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Creative Thinking and Interdisciplinary Approaches to Byzantine Artistic Production

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Abstract Metal objects represent a valuable means to explore the process of artistic production in Byzantium. From gold to bronze, they offer insight into the relationship between crafts and the multiple parameters governing social life. The network of relations involved in the production, use, and distribution of metal objects also places them at the centre of intra- and interdisciplinary exchange among Byzantinists. The literature devoted to them originates within the various subdisciplines constituting Byzantine studies, ranging from epigraphy and philology to dynastic history and art history to archaeology. Their link to numismatics further opens horizons in the study of the Byzantine economy. The scholarly standards instituted across academic fields through interdisciplinary contacts and the knowledge brought to light by such exchanges have the multiplying effect of developing new areas of study and refining the methodologies applied to the analysis of metal objects.

Keywords Metalwork. Crafts. Inscriptions. Vocabulary. Epigrams.

Summary 1 Introduction. – 2 Epigraphy and the Byzantine Object. – 3 Converging Views on the Byzantine Object.Textual Evidence Recontextualised. – 4 Byzantine Economy, Wealth, and Artistic Production. Connected Methods and Approaches.

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1 Introduction

Interdisciplinary contacts are fostered when scholars in different fields of study – but sharing similar methods, materials, techniques, and questionings – conduct research looking in the same direction. The merging of approaches, sources, and data from differing disciplines can help clarify obscure information, test theories, and disprove or confirm hunches, enhancing knowledge about a topic and helping resolve unanswered questions. Sometimes the process brings to light new questions.

Numismatics, sigillography, epigraphy, philology, and archaeology all use precise methods that contribute to factualising history by pinpointing political, societal, and cultural events and shifts. In close connection with art history, they form the scaffolding of Byzantine studies and what is known today about the Byzantines and the empire they created. The aim here is to explore the development and a few specific instances of interdisciplinary contacts in the study of Byzantine artistic production fabricated from precious and base metal. The objects discussed here are either religious objects used in church ritual or private devotional practices or functional objects from daily life, including some invested with aesthetic or sentimental value. The focus of attention is the context of production and use, but in some instances the process of exchange is also taken into account.

During the last two decades, research on the crafted artistic object has been enhanced through the publication of exhibition and museum catalogues, corpuses, archaeological excavations. An increased interest in urban growth and domestic structures in Byzantium produced new perspectives on the study of material culture in parallel with ongoing study of court culture. Online databases have also fostered greater access to published and unpublished objects and museum collections, stimulating scholarly interest in the milieus and situations that created them.

2 Epigraphy and the Byzantine Object

Monumental inscriptions are essential testimonies at the service of Byzantine scholarship, conveying literal and figurative messages from the surfaces of city walls, façades of civic and religious buildings, and painted church interiors. By their very nature, but also depending on their location and content, they have fostered interdisciplinary exchanges between epigraphists, historians, art historians.[1]

1 Jolivet-Lévy, Kiourtzian 2013; Métivier 2012; Jolivet-Lévy, Lemaigre Demesnil, Kiourztian 2017; Jolivet-Lévy 2019. See also Morrisson 1992.

Inscriptions on objects have traditionally been of interest not only for the literal message they convey, but also as clues for determining their date of production. For a 1986 interdisciplinary symposium at Dumbarton Oaks on the vast ensemble of church silver known as the Kumluca, or Sion, treasure, Ihor Ševčenko conducted a study of the inscriptions. His contribution highlighted that the use of letter forms for dating objects can sometime be elusive (Ševčenko 1992, 40). In the case of the Kumluca silver, all the pieces date to the sixth century, but two variants of the letter *alpha* – one with a broken horizontal bar and the other with a slanted bar – were attested. Ševčenko proffered that the differences in the appearance of the letters was not indicative of a different date or a chronological evolution as some might assume. The difference was, however, of value in terms of classification. In this instance, and potentially in others, epigraphic assessment of the arrangement of words on the vessels and the lettering helped in identifying different groups of serial production within the hoard.

Inscriptions are not isolated features. Complementary parameters forming a whole in the production of inscribed objects include the layout and arrangement of the inscriptions vis-à-vis the decorative composition, applied images and motifs, materials from which the object is made, and manufacturing techniques. The occasions on which inscribed objects were used, including those with pseudo-inscriptions, have shed light on the use of apotropaic messaging as well on the aesthetic features of their functionality (Rhoby 2017; Walker 2015).

Let us look, for instance, at a group of sixth-century copper alloy buckets that share a distinctive decorative inscription made in the same manner with circular punches along the mouth of the vessels. An epigraphic examination reveals a lyre-shaped *omega* created from two separate loops and a cross-like *chi* as distinctive features of the lettering. Most of the buckets are domestic vessels bearing wishes of good health. One, in the Istanbul Archaeological Museums, appears to have been created as a gift to a church (Pitarakis 2015a, 354-5, no. 112) **[fig. 1]**. The donor, a certain Antipatros, invokes the fulfilment of a vow he made as well as salvation for himself and his household. Such buckets were part of a set that included a water basin and an ewer. Σικλότρουλλον (probably from σιτλότρουλλον), a compound noun – in Latin, *situla* (bucket) plus *trulla* (basin) – is attested in *De Cerimoniis* (1.50.159 [eds and transl. Dagron, Flusin 2020]) and may reference a set that included a *situla*, and/or a water basin, and an ewer. A water basin and ewer set, used for a hand-washing ritual at banquets is called a *cherniboxestin* (Mundell Mango 1986, 106-7; ByzAD, "cherniboxeston").[2]

2 http://typika.cfeb.org/index/synthese/445.

Figure 1 Copper alloy bucket. Istanbul Archaeological Museums, inv 852 M.

Letter forms and formulas tend to be closely linked to the material, shape, and function of an object. The dedicatory inscription of a sixth-century bronze polykandelon at the Louvre has a sequence of letters of varying sizes along with oversized vertical bars. The inscription reads "Κύριε μνήσθητὶ τοῦ δούλου σου Ἀβραμίου υἱοῦ Κωνσταντοῦτος" (Lord remember your servant Abraamios son of Konstantous). This polykandelon in the Louvre is one of the earliest known Byzantine lighting devices to became the focus of attention of a scholarly publication (Schlumberger 1893; Pitarakis forthcoming). Intrigued by an unusual genitive form of Konstantous in the inscription, Gustave Schlumberger consulted Salomon Reinach, who informed him that names ending in -οῦς, with the genitive -οῦτος, are feminine and that many examples are to be found in Egyptian papyri. A recent study of lapidary inscriptions from Karpathos by George Kiourtzian (2021, 83-4, no. 12) provides new insight into the name Κωνσταντοῦς. Kiourtzian identifies it as a feminine hypocorism (diminutive form of a name) of Κωνσταντία or Κωνσταντίνα, the genitive form of which should be Κωνσταντοῦδος. A local pronunciation may have resulted in -δος being rendered as -τος.

Every Byzantine secular and religious ritual involved the use of dedicated objects and related inscriptions. At lavish banquets in the sixth century, members of the aristocracy made use of a distinctive type of spoon with an elongated handle, a pear-shaped bowl, and a

disk that served as a thumb rest for gripping the utensil at the juncture of the handle and the bowl. The discs often feature a monogram, while the bowl and the handle were used for conveying a rich repertory of texts, illustrating the transmission of literary culture (Fournet, Bénazeth 2020). Some of the inscriptions are amusing sayings, and other are quotes from classical authors. They also include best wishes and evocations of possible conversations related to the dinner, suggesting that sets were at least sometimes created for specific events.

The greater comparative value of silver compared to bronze does not necessarily imply that bronze workshops worked essentially for a more modest clientele. Bronze was also a prized metal. One interesting epigraphic testimony comes from the name Ardabourios in the dedicatory inscriptions of two different types of objects. One is a silver chalice at Dumbarton Oaks, the other a bronze suspension element for a lamp at the Benaki Museum. The similar lettering on these two objects led to the hypothesis both of them being attributed to the same person, who might be the homonymous consul (447; d. 471 in Constantinople) and eldest son of Aspar the Alan, an eastern Roman patrician of Alanic-Gothic descent and "master of soldiers" (Drandaki 2020, 227, no. 107).

The study of prosopographies is particularly relevant in fostering interdisciplinary contacts. For instance, the monograph on Byzantine silver stamps by the art historian Erica Cruikshank Dodd (1961) contains an excursus by the numismatist John P.C. Kent on the *comes sacrarum largitionum*, the highest-ranking financial official in the Byzantine administration. Work by Denis Feissel (1986) on control weights generated new consideration of the office of the prefect of Constantinople and the stamping of silver in the sixth and seventh centuries.

Numismatists, epigraphists, and sigillographers, who are closely involved with the field of metrology, have studied series of flat weights for balance scales. The inscriptions on control weights and the denominational marks on commercial weights reveal evolutions in the administrative and juridic systems that issued them, topics of interest to historians. At the same time, however, the weights also display a rich decorative repertory, such as imperial busts, enthroned emperors and co-emperors, Victories, angels, crosses (including some under arches or a pediment), vegetal and geometrical ornament, and protective formulas. All these elements, while purposeful in conveying information in and of themselves, also encourage an art historical perspective that can help in firming up dates and clarifying the messaging and cultural contexts of certain imagery (Pitarakis 2022). The prototypes for the inscriptions on weights are to be found primarily among coin iconography, but some stereotyped patterns of universal character, such as the cross under an arch or a pediment, have also been attested.

The invocation of God's grace and favour, a stereotyped formula found on late antique weights and weight boxes, is also widespread on wedding jewelry from the same period. In addition, puns and wordplay on wedding-related jewelry also link the virtue of grace to the three Graces – Euphrosyne, Aglaia, and Thalia – and desired bridal attributes. The Museum of Fine Arts in Boston has a third-century gold ring bearing a wish of good luck. The octagonal band with flat sides lies at the heart of a fruitful interdisciplinary collaboration involving classics and epigraphy around the magic imbued in portable inscriptions (Van Den Hoek, Feissel, Herrmann 2015). The effort produced a catalogue of rings, breast pendants, bracelets, fibulas, gems, belt buckles, and dress and toilet accessories along with recorded formulas ranging from wishes of good luck and health to protective inscriptions to expressions of courtship and love. The epigraphic study of each of these pieces, ranging in date from the third to the seventh century, includes a transcription with restitutions of missing letters and words; when a word is obscure, misspelled, or in a reversed form, the correct version is proposed.

The syntax of the magical inscriptions found on amuletic jewelry has its own logic and balance. Most of the patterns of transmission derive from the corpus of magical papyri and the gems themselves. Another essential channel of transmission was iatromagic, a category of medical writing (Grimm-Stadelmann 2020). In magic, the literal meaning of an expression or a word was superseded by the belief in its immediate efficiency, which often depended upon the antiquity of the formula from which it is drawn. Quotes from classical epic poems, such as the *Iliad*, and from psalms are frequently encountered.

During the tenth and eleventh centuries, the standard votive formula found on late antique silver eucharistic vessels was in most known instances replaced by the invocation the priest recited during the service. In another shift, the establishment of private monastic foundations during the eleventh century favoured the manufacture of church vessels in copper alloy in conjunction to those in silver. In imitation of the thick letters used on enamels and repoussé silver, craftsmen introduced a well-defined epigraphic style commonly described as double-stroke lettering (Mundell Mango 1994). The script on the copper alloy vessels made extensive use of ligatures, and the letters feature triangular serifs. The vessels bearing double-stroke lettering are often coated with a layer of tinning. There is a consistent group of such vessels and crosses, the number of which coming to light in private collections continues to grow (Wamser, Zahlhaas 1998, 62, nos. 42-3). The copper liturgical vessels mentioned in monastic inventories from the twelfth century probably correspond to vessels of this type (Pitarakis 2009, 317).

Similar double-stroke lettering is also found around the neck of a consistent group of copper alloy jugs bearing a quote from Psalm

Figure 2
Copper alloy jug. Istanbul Archaeological Museums, inv. 6097 M.
© Istanbul Archaeological Museums (photograph by Dilara Şen Turan)

28 (29):2 recited by the priest during the Blessing of the Waters (Pitarakis 2018). The jugs, made of hammering sheets of metal, date to the eleventh century, but the tradition to which they belong is much older. A small production of jugs stands out among this group in the plain lettering of the psalm text and the casting technique used in their manufacture **[fig. 2]**. This technique, an *alpha* with a slanted bar, and an elegant vine scroll along the belly may suggest placing this particular group to Late Antiquity, although a date in the early ninth century may not be precluded. These inscribed jugs offer a valuable complement to the carved inscriptions of the same Psalm text on a consistent group of sixth-century marble basins from Constantinople (Feissel 2020, 99-101).

The issue of unmastered syntax and spelling – a common 'feature' of Byzantine bronze inscriptions – is also encountered on secular goldsmithing vessels found in Central Europe and the Balkans. The problem this raises involves the wording itself, which is sometimes difficult to decipher. One also finds antiquarian features, a particular onomastic pattern, and a style and technique quite different from Constantinopolitan works. These objects are often from treasures found in the late eighteenth to early twentieth century and whose date and geographical origins are still being debated.

One such find is the Vrap Treasure, also known as the Avar Treasure, discovered in Vrap, Albania, in the early twentieth century

Figure 3 Silver jug from Vrap treasure. Metropolitan Museum of Art, Accession no. 17.190.1704. Public Domain

Figure 4 Cruciform monograms on the bottom of the silver jug on fig. 3. Public Domain

(Bálint 2000; Garam 2000; Piguet-Panayotova 2002; Holcomb 2008). The Metropolitan Museum of Art houses the largest part of the treasure, which is thought to have been deposed in the eighth or perhaps the very early ninth century. The Walters Art Museum, Baltimore, has one drinking bowl from the find, and the Istanbul Archaeological Museums holds a chalice-shaped goblet. Along with a range of belt straps, drinking bowls, and chalices, the group at the Met includes a silver pitcher bearing a quote from Psalm 28 (29):2 around the mouth and five cruciform monograms engraved on the bottom of the vessel, simulating control stamps **[figs 3-4]**. Erika Cruikshank Dodd reads them as the name Zenobios, while more recently Werner Seibt has suggested the Avar name Τζονοβίου, Τζυβίνου, or Βουτζίνου and a date to the late seventh century (Seibt 2004; Garipzanov 2018, 221-2). From the perspective of the geographical location of Vrap – a region in the vicinity of Durrës, ancient Dyrrachion – and the distinctive character of the large majority of the goldsmithing artifacts in the treasure, it has also been suggested that they are interpreted as part of a provincial Byzantine border culture, still largely unknown, merging Avar elements with other local elements from the Balkans and Byzantine influence (Bálint 2000).

The treasure found in 1799 near Nagyszentmiklós, once in Hungary and today Sânnicolau Mare in Romania, has also sparked debate

about its inscriptions, date, and geographical origin (Bálint 2010). Thorough study of the Greek inscriptions on two vessels from the hoard by Georges Kiourtzian led him to suggest dating these two pieces in the second half of the eighth or the first half of the ninth century. The inscriptions might have been engraved on the vessels in a cultural milieu at the periphery of the Byzantine Empire perhaps in the Danube region (Kiourztian 2016, 296-306, nos. 9-10).

The name and title of religious figures and stereotyped invocations, often in a cruciform layout, are among the most standard types of inscriptions attested on objects from the ninth to the eleventh century. Sigillography offers valuable comparisons for interpreting consistent series of inscriptions found on metal objects and hard stone jewelry. Identification of the issuer of an official seal and his or her status allows exploring preferences for Virgin types and epithets, saintly intercessors, and shrines in relation to his or her social status, gender, and age (Pitarakis 2015b, esp. 334-7; Cotsonis 2020). The epigram as a category of inscription on luxury objects developed in the tenth century and peaked during the fourteenth century (see Lauxtermann 2003, 149-96). Andreas Rhoby's systematic inquiry into various types of objects of private and public devotion led to recording the more than seven hundred epigrams preserved on them, opening new horizons on a variety of new approaches to these sometimes lengthy texts and interpretations of their message and purpose (Rhoby 2010, 2017).

One famous icon placed at the centre of scholarly debate by Rhoby's research features the Virgin and is identified as the Hope of the Desperate, now at the Diocesan Museum in Freising. Rhoby's study of the epigram challenged the traditional association of the donor, Manuel Dishypatos, with the metropolitan of Thessalonike who held the office from 1258 to 1261. The identification of another Manuel Dishypatos, a deacon and an official of the metropolis of Serres in 1365, as the possible donor prompted shifting the date of the enameled frame from the mid-thirteenth century to the late fourteenth (Rhoby 2019). The lettering of the epigram includes a *nu* with an inverted oblique bar, as if a mirror inscription, attested on lead seals from the late thirteenth to fourteenth century (Oikonomides 1986, 162) and on Palaiologan coins. The close links between the goldsmithing industry and the mint favours comparisons with monetary iconography. The alphabet of the epigram on the Freising icon also includes what appears to be the *beta* with square loops that, according to Philipp Grierson, are also attested on the Thessalonican coins of Anna of Savoy and on some related issues from the same mint (DOC 5.1, 97-8). The chronology suggested by a prosopographic study of the inscription and analysis of the letter forms is congruent with the information suggested by the enameling technique and colours used in the manufacture of the inscription (Bosselmann-Ruickbie 2021).

3 Converging Views on the Byzantine Object. Textual Evidence Recontextualised

The emergence of an image and its distribution on multiple supports is closely dependent upon the expectations of the commissioners, the faith of the beholders, their mentality and culture. All are conveyed by the requested texts. Jean-Michel Spieser's exploration of the iconography of Christ offers a valuable study case. Spieser notes that the chronological evolution of the iconographic types used to represent Christ has been approached through their distribution on privileged surfaces and materials ranging from sarcophagi, monumental art, and coins to crafted objects like precious reliquaries, crosses, and modest amulets. The roots of the images, however, are found in Christian literature, and in turn the comparison of texts and images reveals the anthropological transformation of Christianity during late antiquity (Spieser 2015). Growing interest in religious anthropology has opened new horizons on the study of the Byzantine object – viewed within the framework of human experience concerning sensoriality and materiality (Caseau Chevallier, Neri 2021; Peers 2021). Another approach, focusing on secular luxury objects from twelfth- and thirteenth-century Byzantium, explores cross-cultural interchange, which has the uncovered a blended visual and conceptual language between Byzantium, Islam, and the West (Pitarakis 2019; Walker 2012, 2020).

The study of artisanal objects offers insight into the lives of broader sections of Byzantine society than investigation of monumental art allows. The Byzantines, however, did not manifest an exacting textual tradition for describing their material world. Every object has a word or group of words to define it and to use in discussing it. However, technical terms often lack precision, thus creating problems of interpretation. Interest in the material world involving daily life is quite variable in the different types of Byzantine texts. A cross-reading of the specialised vocabulary from the perspectives of philology, art history, and archaeology reveals clues about the cultural context from which it emerged. Such a multi-focal perspective may also uncover elements that are not expressly mentioned in the text but are implied or suggested.

The tenth-century *De Cerimoniis* stands as the major source of information on material luxury at the Great Palace. When Jean Ebersolt published his pioneering *Les Arts Somptuaires de Byzance* (1923), many facets of the luxury crafts of Byzantium remained unknown. Many decades later, scholars took a more focused approach to *De Cerimoniis*, for instance, George Galavaris's work on crosses (Galavaris 1994) and Gilbert Dagron's study on thrones at the imperial palace (Dagron 2003a). Michael Featherstone's examination of chapter 15 of book 2 shed light on the luxury artifacts displayed at the Great Pal-

ace during the reception of foreign ambassadors and rulers. Among vessels, those of enamel and repoussé silver were the two major types displayed on these occasions. The vocabulary allows for identifying sets of platters (*minsouria*) and the shallow bowls (*skoutella*, or *plats creux* in French) of different sizes (*De Cerimoniis* 2.15.331-5 [Featherstone 2007, 95]). The word ἀνάγλυφον, generically translated as 'repoussé silver', may also equate to embossing by impression on a mold. The decorative repertory of these vessels is not described. One may assume, however, that it included the animals, fantastic creatures, hybrids, and mythological scenes that one commonly finds on contemporary ivory or bone caskets and was also transferred to the wide production of glazed ceramics from Constantinople. Appropriation of the decorative techniques used on glazed ceramics – impressed ware, sgraffito, champlevé – forms the crux of the close connections between potters, silversmiths, and a variety of other crafts. This relationship among artisans today creates connections among scholars specialising in various fields of material culture. Growing interest in the scholarly study of techniques and materials has also attracted the attention of philologists.

The commentary, index, and glossary for the latest edition of the *De Cerimoniis* (eds Dagron, Flusin 2020) offer a rich tool for new approaches to investigating material culture at the Great Palace. Besides the numerous chapters devoted to religious rituals, one also finds "Coronation and Nuptial Crowning of an *Augousta*" (*De Cerimoniis* 1.50), which offers glimpses into the equipping of elite households in late antiquity and Byzantium. We learn, for instance, that on the third day of the ceremonies surrounding the augusta's marriage, she is accompanied to the bath. The objects carried by her escort include linen towels (σάβανα), a perfume container (μυροθήκη), little boxes (σκρίνια), and a jug and basin (σικλότρουλλα) (*De Cerimoniis* 1.50.152-60, 175-7). The passage ends with a reference to three porphyry pomegranates set with precious stones (ῥοδιῶνες διάλιθοι πορφυροί), which were probably goldsmithing works set with rubies or other red stones. These luxury objects were likely intended for display and prestige, but the specificity of the chosen fruit and the context also conveys a message of fecundity.

The augusta's ritual bath described in the *De Cerimoniis* has ancient roots, and the text in this chapter appears to have preserved some archaisms and an old-fashioned style. To culturally contextualise it further, one may refer to the decoration of the fourth-century Projecta casket, now at the British Museum. Probably a wedding gift, the casket was part of a domestic silver treasure found in 1793 on the Esquiline Hill in Rome. The art historian and classicist Jaś Elsner studied the casket's iconographic programme with the purpose of illustrating the commissioner's place and role in fourth-century elite society in the Roman Empire (Elsner 2003). The aquatic

scenes surrounding the figure of Aphrodite on the lid are of a piece with the bath of the augousta involving various attendants who oversee the accoutrements of the toilette. The objects on the casket include candlesticks, caskets, an ewer, and a troulla as well as a bucket with an arch-shaped handle. In the visual discourse of the tenth-century, when the *De Cerimoniis* was compiled, an object with similar purpose to the Projecta casket would typically bear a metaphorical interpretation of the ritual. This could be achieved through the selection of extracts from mythological narratives for use in a contemporary decorative framework. The so-called Veroli casket at the Victoria and Albert Museum may be viewed as a relevant counterpart (Chatterjee 2013).

The wide array of documentary archives, among them monastic foundation charters (*typika*), wills, and dowries, contain abundant lists of objects and raw materials offering firsthand objective testimony on the crafted object in Byzantium. The structure of such lists – grouping objects by categories and recording information on the history of the object, the context of its use and the other objects with which it is grouped, price, manufacture, components, colour, and inscriptions – provides valuable data for the study of multiple aspects of Byzantine history. The *typika* as sources for approaching material culture first drew the attention of scholars interested in specific categories of objects like lighting devices, agricultural implements, and jewelry. In the 1990s, Nicolas Oikonomides became the first scholar to attempt a broader use of *typika* by mining them to restitute the contents of the Byzantine house (Oikonomides 1990).

Later, in the early 2000s, Jean-Michel Spieser, Maria Parani, Ludovic Bender, Aude Vuilloud, and I undertook a systematic collaborative study of Byzantine artifact terminology with the goal of providing a translation and commentary for each term recorded in published archival documents dating from the ninth to the fifteenth century. That effort resulted in the creation of the online electronic database Artefacts and Raw Materials in Byzantine Archival Documents / Objets et matériaux dans les documents d'archives byzantins (ByzAD)[3] (Parani, Pitarakis, Spieser 2019). The material researched include private documents and public acts (e.g. wills, court decisions), *typika*, and inventories of monastic property. The value of such archival documents is their immediate and objective witnesses to actual practices, including concrete descriptions of artifacts, free of artifice and rhetoric. Assembling all the available data so it can be put in perspective opens interesting avenues for interdisciplinary exchange.

In some instances, a word can gain clarity through comparison with the archaeological record, as occurred when the recurrent discovery

3 http://typika.cfeb.org/index/.

of a distinctive type of bronze pin in conjunction with rings thought to belong to belt buckles (often found in funerary contexts) led to the identification of a binding mechanism – a clasp formed by a ring and a pin identified by the compound word κομποθήλικον or κομποθήκη in the archival documents (ByzAD, "biblion";[4] "kompothèlykon").[5] In another example of interdisciplinary research, Jean-Pierre Sodini compiled a comprehensive list of elements containing such clasps (i.e. other pins and rings) yielded by archaeological excavations and expanded his documentation through the inclusion of depictions of Christ Pantocrator holding a book equipped with such clasps in visual sources from the tenth and eleventh centuries (Sodini 2016). Since this publication, the archaeological discoveries of rings and pins forming binding mechanisms have increased (Demirel Gökalp 2021, 104-6; Pülz et al. 2020, 163-4, pl. 88, colour pl. 101). The extraordinary number and variety of copper alloy finds from the middle Byzantine monastic complex in Hattusa-Boğazköy allowed the graphic restitution of a book cover, including the *gammata* (*gamma*-shaped accessories) at the four corners, a medallion-shaped applique at the centre with a cross motif in relief, and the bookbinding mechanism made by rings and pins used to secure the cover with three straps (Böhlendorf-Arslan 2019, 100, fig. 71).

The vocabulary in *typika* also helped identify a complex device that appears to have been conceived in response to a liturgical need to illuminate the row of epistyle icons. The discovery of a bronze assemblage from a church during the construction of a water conduit in Western Thrace in the 1970s helped clarifying the function of the candle-holding device, today kept at the Archaeological Museum of Edirne (Pitarakis 2016). The components include horizontal bronze strips that were fixed on a marble epistyle using brackets. Each bracket takes the shape of an extended arm. A flat square holder with a pricket at its base inserts into the tightly clenched fists. Isolated or grouped components of such devices made their way from the archaeological record into museum collections during the past decade (Androudis, Motsianos 2019). According to the type and decoration of the strips and the square holders, these devices may be dated to the eleventh and twelfth centuries **[fig. 5]** or to the thirteenth and fourteenth centuries. The composite words found in archival documents along with the actual objects bearing material representation of the words enrich layers of knowledge on the Byzantine templon.

Poetry is another branch of philology that has attracted interest as a source in the study of the luxury object. The above-mentioned corpus of *in situ* epigrams by Rhoby (Rhoby 2010) was followed by

4 http://typika.cfeb.org/index/synthese/690.

5 http://typika.cfeb.org/index/synthese/241.

Figure 5 Bronze hand from a lighting fixture attached to a templon. Istanbul Archaeological Museums, inv. 5870 M. © Istanbul Archaeological Museums (photograph by Dilara Şen Turan)

parallel art historical and philological approaches of investigation. Work by Ivan Drpić (Drpić 2013; 2014; 2016; 2018; 2020) on icon revetments and enkolpia and the comprehensive analysis of Foteini Spingou (2021) on the compilation of twelfth-century epigrams related to objects of art in the manuscript Graecus Z 524, at the Biblioteca Marciana in Venice, introduced new perspectives into the study of cultural history in Byzantium.

In concert with work by Stratis Papaioannou (2013) on Michael Psellos, Rhoby's epigrams also led to an innovative inquiry on subjectivity and self-representation in Byzantium (Rhoby 2016). The puns and wordplay of epigrams were intended to evoke magical powers, drawing the commissioner or recipient into the narrative represented on the object. The transferable power in the object allowed the commissioner or recipient to engage in the enhancive action of mentally assimilating as mythological heroes or religious figures. The use of the active voice in the epigram further involves assimilation by the maker of the object. Byzantine epigrams and inscriptions do not distinguish between "having something made" and "making something" (Lauxtermann 2003, 158-9). In short, the faith of the commissioner channels divine inspiration into the hands of the craftsman whose work then emerges as a reenacting of the Creation by God.

Representations of donors on goldsmithing artifacts are not frequently encountered. This may be due to donors typically expressing themselves through epigrams or in some instances being symbolically one with the imagery on the object or represented by it. The stereotyped format of the donor in *proskynesis*, at the feet of a saintly figure, is however attested. Such an example is found on a small eleventh-century bronze icon of St. Nicholas in Thessalonike that perhaps also served as a matrix (Kypraiou 1986, 89-90, no. 11). The incorporation of the donor in a composition serves to emphasise his or her wealth and the expense involved in the commission. A more lavish example is offered by the lid of the twelfth-century reliquary box at the Protaton, Mount Athos, showing the donor, a monk named Zosimas, at the foot of the Virgin in the Crucifixion scene (Pitarakis, Oikonomaki-Papadopoulou 2000, 49-53; Hostetler 2017, 172-89). The standing figures of Constantine Akropolites and his wife within the silver frame of the thirteenth-century icon of the Virgin and Child at the Tretiakov Gallery in Moscow attest to a version of this practice with precious revetments (Drpić 2016, 375).

4 Byzantine Economy, Wealth, and Artistic Production. Connected Methods and Approaches

One can observe in a succession of major publications the steps taken toward the growing integration of material culture research and study of the dynamics of Byzantine economy: *Studies in Byzantine Monetary Economy* by Michael Hendy (1985); the two-volume *Hommes et Richesses* directed by Jacques Lefort and Cécile Morrisson in collaboration with Vassiliki Kravari (Morrisson, Lefort 1989; Kravari, Lefort, Morrisson 1991); the three-volume *Economic History of Byzantium* compiled by Angeliki Laiou (2002); *The Byzantine Economy* by Laiou and Morrisson (2007); *Trade and Markets in Byzantium* by Morrisson (2012b) and *Trade in Byzantium* by Magdalino, Necipoğlu, and Jevtić (2016). Ceramics production represents a major area in this progression, with current research tending to highlight the links between ceramics finds, domestic structures, and coins. Studies devoted to long-distance trade in light of finds from shipwrecks and harbours brought attention to non-ceramic products (Mundell-Mango 2001). Steelyards are a recurrent find in late antique shipwrecks, typically in conjunction with copper kitchen vessels and table ware vessels. The excavations at the Theodosian Harbour of Yenikapı, in Istanbul, offer an extraordinary snapshot of the range of local production and imports that coexisted during a given period (Kızıltan 2007; Kızıltan, Baran Çelik 2013). Differentiating what was manufactured locally from what arrived via long-distance trade or other channels is not always obvious. Most of the exquisite

goldsmithing items found appear to be the work of Constantinopolitan workshops, while some ivory carvings from the sixth or seventh century may have come from Alexandria (Pitarakis 2021).

The close connection between numismatics and the study of luxury metal crafts is aptly exhibited in the sacks of coins depicted on ivory diptychs, the circus prizes on gold medals commemorating the consulship of emperors, and the wide range of coin jewelry and other categories of imperial largesse. The imperial mint and goldsmithing workshops at the palace worked in close collaboration, both falling under the authority of a single official, the *comes sacrarum largitionum* (Morrisson 2002; 2012a). The *comes* also oversaw the imperial textile workshops, which in the production of precious silks and dyes made wide use of gold thread. The insignia, silver plates, and medals that transmitted imperial ideology to all sectors of society were struck at palace workshops and served as prototypes for the urban workshops.

Numismatics and the study of goldsmithing share similar methods of recording and verification. Metrology – the study of all measurable features of an object, such as its dimensions, weight, and metallic composition – and examination of coin dies have long been standard procedures for numismatists, but the use of these practices has increasingly expanded. Today, for example, the precise measurement of objects' dimensions, along with the production of charts detailing metal composition obtained through scientific analysis, is among the methodologies developed and presented in a publication devoted to the production of late antique copper alloy vessels between the fourth and eighth centuries through examples in the Benaki Museum collection and related materials (Drandaki 2020). With regard to die studies, however, the possibility of identifying series of metal objects made from a single mold or die happens only infrequently. Overmoulding is also a common practice that one has to keep in mind when studying a bronze object. At the same time, the increasing number of objects of similar type produced from stone moulds and metal matrixes is helping re-create chains of production by given workshops. Provenance as an element of consideration in recording coins and metal objects allows the drafting of distribution maps and hypotheses about places of manufacture. The geographical distribution of mints and arms factories may help in pinpointing major metalworking centres.

Iconography is an essential intersection between art history, numismatics, and sigillography. For instance, the appearance of the image of the Virgin on Byzantine coins, an introduction attested in a rare issue of the *solidi* of Leo VI (r. 866-912) (Kalavrezou 2003, 128) and Michael Psellos's account of the miracle of the icon of the Virgin at the Blachernae, provoked an intense interdisciplinary debate about the author's description of the miracle and the actual iconographic type

it represented (Pentcheva 2006, 145-63; Fisher 2012). Another engaging debate on the prototypes of the iconographic types stemmed from the comparison of vast series of empress bust counterweights for the steelyards often yielded in seventh-century archaeological contexts with an inspiration from fourth-century coin types (Pitarakis 2012, 419-22). The popularity of pseudo-coins on precious jewelry of the sixth and seventh centuries offers an interesting social and artistic background for approaching this production (Pitarakis 2022).

The transmission of numismatic iconography to early Byzantine marriage rings bears testimony through the close connection between the imperial mint and the jewellers of the capital (Walker 2010). Their relationship might also have impacted the production of bronze workshops. The diversification of iconographic types on Palaiologan coinage – from the introduction of the Virgin surrounded by the city walls of Constantinople on the obverse of the gold hyperpyra of Michael VIII Palaiologos (r. 1261-1282) to that of the winged emperor on the Thessalonican coins of John Komnenos Doukas (1237-44) and the Palaiologan monogram – is a further rationale for interdisciplinary contacts between numismatics and art history (Cutler 1975, 54, 111-41; Pitarakis 2010b, 607-8; Morrisson, Papadopoulou 2013, 85-9).

On the reverse of Michael VIII's gold hyperpyron, the representation of the kneeling emperor with straight back before the seated Christ fostered interdisciplinary discussion because of its ideological and political implications, particularly of Western influence. This type also adds context to local Constantinopolitan artistic creation, such as the pose of the deferring Theodore Metochites in the well-known mosaic at the inner narthex of Chora. As with most other situations, the selection of an iconographic type fits within a broader cultural context. In the case of Metochites, his action is also contextualised by contemporary attitudes toward donation as evinced by *typika* (Ševčenko 2012, 198-201).

Innovation in coin iconography is often prompted by a major event that at the same time may serve as grounds for disseminating an ideological message. The introduction of the image of St. John the Baptist blessing the emperor on a gold issue of Alexander (r. 912-13), younger brother and co-emperor of Leo VI (r. 886-912), serves as a case in point. Cécile Morrisson and Pagona Papadopoulou (2013) observe that after Alexander's example, a saintly figure again appears on coins only in the eleventh century. While recognising that religious images on coins may convey multiple meanings, Papadopoulou and Morrisson suggest that the image of St. John might be a typological equivalent of the patriarch Nicholas Mystikos (901-07, 912-25), whom Leo VI had deposed during the crisis of the tetragamy.

Alongside this view, one could further suggest a generic reading for John's presence in light of the character of kingship and its rela-

tion to the church (Pitarakis 2020, 174). *De Cerimoniis* indicates that one major stop in the imperial procession in Hagia Sophia is at the chapel of the Holy Well, where behind curtains, the patriarch returns the crown to the emperor, who removes it upon entering the church (*De Cerimoniis* 1.1.275-80). In light of the emperor's ritual exit from the Great Church, John the Baptist on Alexander's coin may convey the baptismal connotation of the symbolic unction conferred on the *porphyrogennetoi* and the idea of a God-chosen emperor ruling over his chosen people (Dagron 2003b, 94-6, 102-3, 122, 273-4).

Metal objects have liquidity value in being convertible into money. The opposite, for instance, would be ivory, which although a precious material in medieval Byzantium, does not frequently appear among the artifacts listed in archival documents because it could not be converted into money (ByzAD, Artefact, ## 1176, 1353, 1786, 3003).[6] Amid monetary crisis, as in the late eleventh century, the reverse process of melting coins into silver plates is also documented (Morrisson, Papadopoulou 2019, 317). The liquidity value of metal is further evident in the theft of pieces of silver from icon revetments to be traded in exchange for food during the economic hardship of the fourteenth century (Oikonomides 1991, 38-9). The Byzantines accumulated silver objects for thesaurisation (storing money). The numerous coin hoards from the seventh century have often yielded silver plates as well as gold jewelry. In later contexts, as with the Palaiologan hoards from Belgratkapı, in Constantinople, some objects may have been of personal value, such as a silver enkolpion, a set of silver toilette items, a silver whistle, and a small bronze mortar (Pitarakis 2015a, 360-3, nos 116-19; Baker et al. 2017).

Metal objects, having a place among dowries due to possessing monetary value, were also bequeathed. In one case from Thessalonike, Maria Deblitzene, widow of Manuel, went to court to secure her right to her dowry and marital gifts from her late husband. A detailed inventory dated to 1384 offers valuable testimony for exploring the definition of the luxury object in Byzantium. The list of the household's precious belongings included a brooch and *kataseista*, probably pendant ornaments forming part of a headdress, valued at the impressive sum of 154 hyperpyra, while an ewer and a basin, probably of copper alloy, were together valued at 1 hyperpyron. There are also several rings identified as being made of *malagma*, a very pure gold which might connect with the fineness and the theoretical weight of the hyperpyron (Spieser 2021). The ownership of precious jewelry transmitted through inheritance is frequently illustrated in archival

6 http://typika.cfeb.org/index/artefact/1176; http://typika.cfeb.org/index/artefact/1353; http://typika.cfeb.org/index/artefact/1786; http://typika.cfeb.org/index/artefact/3003.

documents of the same period. In a will dated 1334 in the archives of the Prodromos monastery, in Serres, we learn that a ring, a silver bowl, and a gold jewelry clasp valued at 5 nomismata were selected for inheritance (ByzAD, Artefact, #3027).[7]

Comparisons of the price of metal objects with other categories are useful in assessing relative value in regard to household income. The study of prices opens a space ripe for interdisciplinary exchange (Morrisson, Cheynet 2002, 851-6, table 15). For goldsmithing artifacts, the monetary input of the artisan's skill with regard to the working of raw materials is difficult to evaluate. Sometimes in archival documents, instead of the price of a jewel, one finds a mention of its weight (Spieser 2021, 6). From the perspective of wages, it has been demonstrated that in the private sector, craftsmen were paid scarcely less than specialists such as doctors and appear to have enjoyed incomes fairly similar to those of professional soldiers (Morrisson, Cheynet 2002, 869). There are of course biases introduced by the disparity of available evidence given the long chronology of Byzantium.

The containers in which coin hoards were hidden are another element enhancing the relationship between numismatics and the study of metal artifacts. Pottery jugs as well as copper alloy jugs are attested as containers for coins. Two late sixth- and seventh-century hoards found, respectively, in Spetses and Samos, Greece, in the late 1970s and 1983, included distinctive types of copper jugs as containers the dating of which was thus strengthened (Morrisson et al. 2006, 278, 391). The eleventh-century hoard found in 1984 at Kocamustafapaşa, in Istanbul, allowed the identification of a rare, dated type of jug from the middle Byzantine period (Pitarakis 2010a).

Material culture intersects with the growing interest of archaeology in the study of urban development and spatial dynamics in relation to societal development (see Böhlendorf-Arslan, Ricci 2012). The evidence provided by the investigation of money supply and money circulation in the archaeological record finds a valuable complement in the quantification of ceramics, metal objects, glass, and other small finds. A cross-examination of such small finds may offer valuable clues on chronology as well as on the economic status of the recipients (Uytterhoeven 2021, 237-9; Papadopoulou 2015; Sanders 2018; 2020). A systematic classification of small finds with regard to their material and spatial distribution within each site or sector may provide interesting insight into social structures, production, and exchange. Such an inquiry could also broaden our knowledge about the equipping of well-off and middle-class households and technical issues on which the written sources are silent. Amorium excavations, in Phry-

7 http://typika.cfeb.org/index/artefact/3027.

gia, provide outstanding examples. In the Lower City Enclosure, for instance, there is an assemblage of objects from a destruction layer dated to the ninth century that includes a rich variety of objects and materials, including an open-shape copper basin, two pairs of iron folding legs for stools or tables, an iron stylus, a weight, two knives, a padlock, four gaming counters, an ivory or bone handle, and bone instruments that seem to have been used in weaving (Ivison 2012, 56-7; Yıldırım 2017, 85). Instruments like styli had multivalent functions. The discovery of several styli within the context of a church, for instance, led to the assumption that they might have served alternately for detailing painted wall decorations (Demirel Gökalp 2021, 107-8).

The categorising of information on the composition, types, and quantity of gold, silver, and copper alloys from archaeological contexts for comparison with objects maintained in museums and private collections is an approach not yet pursued on a large scale. As publication of metal finds grows, attempts to gather such statistics could contribute to more comprehensive evaluations of Byzantine production. The study of Late Antique and Byzantine small finds from archaeological excavations in Anatolia have been the focus of several recent master's and doctoral theses subsequently revised for publication. Among them, for instance, are those on the finds from Amorium (Yıldırım 2017), Kibyra (Demirer 2013; Kaya, Demirer 2020), Anaia/Kadıkalesi (Altun 2015), Divriği Fortress, in Sivas (Acar 2019), and Patara (Şahin 2018). One would suspect that among the luxury items from aristocratic households preserved in major museums and collections are objects that influenced more modest serial productions yielded by the archaeological record.

Ritualised life in the domestic realm (include the palace), the church, and the outdoors has produced particular sets of behaviours and practices requiring the use of specific categories of objects. In some cases, they are shared only by distinct social groups, but in others are found across all levels of society. Growing interest in the economic, social, and cultural aspects of objects points to the potential of a broad, enriching basis for interdisciplinary contacts in the study of Byzantine artistic production. Goldsmithing and the manufacture of copper alloys produced objects widely dispersed throughout society and involving all aspects of daily life, making them a particularly interesting subcategory relevant to such an approach.

Bibliography

Acar, D. (2019). *Divriği Kalesi Metal Buluntuları (2006-2018)* (Metal Finds at Divriği Castle [2006-2018]) [MA thesis]. Sivas: Sıvas Cumhuriyet Üniversitesi; Institute of Social Sciences; Department of Art History.

Altun, F.İ. (2015). *Kuşadası, Kadıkalesi/Anaia Kazısı 2001-2012 Sezonu Bizans Küçük Buluntuları* (Kuşadası, Kadıkalesi/Anaia Excavations, Season 2001-2012. Small Byzantine Finds) [PhD dissertation]. Izmir: Ege University; Institute of Social Sciences.

Androudis, P.; Motsianos, P. (2019). "Byzantine Metal Support Fittings for a Candlestick from the Monastery of Chilandar on Mount Athos". Motsianos, I.; Garnett, K.S. (eds), *Glass, Wax and Metal. Lighting Technologies in Late Antique, Byzantine and Medieval Times*. Oxford: Archaeopress, 153-8.

Baker, J. et al. (2017). "The Reformed Byzantine Silver Based Currencies (ca. 1372-1379) in the Light of the Hoards from the Belgrade Gate". *Dumbarton Oaks Papers*, 71, 273-335.

Bálint, C. (2000). "Some Avar and Balkan Connections of the Vrap Treasure". Reynolds Brown, Kidd, Little, 2000, 180-7.

Bálint, C. (2010). *Der Schatz von Nagyszentmiklós. Archäologische Studien zur frühmittelalterlichen Metalgefäßkunst des Oriens, Byzanz' und der Steppe*. Budapest: Balassi Kiadó. Varia Archaeologica Hungarica 16b.

Bosselmann-Ruickbie, A. (2021). "Palaeologan Luxury Art in a 'Period of Decline'. Byzantine Enamel of the Thirteenth and Fourteenth Centuries and Its Potential for Innovation". Martiniani-Reber et al. 2021. https://bit.ly/3OiXHnNh.

Böhlendorf-Arslan, F. (2019). *Die Oberstadt von Ḫattuša. Die Mittelbyzantinische Siedlung in Boğazköy. Fallstudie zum Alltagsleben in einem anatolischen Dorf zwischen dem 10. Und 12. Jahrhundert*. Berlin: De Gruyter.

Böhlendorf-Arslan, F.; Ricci, A. (eds) (2012). *Byzantine Small Finds in Archaeological Contexts*, *Byzas 15*. Istanbul: Ege Yayınları.

ByzAD 2003- = Bender, L.; Parani, M.; Pitarakis, B.; Spieser, J.-M.; Vuilloud, A., *Artefacts and Raw Materials in Byzantine Archival Documents. Objets et matériaux dans les documents d'archives byzantins*. http://typika.cfeb.org/index.

Caseau Chevallier, B.; Neri, E. (éds) (2021). *Rituels religieux et sensorialité (Antiquité et Moyen Âge). Parcours de recherche*. Bologna; Milan: Silvana Editoriale. Biblioteca d'arte 71.

Chatterjee, P. (2013). "Vision, Transformation, and the Veroli Casket". *Oxford Art Journal*, 36(3), 325-44. https://doi.org/10.1093/oxartj/kct029.

Cotsonis, J.A. (2020). *The Religious Figural Imagery of Byzantine Lead Seals II. Studies on Images of the Saints and on Personal Piety*. Abingdon; Oxon; New York: Routledge; Taylor & Francis Group. Variorum Collected Studies.

Cruikshank Dodd, E. (1961). *Byzantine Silver Stamps. With an Excursus on the Comes Sacrarum Largitionum by J.P.C. Kent*. Washington, D.C.: Dumbarton Oaks Research Library and Collection; Trustees of Harvard University. Dumbarton Oaks Studies 7.

Cutler, A. (1975). *Transfigurations. Studies in the Dynamics of Byzantine Iconography*. University Park (PA); London: The Pennsylvania State University.

Dagron, G. (2003a). "Trônes pour un empereur". Avramea, A.; Laiou, A.; Chrysos, E. (eds), *Byzantium. State and Society. In Memory of Nikos Oikonomides*.

Athens: Institute for Byzantine Studies; The National Research Foundation, 179-203.
Dagron, G. (2003b). *Emperor and Priest: The Imperial Office in Byzantium*. Cambridge: Cambridge University Press.
Dagron, G.; Flusin, B. (éds et trad.) (2020). *Constantin Porphyrogénète. Le Livre des Cérémonies*. Avec la collaboration de M. Stavrou. 6 vols. Paris: Amis du Centre d'Histoire et Civilisation de Byzance. Corpus Fontium Historiae Byzantinae 52.
Demirel Gökalp, Z. (2021). "Amorium Kazılarında Bulunan Styluslar" (Styluses Found in Amorium Excavations). *Türkiye Bilimler Akademisi Kültür Envanteri Dergisi*, 23, 99-117. https://doi.org/10.22520/tubaked.2021.23.005.
Demirer, Ü. (2013). *Kibyra Metal Buluntuları* (Metal Finds at Kibyra) [PhD dissertation]. Antalya: Akdeniz University; Institute of Social Sciences.
Drandaki, A. (2020). *Late Antique Metalware. The Production of Copper-Alloy Vessels between the 4th and 8th Centuries. The Benaki Museum Collection and Related Material*. Turnhout: Brepols. Bibliothèque de l'Antiquité Tardive 37.
Drpić, I. (2013). "Painter as Scribe. Artistic Identity and Arts of *Graphē* in Late Byzantium". *Word & Image. A Journal of Verbal. Visual Enquiry*, 29(3), 334-53. https://doi.org/10.1080/02666286.2013.771921.
Drpić, I. (2014). "The Patron's 'I'. Art, Selfhood, and the Later Byzantine Dedicatory Epigram". *Speculum*, 89(4), 895-935. https://doi.org/10.1017/s0038713414000785.
Drpić, I. (2016). *Epigrams, Art, and Devotion in Later Byzantium*. Cambridge: Cambridge University Press.
Drpić, I. (2018). "The Enkolpion. Object, Agency, Self". *Gesta*, 57(2), 197-224. https://doi.org/10.1086/698842.
Drpić, I. (2020). "Short Texts on Small Objects. The Poetics of the Byzantine *Enkolpion*". Lauxtermann, M.D.; Toth, I. (eds), *Inscribing Texts in Byzantium. Continuities and Transformations*. London: Routledge, 309-34.
Ebersolt, J. (1923). *Les arts somptuaires de Byzance. Étude sur l'art impérial de Constantinople*. Paris: Éditions Ernest Leroux.
Elsner, J. (2003). "Visualizing Women in Late Antique Rome. The Projecta Casket". Entwistle, C. (ed.), *Through a Glass Brightly. Studies in Byzantine and Medieval Art and Archaeology Presented to David Buckton*. Oxford: Oxbow Books, 22-36.
Featherstone, J.M. (2007). "Δι᾽Ἔνδειξιν. Display in Court Ceremonial (*De Cerimoniis* II, 15)". Cutler, A; Papaconstantinou, A. (eds), *The Material and the Ideal. Essays in Medieval Art and Archaeology in Honour of Jean-Michel Spieser*. Leiden; Boston: Brill, 75-112.
Feissel, D. (1986). "Le préfet de Constantinople, les poids étalons et l'estampillage de l'argenterie au VI^{e} et au VII^{e} siècle". *Revue numismatique*, 28, 119-42. https://doi.org/10.3406/numi.1986.1889.
Feissel, D. (2020). "Inscriptions grecques en Vénétie". Feissel, D. (ed.), *Études d'épigraphie et d'histoire des premiers siècles de Byzance*. Paris: Association des amis du Centre d'Histoire et Civilisation de Byzance. Bilans de Recherche 10.
Fisher, E.A. (2012). "Michael Psellos on the 'Usual' Miracle at Blachernai, the Law, and Neoplatonism". Sullivan, D.; Fisher, E.; Papaioannou, S. (eds), *Byzantine Religious Culture. Studies in Honor of Alice-Mary Talbot*. Leiden; Boston: Brill, 187-204.

Fournet, J.-L.; Bénazeth, D. (2020). "Quand les cuillers se mettent à parler". Boud'hors, A. et al. (éds), *Études coptes XVI. Dix-huitième journée d'études* (Bruxelles, 22-24 juin 2017). Paris: De Boccard, 129-59. Cahiers de la Bibliothèque Copte 23.

Galavaris, G. (1994). "The Cross in the Book of Ceremonies by Constantine Porphyrogenitus". *Θυμίαμα στη μνήμη της Λασκαρίνας Μπούρα*. 2 vols. Athens: Benaki Museum, 95-9.

Garam, É. (2000). "The Vrap Treasure". Reynolds Brown, Kidd, Little 2000, 170-9.

Garipzanov, I. (2018). *Graphic Signs of Authority in Late Antiquity and Early Middle Ages, 300-900*. Oxford: Oxford University Press.

Grierson, P. (2006). *Catalogue of the Byzantine Coins at the Dumbarton Oaks Collection and in the Whittemore Collection*. Vol. 5, *Michael VIII to Constantine XI, 1258-1453*. Washington, D.C.: Dumbarton Oaks Research Library and Collection.

Grimm-Stadelmann, I. (2020). *Untersuchungen zur Iatromagie in der Byzantinischen Zeit*. Berlin; Boston: De Gruyter.

Hendy, M. (1985). *Studies in Byzantine Monetary Economy, c. 300-1450*. Cambridge: Cambridge University Press.

Holcomb, M. (2008). "'Ugly but … Important'. The Albanian Hoard and the Making of the Archaeological Treasure in the Early Twentieth Century". *Early Medieval Europe*, 16(1), 3-22. https://doi.org/10.1111/j.1468-0254.2008.00219.x.

Hostetler, B. (2017). "Image, Epigram, and Nature in Middle Byzantine Personal Devotion". Bartal, R.; Bodner, N.; Kühnel, B. (eds), *Natural Materials of the Holy Land and the Visual Translation of Place, 500-1500*. London; New York: Routledge; Taylor & Francis, 172-89.

Ivison, E. (2012). "Excavation at the Lower City Enclosure, 1996-2008". *Amorium Reports 3*. *The Lower City Enclosure Finds Reports and Technical Studies*. Istanbul: Ege Yayınları, 5-151.

Jolivet-Lévy, C. (1987). "L'image du pouvoir dans l'art byzantin sous la dynastie macédonienne (867-1056)". *Byzantion*, 57, 441-70.

Jolivet-Lévy, C. (2019). "Inscriptions et images dans les Églises byzantines de Cappadoce. Visibilité/lisibilité, interactions et fonctions". Brodbeck, S.; Poilpré, A.-O. (éds), *Visibilité et présence de l'image dans l'espace ecclésial. Byzance et Moyen Âge Occidental*. Paris: Éditions de la Sorbonne, 378-408. Byzantina Sorbonensia 30.

Jolivet-Lévy, C.; Kiourtzian, G. (2013). "Le site de Gorgoli et le martyrium de saint Kérykos en Cappadoce. Étude préliminaire". Blondeau, C. et al. (éds), *Ars auro gemmisque prior. Mélanges en hommage à Jean-Pierre Caillet*. Turnhout: Brepols, 463-78.

Jolivet-Lévy, C.; Lemaigre Demesnil, N.; Kiourtzian, G. (2017). "Bezirana kilisesi (Cappadoce). Un exceptionnel décor paléologue en terres de Rūm. Nouveau témoignage sur les relations entre Byzance et le sultanat". *Zograph*, 41, 107-42. https://doi.org/10.2298/zog1741107j.

Kalavrezou, I. (ed.) (2003). *Byzantine Women and Their World*. New Haven (CT); London: Yale University Press.

Kaya, M.C.; Demirer, Ü. (2020). "Kibyra'dan Instrumenta Domestica Metaller. Kuzey Yamaç 1 No'lu Mekan Buluntuları" (Instrumenta Domestica Metals from Cibyra: Finds of Building No. 1 at North Slope). *Phaselis*, 4, 113-43. https://doi.org/10.18367/pha.20008.

Kiourtzian, G. (2016). "Les inscriptions grecques de Nagyszentmiklós". Brodbeck, S. et al. (éds), *Mélanges Catherine Jolivet-Lévy. Travaux et Mémoires*, 20(2), 291-306.

Kızıltan, Z. (ed.) (2007). *Gün Işığında. Istanbul'un 8000 Yılı. Marmaray, Metro, Sultanahmet Kazıları* (In the Light of Day. 8000 Years of Istanbul. Marmaray, Metro, and Sultanahmet Excavations). Istanbul: Vehbi Koç Vakfı.

Kızıltan, Z.; Baran Çelik, G. (eds) (2013). *Stories from the Hidden Harbor. Shipwrecks of Yenikapı*. Istanbul: Istanbul Archaeological Museums Press.

Kiourtzian, G. (2021). "Inscriptions chrétiennes de Karpathos". *Cahiers archéologiques*, 58, 73-98.

Kravari, V.; Lefort, J.; Morrisson, C. (éds) (1991). *Hommes et richesses dans l'Empire byzantin*. Tome II, *VIII^e^-XV^e^ siècle*. Paris: Editions P. Lethielleux. Réalités byzantines 3.

Kypraiou, E. (1986). Θεσσαλονίκη. Ιστορία και Τέχνη. Έκθεση Λευκοὺ Πύργου. Athens: Tamio Arkhaioloyikon Poron kai Apallotrioseon.

Laiou, A. (ed.) (2002). *The Economic History of Byzantium from the Seventh to the Fifteenth Century*. 3 vols. Washington, D.C.: Dumbarton Oaks Research Library and Collection. Dumbarton Oaks Studies 39.

Laiou, A.E.; Morrisson, C. (2007). *The Byzantine Economy*. Cambridge: Cambridge University Press. Cambridge Medieval Textbooks.

Lauxtermann, M.D. (2003). *Byzantine Poetry from Pisides to Geometres. Texts and Comments*, vol. 1. Vienna: Austrian Academy of Science Press. Wiener byzantinische Studien 24/1.

Magdalino, P.; Necipoğlu, N.; Jevtić, I. (eds) (2016). *Trade in Byzantium. Papers from the Third International Sevgi Gönül Byzantine Studies Symposium* (Istanbul, 24-27 June 2013). Istanbul: Koç University's Research Center for Anatolian Civilizations (ANAMED).

Martiniani-Reber, M. et al. (éds) (2021). *Autour des métiers du luxe à Byzance*. Musée d'Art et d'Histoire de Genève. `https://collections.geneve.ch/mah/node/422714`.

Métivier, S. (2012). "Byzantium in Question in 13th-Century Seljuk Anatolia". Saint-Guillain, G.; Stathakopoulos, D. (eds), *Liquid and Multiple. Individuals and Identities in the Thirteenth-Century Aegean*. Paris: Association des amis du Centre d'Histoire et Civilisation de Byzance, 235-58. Collège de France-CNRS; Centre de Recherche d'Histoire et Civilisation de Byzance, Monographies 35.

Morrisson, C. (1992). "L'épigraphie des monnaies et des sceaux à l'époque byzantine". Harlfinger, D. et al. (a cura di), *Paleografia e codicologia greca*. Alessandria: Edizioni dell'Orso, 252-74. Biblioteca di scrittura e civiltà 3.

Morrisson, C. (2002). "Byzantine Money. Its Production and Circulation". Laiou, A. (ed.), *Economic History of Byzantium*, vol. 3. Washington, D.C.: Dumbarton Oaks Research Library and Collection, 909-66.

Morrisson, C. (2012a). "Imperial Generosity and Its Monetary Expression. The Rise and Decline of the 'Largesses'". Spieser, J.-M.; Yota, E. (éds), *Donation et donateurs dans le monde byzantin*. Paris: Desclée de Brouwer, 25-46. Réalités byzantines 14.

Morrisson, C. (ed.) (2012b). *Trade and Markets in Byzantium*. Washington, D.C.: Dumbarton Oaks Research Library and Collection. Dumbarton Oaks Byzantine Symposia and Colloquia.

Morrisson, C.; Cheynet, J.-Cl. (2002). "Prices and Wages in the Byzantine World". Laiou, A. (ed.), *The Economic History of Byzantium*, vol. 2. Washington, D.C.: Dumbarton Oaks Research Library and Collection, 815-78.

Morrisson, C.; Lefort, J. (éds) (1989). *Hommes et richesses dans l'Empire byzantin*. Tome 1, *IV^e^-VII^e^ siècle*. Paris: Éditions P. Lethielleux. Réalités byzantines 1.

Morrisson, C.; Papadopoulou, P. (2013). "Symbols of Power, Symbols of Piety. Dynastic and Religious Iconography on Post-iconoclastic Byzantine Coinage". Grünbart, M.; Rickelt, L.; Vucetić, M. (Hrsgg), *Zwei Sonnen am Goldenen Horn? Kaiserliche und patriarchale Macht im byzantinischen Mittelalter. Akten der internationalen Tagung vom 3. bis 5. November 2010*. Teil 2. Münster: LIT Verlag, 75-98.

Morrisson, C.; Papadopoulou, P. (2019). "Monnaies réelles et monnaies de compte dans les documents athonites", in Delouis, O.; Smyrlis, K. (éds), "Lire les Archives de l'Athos", *Travaux et Mémoires*, 23(2), 299-339.

Morrisson, C. et al. (2006). *Les trésors monétaires byzantins des Balkans et d'Asie Mineure (491-713)*. Paris: Éditions P. Lethielleux. Réalités byzantines 13.

Mundell Mango, M. (1986). *Silver from Early Byzantium. The Kaper Koraon and Related Treasures*. Baltimore: The Walters Art Gallery.

Mundell Mango, M. (1994). "The Significance of Byzantine Tinned Objects". *Θυμίαμα στη μνήμη της Λασκαρίνας Μπούρα*. 2 vols. Athens: Benaki Museum, 221-7.

Mundell Mango, M. (2001). "Beyond the Amphora. Non-Ceramic Evidence from Late Antique Industry and Trade". Kingsley, S.A.; Decker, M.J. (eds), *Economy and Exchange in the East Mediterranean during Late Antiquity*. Oxford: Oxbow Books, 87-106.

Oikonomides, N. (1986). *A Collection of Dated Byzantine Lead Seals*. Washington, D.C.: Dumbarton Oaks Research Library and Collection.

Oikonomides, N. (1990). "The Contents of the Byzantine House from the Eleventh to the Fifteenth Century". *Dumbarton Oaks Papers*, 44, 205-14.

Oikonomides, N. (1991). "The Holy Icon as an Asset". *Dumbarton Oaks Papers*, 45, 35-44.

Papadopoulou, P. (2015). "Coins and Pots. Numismatic and Ceramic Evidence in the Economic History of the Middle Ages". Vroom, J. (ed.), *Medieval and Post-Medieval Ceramics in the Eastern Mediterranean. Fact and Fiction*. Turnhout: Brepols, 199-226.

Papaioannou, S. (2013). *Michael Psellos. Rhetoric and Authorship in Byzantium*. Cambridge; New York: Cambridge University Press.

Parani, M. (2010). "Byzantine Jewellery. The Evidence from Byzantine Legal Documents". Entwistle, C.; Adams, N. (eds), *Intelligible Beauty. Recent Research on Byzantine Jewellery*. London: British Museum, 186-92.

Parani, M.; Pitarakis, B.; Spieser, J.-M. (2019). "Artefacts and Raw Materials in Byzantine Archival Documents. A New Electronic Resource for the Study of Byzantine Material Culture", in Delouis, O.; Smyrlis, K. (éds), "Lire les Archives de l'Athos", *Travaux et Mémoires*, 23(2), 419-45.

Peers, G. (2021). *Animism, Materiality, and Museums. How Do Byzantine Things Feel?* Amsterdam: ARC Humanities Press; Amsterdam University Press.

Pentcheva, B. (2006). *Icons and Power. The Mother of God in Byzantium*. University Park (PA): The Pennsylvania State University Press.

Piguet-Panayotova, D. (2002). "The Gold and Silver Vessels from the Albanian Treasure in New Light". *Mitteilungen zur spätantiken Archäeologie und byzantinischen Kunstgeschichte*, 3, 37-74.

Pitarakis, B. (2009). "La vaisselle eucharistique dans les églises d'Orient". Bériou, N.; Caseau, B.; Rigaux, D. (éds), *Pratiques de l'eucharistie dans les Églises d'Orient et d'Occident (Antiquité et Moyen Âge)*. Paris: Institut d'Études Augustiniennes, 309-29.

Pitarakis, B. (2010a). "La cruche en cuivre du trésor de Kocamustafapaşa à Istanbul (XI^{e} siècle)", in "Mélanges Cécile Morrisson", *Travaux et Mémoires*, 16, 675-83.

Pitarakis, B. (2010b). "Wings of Salvation in Thirteenth-Century Art". Ödekan, A.; Akyürek, E.; Necipoğlu, N. (eds), *Change in the Byzantine World in the Twelfth and Thirteenth Centuries*. Istanbul: Koç University Press, 604-8.

Pitarakis, B. (2012). "Daily Life at the Marketplace in Late Antiquity and Byzantium". Morrisson, C. (ed.), *Trade and Markets in Byzantium*. Washington, D.C.: Dumbarton Oaks Research Library and Collection, 399-426. Dumbarton Oaks Byzantine Symposia and Colloquia.

Pitarakis, B. (ed.) (2015a). *Life Is Short, Art Long. The Art of Healing in Byzantium* = Exhibition catalogue (Pera Museum, 10 February-26 April 2015). Istanbul: Pera Museum.

Pitarakis, B. (2015b). "Piété privée et processus de production artistique à Byzance : à propos d'un enkolpion constantinopolitain (XIII^{e}-XIV^{e} siècle)". *Deltion tes Christianikes Archaiologikes Hetaireias*, 36, 325-44.

Pitarakis, B. (2016). "Bras de lumière sur le templon médiéval (XI^{e}-XIII^{e} siècle)". Brodbeck, S. et al. (éds), *Mélanges Catherine Jolivet-Lévy. Travaux et Mémoires*, 20(2), 435-52.

Pitarakis, B. (2018). "The Ritual of the Blessing of the Waters and Copper Alloy Vessels". *Annual of İstanbul Studies*, 7, 31-48.

Pitarakis, B. (2019). "Jewelers, Coppersmiths, and Clientele. Between Byzantium and the Arab World". Durak, K.; Jevtić, I. (eds), *Identity and The Other in Byzantium = Papers from the Fourth International Sevgi Gönül Byzantine Studies Symposium* (Istanbul, 23-5 June 2016). Istanbul: Koç University Press, 313-36.

Pitarakis, B. (2020). "Hagia Sophia, God's Chosen Ruler, and St. Nicholas. New Perspectives on the Macedonian Dynasty". *Yıllık. Annual of Istanbul Studies*, 2, 165-77. https://doi.org/10.53979/yillik.2020.13.

Pitarakis, B. (2021). "Health and Faith in Byzantine Anatolia". Akyürek, E.; Durak, K. (eds), *Anatolia in the Byzantine Period*. Istanbul: Yapı Kredi Yayınları, 242-53.

Pitarakis, B. (2022). "The Art of Weighing in Byzantium. Bizans'ta Ağırlık Ölçme Sanatı". *Ağırlık ve Ölçü Sanatı. The Art of Weights and Measures*. Istanbul: Pera Museum, 24-37.

Pitarakis, B. (forthcoming). "Objects of Desire. Collectors, Scholars, and Istanbul's Byzantine Art Market, 1850s-1950s". Delouis, O.; Pitarakis, B. (eds), *Discovering Byzantium in Istanbul. Scholars, Institutions, and Challenges, 1800-1955*. Istanbul: Istanbul Research Institute Publications. Istanbul Research Institute Publications 48, Symposium Series 3

Pitarakis, B.; Oikonomaki-Papadopoulou, Y. (2000). "Βυζαντινά Έργα". Papadopoulos, S. (ed.), *Κειμήλια Πρωτάτου*, vol. 1. Mount Athos: Iera Kinotis Ayiou Orous Atho, 45-58.

Pülz, A.M. et al. (2020). *Byzantinische Kleinfunde aus Ephesos*. Wien: Verlag der Österreichischen Akademie der Wissenschaften. Forschungen in Ephesos 18/1.

Reynolds Brown, K.; Kidd, D.; Little, Ch.T. (eds) (2000). *From Attila to Charlemagne. Arts of the Early Medieval Period in the Metropolitan Museum of Art*. New York: The Metropolitan Museum of Art, 180-7. The Metropolitan Museum of Art Symposia.

Rhoby, A. (2010). *Byzantinische Epigramme auf Ikonen und Objekte aus Kleinkunst*. Wien: Österreichische Akademie der Wissenschaften. Byzantinische Epigramme in inschriftlicher Überlieferung 2.

Rhoby, A. (2016). "Methods of Self-Representation in Byzantine Inscriptional Epigrams. Some Basic Thoughts". Santin, E.; Foschia, L. (éds), *L'épigramme dans tous ses états. Épigraphiques, littéraires, historiques*. Lyon: ENS Éditions, 2016. https://books.openedition.org/ensedition s/5621.

Rhoby, A. (2017). "Text as Art? Byzantine Inscriptions and Their Display". Berti, I. et al. (eds), *Writing Matters. Presenting and Perceiving Monumental Inscriptions in Antiquity and the Middle Ages*. Berlin; Boston: De Gruyter, 265-83.

Rhoby, A. (2019). "Das Inschriftenprogramm auf dem Beschlag der Freisinger Lukasikone". Bosselmann-Ruickbie, A. et al. (Hrsgg), *Das Freisinger Lukasbild. Eine byzantinische Ikone und ihre tausendjährige Geschichte. Tagunsband zum Internationalen Symposium Freising 2016*. Paderborn: Schöningh, 87-98. Kataloge und Schriften (Diözesanuseum Freising) 67.

Şahin, F. (2018). *Patara V.2. Patara Metal Buluntuları* (Patara V.2. The Patara Metal Finds). Istanbul: Ege Yayınları.

Sanders, G. (2018). "Είχαν οι απλοί άνθρωποι κεραμικά; Είδη οικοσκευής των πλουσιότερων και των φτωχότερων βαθμίδων της κοινονίας". Yangaki, A.G.; Panopoulou, A. (eds), *Το Βυζάντιο χώρις λάμψη. Τα ταπεινά αντικείμενα και η χρήση τους στον καθημερινό βίο των Βυζαντινών. Byzantium Without Glamour. The Humble Objects and Their Use in the Everyday Life of the Byzantines*. Athens: National Hellenic Research Foundation, 79-107.

Sanders, G.D.R. (2020). "Spring Forward Two Examples of How Shifting Chronologies Can Postpone The Dark Ages". *Herom. Journal on Hellenistic and Roman Material Culture*, 9, 353-79.

Schlumberger, G. (1893). "Un polycandilon byzantine". *Byzantinische Zeitschrift*, 2(3), 441-3.

Seibt, W. (2004). "Überlegungen zum Namensmonogramm auf dem byzantinischen Henkelkrug des Awarenschatzes von Vrap". Heftner, H.; Tomaschitz, K. (Hrsgg), *Ad Fontes! Festschrift für Gerhard Dobesch zum 65. Geburtstag*. Wien: Phoibos, 855-8.

Ševčenko, I. (1992). "The Sion Treasure. The Evidence of the Inscriptions". Boyd, S.A.; Mundell Mango, M. (eds), *Ecclesiastical Silver Plate in Sixth-Century Byzantium = Papers of the Symposium* (Walters Art Gallery, Baltimore; Dumbarton Oaks, 16-18 May 1986). Washington, D.C.: Trustees for Harvard University, 39-56.

Ševčenko, N. (2012). "The Portrait of Theodore Metochites at Chora". Spieser, J.-M.; Yota, E. (éds), *Donation et donateurs dans le monde byzantin*. Paris: Desclée de Brouwer, 189-205. Réalités byzantines 14.

Sodini, J.-P. (2016). "Une boucle de fermoir dans une tombe de la cathédrale de Xanthos". Brodbeck, S. et al. (éds), *Mélanges Catherine Jolivet-Lévy. Travaux et Mémoires*, 20(2), 555-71.

Spieser, J.-M. (2015). *Images du Christ. Des catacombes aux lendemains de l'iconoclasme*. Genève: Droz. Titre courant 57.

Spieser, J.-M. (2021). "Les objets de luxe dans les documents d'archives byzantins. L'exemple d'un acte du tribunal ecclésiastique de Thessalonique de 1384". Martiniani-Reber, M. et al. 2021. https://collections.geneve.ch/mah/publication/les-objets-de-luxe-dans-les-documents-darchives-byzantins.

Spingou, F. (2021). *Words and Artworks in Byzantium. Twelfth-Century Poetry on Art from MS. Marcianus Gr. 524*. Tolworth: Grosvenor House.

Uytterhoeven, I. (2021). "Creating Private Space. Living Areas in the Late Antique Cities of Asia Minor". Kontogiannis, N.D.; Uyar, T.B. (eds), *Space and Communities in Byzantine Anatolia = Papers from the Fifth International Sevgi Gönül Byzantine Studies Symposium* (Istanbul, 24-26 June 2019). Istanbul: Koç University Press, 219-41.

Van den Hoek, A.; Feissel, D.; Herrmann, J.Jr. (2015). "More Lucky Wearers. The Magic of Portable Inscriptions". Boschung, D.; Bremmer, J.N. (eds), *The Materiality of Magic*. Paderborn: Wilhelm Fink, 309-56.

Walker, A. (2010). "The Question of the Crowned Bride", in "Mélanges Cécile Morrisson", *Travaux et Mémoires*, 16, 849-63.

Walker, A. (2012). *The Emperor and the World. Exotic Elements and the Imaging of Middle Byzantine Imperial Power*. Cambridge: Cambridge University Press.

Walker, A. (2015). "Pseudo-Arabic Inscriptions and the Pilgrim's Path at Hosios Loukas". Eastmond, A. (ed.), *Viewing Inscriptions in the Late Antique and Medieval World*. Cambridge: Cambridge University Press, 99-123.

Walker, A. (2020). "Integrated yet Segregated. Eastern Islamic Art in Twelfth Century Byzantium". Schroeder, R.; Lam, A. (eds), *The Eloquence of Art. Essays in Honour of Henry Maguire*. London: Routledge, 387-406.

Wamser, L.; Zahlhaas, G. (Hrsgg) (1998). *Rom und Byzanz. Archäologische Kostbarkeiten aus Bayern*. München: Hirmer Verlag. Prähistorische Staatsammlung München.

Yıldırım, B. (2017). *Amorium Kazıları. Büyük Mekân Maden Buluntuları* (Amorium Excavations. Metal Finds from the Lower City Enclosure) [MA Thesis]. Eskişehir: Eskişehir Anadolu University; Institute of Social Sciences.