlements. Here, I focus on a change in the interpretative outlook in the historiography of Byzantine Cappadocia. The assumption that the medieval inhabitants of the region were almost exclusively monks and hermits had its roots in the explorations and travelogues of the eighteenth and nineteenth centuries. In the early twentieth century, the interests in systematical catalogs and stylistic analyses of extant wall paintings in the Cappadocian churches grew; so did the overreaching impact of the monastic identification that prevailed in the scholarship of the greater part of the century.[83] The idea that the extraterrestrial appearance of the landscape dictated sacred associations and attracted monastic communities still had considerable currency in the 1970s, as in Spiro Kostof's widely circulated book, *Caves of God*.[84]

Towards the end of the twentieth century, the identification of many sites as monasteries was revisited. The similarities in the spatial layouts of aristocratic oikoi and monasteries in Byzantium and the easy transition between them have been acknowledged.[85] The architectural and topographical elements that were previously recognized as indicators of monastic use, such as precinct walls, a major church building, courtyards, series of small rooms, rock-cut spaces, natural caves, and a hardly accessible location, are now accepted to correspond to diverse functions and settlement types.[86] In the case of Cappadocia,

83 Veronica Kalas, "Early Explorations of Cappadocia and the Monastic Myth," *Byzantine and Modern Greek Studies* 28 (2004): 101–2. Catherine Jolivet-Lévy maintains that the generalized discussions of the earlier monastic myth to promote the secular character of rock-cut complexes have had a negative impact on Cappadocian scholarship: for a critical historiographic study, see Catherine Jolivet-Lévy, "Byzantine Settlements and Monuments of Cappadocia: A Historiographic Review," *Eastern Christian Art* 9 (2012–2013): 57.

84 Paul Magdalino, "The Byzantine Aristocratic Oikos," in *The Byzantine Aristocracy, IX to XIII Centuries*, ed. Michael Angold (Oxford: BAR, 1984), 94, 96.

85 Spiro Kostof, *Caves of God: The Monastic Environment of Byzantine Cappadocia* (Cambridge: MIT Press, 1972).

86 Stephen Hill, "When Is a Monastery Not a Monastery?" in *The Theotokos Evergetis and Eleventh-Century Monasticism*, eds. Margaret Mullett and Anthony Kirby (Belfast: Belfast Byzantine Enterprises, 1994).

the exclusively spiritual association of the rupestrian landscape appears to be a modern construction that originated in the early scholarship.[87] The argument does not negate the presence of monasteries but instead suggests an intermingled coexistence of secular and religious settlements in the region.[88] This reading was possible owing to the then-recent scrupulous archaeological and architectural surveys that gradually brought to light the secular character of Byzantine Cappadocia.

In 1985, Lyn Rodley's *Cave Monasteries of Byzantine Cappadocia* heralded a novel, archaeology-oriented methodology that prioritized contextual data and the spatial organizations of the rock-cut complexes.[89] The study expanded scholarly interests outside art historical discussions, including the carved spaces with few, or no, wall paintings. Rodley offered a holistic interpretation of the rock-cut sites, thanks to detailed architectural documentation of a selection of complexes. Nevertheless, she almost exclusively insisted on monastic identifications, as reflected in the title of her book.[90]

In 1997, reevaluating the material published by Rodley, Thomas Mathews and Annie-Christine Daskalakis-Mathews acknowledged that many of the courtyard complexes in Cappadocia should be better understood as aristocratic mansions. Their residential identification relied on the absence of refectories, the secondary position or omission of churches, and the overall spatial arrangement that they associated with the inverted T-plan of Islamic domestic architecture.[91] In the same year, Robert Ousterhout published the preliminary results of the archaeological survey at the Çanlı Kilise settlement, and in a separate essay, he discussed the material that led him to question the monastic identity of Byzantine Cappadocia.[92] In his later book on the subject, Ousterhout visualized a prosperous settlement with built and rock-cut elements. It was the result of a four-year-long survey and marked a turning point in the research on Cappadocia. The author identified only one of the 23 carved complexes as a monastic foundation, Area 17, and all the rest as residential units in a prosperous settlement, inhabited by people of high social standing in the tenth and eleventh centuries.[93]

Following the fieldwork at the Çanlı Kilise settlement, further archaeological research enabled scholars to reconsider the long-accepted identifications of other Cappadocian sites. The architectural survey in the settlement at Selime-Yaprakhisar reveals a similar case.[94] As a result of the fieldwork, fifteen courtyard complexes were identified in the settle-

87 Veronica Kalas, "Challenging the Sacred Landscape of Byzantine Cappadocia," in *Negotiating Secular and Sacred in Medieval Art: Christian, Islamic, and Buddhist*, eds. Alicia Walker and Amanda Luyster (Farnham: Ashgate, 2009).

88 The concentration of monastic establishments is now accepted to be no denser than elsewhere in the Byzantine Empire: Ousterhout, *Visualizing Community*, esp. 478.

89 Rodley, *Cave Monasteries.*

90 As an exception to this scheme, she questions the monastic character of Açıksaray in the third chapter, leaving a secular identification open.

91 Thomas F. Mathews and Annie-Christine Daskalakis-Mathews, "Islamic-Style Mansions in Byzantine Cappadocia and the Development of the Inverted T-Plan," *Journal of the Society of Architectural Historians* 56, no. 3 (1997).

92 Robert Ousterhout, "Survey of the Byzantine Settlement at Çanlı Kilise in Cappadocia: Results of the 1995 and 1996 Seasons," *Dumbarton Oaks Papers* 51 (1997); Robert Ousterhout, "Questioning the Archaeological Evidence: Cappadocian Monasticism," in *Work and Worship at the Theotokos Evergetis, 1050–1200*, eds. Margaret Mullett and Anthony Kirby (Belfast: Belfast Byzantine Enterprises, 1997).

93 Ousterhout, *A Byzantine Settlement in Cappadocia*, esp. 199–215.

94 Kalas, "Rock-Cut Architecture of the Peristrema Valley;" Veronica Kalas, "The 2004 Survey of the Byzantine Settlement at Selime-Yaprakhisar in the Peristrema Valley, Cappadocia," *Dumbarton Oaks Papers* 60 (2006); Veronica Kalas, "Cappadocia's Rock-Cut Courtyard Complexes: A Case Study for Domestic Architecture in Byzantium," in *Housing in Late Antiquity: From Palaces to Shops*, eds. Luke Lavan, Lale Özgenel, and Alexander Sarantis (Leiden: Brill, 2007).

ment, many with multi-register monumental rock façades, overlooking the large farmlands in the valley. Based on their spatial characteristics, Veronica Kalas defines them as mansions of the landed military aristocracy, probably carved around the same time in the tenth and eleventh centuries. One of them stands out as the largest and most pretentious rock-cut residence in Cappadocia: the so-called Selime Kalesi, which is considered to be the principal complex of the settlement, "a domestic residence of a local warlord." Furthermore, Kalas suggests that several funerary chapels on the outskirts of the settlement define the surrounding landscape and create a sacred barrier on the edge of the inhabited land.[95] This second reading explains the sheer number of extant rock-cut churches in the region, beyond the monastic-lay dichotomy.

Likewise, Açıksaray was previously recognized as a monastic site, a historiographic fallacy going back to the early explorations of Guillaume de Jerphanion, although he never visited the site.[96] This identification was first questioned by Lyn Rodley who implied a secular character based on the small number and "apparent lowly status" of churches in the area.[97] More recently, Fatma Gül Öztürk painstakingly surveyed nine courtyard complexes and thirteen standalone churches at the settlement.[98] She documented five large-scale stable units with high mangers that altogether provide enough space for more than fifty horses. Öztürk argues that the courtyard complexes at the core of the settlement were planned and executed together in the tenth and eleventh centuries; the central reception halls and monumental façades indicate the presence of wealthy landowners whose primary occupation was horse breeding.

As the above examples illustrate, the new interpretative outlook not only results in a paradigm shift away from the monastic identification but also signifies a change in the scholarly approach, with a greater focus on the everyday life. Around the same time, with the acknowledgment of the courtyard complexes' residential character, a funerary interpretation has alternatively been put forward for some of the carved churches in the region. Alexander Grishin adopted an early critical approach towards the monastic myth. In his article on the church of Yusuf Koç at Avcılar, he argued for an essentially sepulchral function for the churches with a large number of tombs and little evidence of use for regular liturgical celebrations.[99] Along the same lines, Sue-Anne Wallace urged a reconsideration of the overestimated scale of monastic establishments in Cappadocia. In her doctoral dissertation, she suggested a private funerary function for many rupestrian churches in the region, essentially relying on a specific sanctuary arrangement, presumably intended for commemorative services.[100]

It is now commonly accepted that the commemoration of the dead played an important role in the formation of many rock-cut sites. In Byzantine Cappadocia, mortuary practices show a large variety, and in some cases, a funerary association substitutes a monastic one. For example, more than 30 rock-cut refec-

95 Veronica Kalas, "Sacred Boundaries and Protective Borders: Outlying Chapels of Middle Byzantine Settlements in Cappadocia," in *Sacred Landscapes in Anatolia and Neighboring Regions*, eds. Charles Gates, Jacques Morin, and Thomas Zimmermann (Oxford: Archaeopress, 2009).

96 Fatma Gül Öztürk, "Transformation of the 'Sacred' Image of a Byzantine Cappadocian Settlement," in *Architecture and Landscape in Medieval Anatolia, 1100–1500*, eds. Patricia Blessing and Rachel Goshgarian (Edinburgh: Edinburgh University Press, 2017), 139.

97 Rodley, *Cave Monasteries*, 148–50.

98 Fatma Gül Öztürk, "A Comparative Architectural Investigation of the Middle Byzantine Courtyard Complexes in Açıksaray – Cappadocia: Questions of Monastic and Secular Settlement" (PhD diss., Middle East Technical University, 2010); Fatma Gül Öztürk, "Açıksaray 'Open Palace': A Byzantine Rock-Cut Settlement in Cappadocia," *Byzantinische Zeitschrift* 107, no. 2 (2014).

99 Alexander D. Grishin, "The Church of Yusuf Koç near Göreme Village in Cappadocia," *Mediterranean Archaeology* 3 (1990): 40–41.

100 Wallace, "Byzantine Cappadocia," 248–55.

tories with extant *trapezai* and benches exist around the larger settlement area at Göreme, which was previously seen as a sole indicator of monastic use. Nevertheless, the absence of cells, dormitories, kitchens, and other utilitarian spaces largely invalidates this identification. Moreover, not all the refectories can be securely associated with individual churches that are less accessible and suited for smaller congregations. Robert Ousterhout interprets the extraordinary concentration of the *trapezai* as neither monastic nor domestic but associates it with a local tradition related to the commemoration of the dead.[101] He suggests a primarily funerary identification for the site, where some monastic foundations might have developed in relation to the burials of local elites. This reading of the evidence with a larger interest in connecting the rock-cut spaces to their surrounding built, carved, and natural environments challenges the previous misconceptions derived from the study of the monuments in isolation. More recently, in his book *Visualizing Community*, Ousterhout adopts a holistic approach to interpreting Byzantine Cappadocia as "a living populated landscape."[102] The rich archaeological material reaches its full potential to examine the landscape organizations, social structures, economic activities, and daily life in different types of settlements, such as isolated aristocratic residences, small villages, large agrarian settlements, administrative and military centers, fortresses, and underground cities.

The closely related and roughly contemporary historiographic turn in the scholarship of rock-cut settlements in southern Italy deserves a brief mention here.[103] Similar to the case in Cappadocia, starting from the final decades of the nineteenth century, a Thebaid myth was constructed around the presupposed eremitic and pan-Byzantine character of the region, with an overemphasis on the colonization of southern Italy by Byzantine monks who flew from the advance of the Arabs in the eastern provinces. From the late 1960s onwards, however, systematic recording of individual sites, archaeological research, and re-reading of the relevant written sources slowly made way for the reconstruction of dynamic settled landscapes. As a result, rigorous inquiries made it possible to insert the rock-cut churches, previously studied in isolation, into their proper historical context and a living environment constructed in negative. In addition to the Greek-speaking ascetics, the historiographic shift brought the agrarian lay society of the Byzantine and Norman periods into discussion. As in Cappadocia, this change in the interpretative outlook provided insights into daily life and gave voice to the shepherds, farmers, and artisans—in short, the diverse set of protagonists in these rupestrian settlements.

In a nutshell, non-destructive archaeological approaches that give priority to contextual data and integration with the landscape have proved to be useful in the complete transformation of deep-seated misconceptions. The above-discussed paradigm shifts

101 Robert Ousterhout, "Remembering the Dead in Byzantine Cappadocia: The Architectural Settings for Commemoration," in *Architecture of Byzantium and Kievan Rus from the 9th to the 12th Centuries*, eds. Oleg Ioannisian and Denis Jolshin (St. Petersburg: The State Hermitage Publishers, 2010), 93–96. For a recent examination of "the problem of Göreme," see Ousterhout, *Visualizing Community*, 411–78. For a critical review of the hypothesis, see Jolivet-Lévy, "Byzantine Settlements and Monuments of Cappadocia," 57.

102 Ousterhout, *Visualizing Community*.

103 For a succinct overview of the scholarship on rupestrian settlements in southern Italy, see Pietro Dalena, "Dalla Civiltà in Grotta alla Civiltà del Vivere in Grotte," in *Il Contesto e L'immagine della Civiltà Rupestre: Nuovi percorsi, fonti e tecniche di ricerca. Atti del VII Convegno internazionale sulla civiltà rupestre: Savalletri di Fasano (BR), 17–19 novembre 2016*, ed. Enrico Menestò (Spoleto: Fondazione Centro italiano di studi sull'alto medioevo, 2018), 32–39. Also see Jean-Marie Martin, "Un problema storiografico e storico," in *Il Contesto e L'immagine della Civiltà Rupestre: Nuovi percorsi, fonti e tecniche di ricerca. Atti del VII Convegno internazionale sulla civiltà rupestre: Savalletri di Fasano (BR), 17–19 novembre 2016*, ed. Enrico Menestò (Spoleto: Fondazione Centro italiano di studi sull'alto medioevo, 2018); Cosimo Damiano Fonseca, "Non Solo Chiese, Non Solo Grotte," in *Le aree rupestri dell'Italia centro-meridionale nell'ambito delle civiltà italiche: conoscenza, salvaguardia, tutela. Atti del IV Convegno internazionale sulla civiltà rupestre: Savalletri di Fasano (BR), 26–28 novembre 2009*, ed. Enrico Menestò (Spoleto: Fondazione Centro italiano di studi sull'alto medioevo, 2011).

are instructive for the interpretation of Byzantine hewn-out spaces in general. This does not negate the presence of rock-cut monasteries and the spiritual association of cave spaces but demands a more balanced reading of the material as an alternative mode of architectural expression.[104] The identifications with monastic, secular, or primarily funerary functions offer alternative interpretations for the rock-cut sites, yet none of them rules out the other. Each case deserves separate treatment in its proper context. In the final analysis, the above survey reveals that a balanced consideration of historical, spatial, and topographic data allows for a more nuanced picture of everyday life in rocky environments.

NEW INTERPRETIVE FRAMEWORKS

A series of new interpretative frameworks open fresh avenues of research and present different ways to approach carved architecture. This section starts with a commentary on the influence of spatial discourse in the scholarship on Byzantine rock-cut spaces. Then, I present a selection of studies focusing on relatively less explored aspects of rupestrian sites, namely the complex design principles, Byzantine identities, and the creation of sacred space.

In the last three decades, many disciplines in the social sciences and humanities have experienced a conceptual change that regards space as an important parameter in the production and transformation of cultural notions, as well as a constantly reshaped and reimagined dynamic entity.[105] Henri Lefebvre pioneered the idea that each society creates its own peculiar space, which he defined not as a given, physical reality but as a fluid, cultural production, continuously transformed by social interactions.[106] His ideas became the most influential in the study of spatial paradigms in premodern societies.[107] The so-called spatial turn invalidated the earlier subordination of space to time in history writing and reintroduced spatial discourses into social theory.[108] The field of Byzantine studies, although not much engaged with the theoretical discussions that the spatial turn brought to the forefront, has been affected by these conceptual developments and became more concerned with spatial issues in Byzantine culture. In this direction, recent projects that combine the methodologies of survey archaeology and textual studies display compelling results in the understanding of spatial practices in Byzantium and the reconstruction of Byzantine lived spaces.[109] Similarly, the prominent role given to the spatial and topographical settings in Cappadocian studies from the mid-1980s onwards can be considered a reflection of the renewed interest in the spatial aspects of Byzantine carved spaces. The studies that are discussed in the previous section benefit methodologically from the ideas generated by the spatial turn, even though it is not explicitly stated.

The prejudice towards carved architecture was not limited to their monastic identification. In the early scholarship, Byzantine rock-cut spaces were regard-

104 Among others, Catherine Jolivet-Lévy states that an overemphasis on the secular character of Cappadocia may result in an equally distorted picture: see Jolivet-Lévy, "Byzantine Settlements and Monuments of Cappadocia," 58.

105 Barney Warf and Santa Arias, "Introduction: The Reinsertion of Space into the Social Sciences and Humanities," in *The Spatial Turn: Interdisciplinary Perspectives*, eds. Barney Warf and Santa Arias (London: Routledge, 2009), esp. 1–4.

106 Henri Lefebvre, *The Production of Space*, trans. Donald Nicholson-Smith (Malden: Blackwell, 1974).

107 Megan Cassidy-Welch, "Space and Place in Medieval Contexts," *Parergon* 27, no. 2 (2010): 1.

108 Edward W. Soja, "Taking Space Personally," in *The Spatial Turn: Interdisciplinary Perspectives*, eds. Barney Warf and Santa Arias (London: Routledge, 2009), 12.

109 Myrto Veikou, "Space in Texts and Space as Text: A New Approach to Byzantine Spatial Notions," *Scandinavian Journal of Byzantine and Modern Greek Studies* 2 (2016): 144–46. For an overview and critical assessment of the role of survey archaeology in reconstructing Byzantine lived spaces, see Myrto Veikou, "The Reconstruction of Byzantine Lived Spaces: A Challenge for Survey Archaeology," in *Ἐν Σοφίᾳ Μαθητεύσαντες: Essays in Byzantine Material Culture and Society in Honour of Sophia Kalopissi-Verti*, eds. Charikleia Diamanti and Anastasia Vassiliou (Oxford: Archaeopress, 2019). Recent scholarship on Cappadocia is also included in this brief review.

ed as troglodytic shelters and associated with a lowly status, in line with the then-prevalent western perspective. On the contrary, many carved spaces display elaborate spatial organizations, sophisticated architectural arrangements, and ornamental details. Thus, they need to be considered as manifestations of advanced artistic and technical achievements of Byzantine society.

A change in this outlook has resulted in the appreciation of the creative processes in Byzantine rock-cut architecture in the current scholarship. Robert Ousterhout's examination of the role of sightlines in the planning of Tokalı Kilise in Göreme and Karabaş Kilise in Soğanlı Dere indicates subtle spatial schemes, although they initially appear to be irregular spaces.[110] He convincingly argues for an elaborate architectural layout at both sites that privileged certain viewpoints, above all the direct visual access between the hermit cell and the liturgical space. More recently, in her dissertation, Alice Lynn McMichael investigated the role of monumental ceiling crosses in the carved churches and how they channel the viewers' attention towards designed viewing experiences. The manipulation of gaze and movement provides insights into the intended usage of the space in its original context.[111] Both studies confirm careful planning and fundamentally invalidate the dullness previously attributed to rock-cut architecture.

Research on rupestrian sites benefits also from these new lines of inquiry in the dicipline. The studies of various ways in which members of a certain group constructed and manifested their identities and the complex relationships of multiple identity markers in Byzantium constitute a flourishing field.[112] Rock-cut spaces often render possible the partial reconstruction of the identities of individual patrons, groups of people, and members of a society. Among the above-cited studies, for example, each of the four roughly contemporary settlements in Çanlı Kilise, Selime-Yaprakhisar, Erdemli, and Açıksaray indicate a different social structure and primary economic activities.[113] The first displays a non-hierarchical settlement organization of a large group of military elites, while in Selime-Yaprakhisar, one of the rock-cut complexes stands out with its scale, pretentious architecture, and privileged position. Similarly, at Erdemli, a large rock-cut complex surrounded by numerous winemaking facilities, Saray Monastery, dominates the village and probably monopolized its agricultural production. Lastly, Açıksaray presents a large agrarian settlement populated by a landed aristocracy whose wealth relied on horse breeding. The multiple identities of the inhabitants and the social structure at each of these sites are reflected in the rupestrian environment. In terms of self-representation, B. Yelda Olcay Uçkan and Seçkin Evcim have examined even more telling material from neighboring Phrygia in an attempt to identify the artistic productions of non-orthodox religious groups. In this way, rock-cut architecture is described as an isolated ground for the self-expression of medieval subaltern communities.[114] As an integral element of Byzantine material culture and imagination, the study of rupestrian landscapes illuminates the diversity of Byzantine identities and the complex relations between them.

The hierotopical questions open further lines of inquiry for rock-cut architecture, bringing the space,

110 Robert Ousterhout, "Sightlines, Hagioscopes, and Church Planning in Byzantine Cappadocia," *Art History* 39, no. 5 (2016).

111 Alice Lynn McMichael, "Rising Above the Faithful: Monumental Ceiling Crosses in Byzantine Cappadocia" (PhD diss., City University of New York, 2018).

112 For a historiographic survey and a thorough consideration of identity and the other in Byzantine studies, see Koray Durak and Ivana Jevtić, "Identity and the Other in Byzantine Studies: An Introduction," in *Identity and the Other in Byzantium*, eds. Koray Durak and Ivana Jevtić (Istanbul: The Koç University Stavros Niarchos Foundation Center for Late Antique and Byzantine Studies, 2019).

113 For the Çanlı Kilise settlement, see nn. 92–93; for Selime-Yaprakhisar, see n. 94; for Erdemli, see n. 66; for Açıksaray, see n. 98.

114 Uçkan and Evcim, "The Other Beliefs in Byzantine Phrygia."

performance, and reception into discussion all at once. The sacred association remains prominent in the Byzantine perception of cave-like spaces. The paradigm shift towards a secular identification of Cappadocian courtyard complexes does not rule out the presence of rock-cut monasteries. In 2002, Alexei Lidov coined the term "hierotopy" to define "a form of vision" to investigate the creation of sacred space as "a special form of creativity."[115] The process requires a performance that differentiates a particular space from its surroundings, both in the creation and reception of the sacred. Lidov distinguishes hierotopy from hierophany by the former's focus on the spatial creation and final product of this performance. The idea provides an interpretive perspective to comprehending an important aspect of Byzantine culture, since religion, sanctity, and sainthood were essential for understanding the medieval imagination. In this framework, Nikolas Bakirtzis examined the creation of the sacred landscape of the monastery of St. John the Forerunner on Mount Menoikeion near Serres.[116] The Athonite monk Ioannikos established the monastery in 1270–1275 after fourteen years of seclusion in three cave dwellings on the mountain, together with his young nephew. Through these caves, the holy man made an almost-circular movement and defined the limits of the monastery's sacred space. The caves marked the landscape and provided the monks with a way to relate themselves to the founder of the monastery. In a similar manner, Natalia Teteriatnikov analyzed the hierotopical project of St. Neophytos in his Enkleistra and argued for the multiplication of *loca sancta* of the Holy Land in a Cypriote eremitic context.[117]

CONCLUSION

A large portion of what we materially have from the Byzantine Empire is related to carved architecture, yet it is often equated with inferiority and almost completely left out of the mainstream narratives of art and architecture.[118] In many regions, rock-cut spaces face total neglect, remaining undocumented and unstudied up to this day. On the other side of the coin, Byzantines' physical and conceptual involvement in the rupestrian landscapes provides us with unique insights into their daily life, social stratification, settlement organization, and artistic and architectural production, without which our understanding of Byzantium is destined to be incomplete.

Certain advantages (state of preservation, presence of extant furniture and decoration, etc.) and pitfalls (scanty textual evidence, complex chronologies, lack of stratigraphy, etc.) remain consistent in the study of rock-hewn architecture, despite its large geographical and temporal distribution. As this review of key sources reveals, the last three decades have witnessed a radical change in the trajectory of research on Byzantine rock-cut spaces. The scholarship on Cappadocia has shifted towards a secular identification of many rupestrian settlements previously considered to be unquestionably monastic. Recent studies of rock-cut environments, diverging from the decontextualized art historical readings spiced with theological discussions, have concentrated on the commemorative aspects, religious landscapes, construction of identities, patronage, creation of sacred spaces, complexity of spatial organizations, inventiveness of carvers, and so forth. With proper methodological and theoretical tools, this particular type of material has a lot to contribute to the studies

115 Lidov, "Hierotopy."

116 Nikolas Bakirtzis, "The Creation of an Hierotopos in Byzantium: Ascetic Practice and Its Sacred Topography on Mt. Menoikeion," in *Hierotopy: The Creation of Sacred Spaces in Byzantium and Medieval Russia*, ed. Alexei Lidov (Moscow: Indrik, 2006).

117 Natalia Teteriatnikov, "The Relic of the True Cross and Jerusalem Loca Sancta: The Case of the Making of Sacred Spaces in the St. Neophytos' Encleistra, Paphos," in *Hierotopy: The Creation of Sacred Spaces in Byzantium and Medieval Russia*, ed. Alexei Lidov (Moscow: Indrik, 2006).

118 The observations on the marginalization of Cappadocian monuments as "eccentric and provincial" hold for Byzantine carved architecture in general: see Ousterhout, *Visualizing Community*, 5. Although Cappadocia appears more frequently in recent survey books of Byzantine art and architecture, the same cannot be said for the rupestrian sites in the other regions of the Empire.

of daily life, liturgical and mortuary practices, domestic archaeology, monastic space, etc.

In conclusion, I argue that rock carving was a primary way through which Byzantines interacted with their surrounding environments in Cappadocia and beyond. Seen in this way, rock-cut and masonry architecture of any region should be regarded as two inherently different expressions of the same spatial concepts, symbolically and physically related to one another. I further believe that it is crucial to understand the motivations behind the creation, use, and reuse of rock-cut spaces and to visualize how they were perceived in their medieval contexts. Although they were created through a process of material removal, the "emptied" carved spaces became replete with diverse meanings and associations. The interpretative tools that are reviewed in this paper provide fresh ways to re-evaluate old material, as well as those yet to be discovered, and perhaps to reinstate their rightful place in Byzantine material culture.

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ÖZET

Alternatif bir mimari ifade biçiminin sonucu olarak değerlendirilebilecek kayaya oyulmuş mekânlarla Bizans İmparatorluğu'nun neredeyse her bölgesinde karşılaşmaktayız. Bireylerin yaşamı süresince ve ölümlerinden sonra çeşitli işlevlere karşılık gelen mağaralar ve kayaya oyulmuş mekânlar pek çok sembolik ve kültürel anlamla donatılmıştır. Bunun bir sonucu olarak, günümüze ulaşan Bizans maddi kültürünün büyük bir kısmı kayaya oyulmuş alanlarla ilişkilidir. Buna karşın kaya mimarisi genellikle ikinci plana atılmış ve Bizans tarihine ilişkin anlatılara nadiren dahil edilmiştir. Son yıllarda, kaya oyma yerleşimleri çeşitli açılardan ele alan çalışmaların artması ve kayaya oyma yapıları barındıran tarihsel çevreye yönelik yeni yaklaşımlar, bu bakış açısını değiştirmeye başlamış ve Bizans kaya mimarisine odaklanan bir sentezi zorunlu kılmıştır. Bu inceleme, söz konusu arkeolojik malzeme özelinde eleştirel bir değerlendirme ortaya koymayı ve fenomeni olabildiğince kapsamlı bir şekilde tartışmayı amaçlamaktadır. Bu doğrultuda, metinde, kaya oyma pratiğine Bizans toplumunun yaşadığı çevreyle ilişki kurmak ve peyzajı dönüştürmek için kullandığı birincil araçlardan biri olarak yaklaşılmakta ve kaya oyma ve yığma mimari gelenekleri arasındaki ilişki incelenmektedir. Ayrıca, Bizanslıları kayaya oyma yapılar meydana getirmeye yönlendirmiş olabilecek pratik nedenler ve mağaralara atfedilen kutsallık üzerinde durulmaktadır. Kaya mimarisi, arkeoloji özelinde kendine has avantajlar ve zorluklar ortaya koymaktaysa da özellikle görece iyi korunagelmiş olması nedeniyle, kayaya oyulmuş malzeme, mekânsal pratikler, ekonomik faaliyetler, günlük yaşam ve daha pek çok konunun araştırılmasına büyük katkı sağlama potansiyelini barındırmakta. Eleştirel bir tarihyazımı çalışması niteliğinde olan bu metin, güncel araştırmaların seyrini değiştiren kavramlar üzerinde durmanın yanı sıra, eldeki yorumsal araçlara ve gelecek çalışmaların gidişatına yönelik bir değerlendirme de sunmakta. Sonuç olarak, burada ele alınan yayınlar, kaya oyma yapıların ve içinde bulundukları çevrenin uygun araçlar ve kuramsal çerçevelerle incelenmesi sonucunda, Bizans toplumuna dair daha kapsamlı ve incelikli bir anlayışı mümkün kıldığını vurgulamaktadır.

ANAHTAR KELİMELER

Kaya mimarisi, mağaralar, kaya oyma yerleşimler, tarihsel peyzaj, metodoloji