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PROVISIONING OF LATE ANTIQUE CONSTANTINOPLE: *ANNONA CIVILIS* AND BEYOND

Abstracts

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Engin Akyürek (Koç University/GABAM)

Andriake: Harbor of Myra in Late Antiquity

In late antique and early Byzantine periods commercial vessels on their way from Egypt to Constantinople sailed through the shores of Palestine, Syria, and south Anatolia before heading to the Aegean Sea and Propontis. Lycia stood in the midway of this route serving long-distance traders with its harbors such as Olympos, Lmyra, Myra, Patara and Macri. Andriake, the harbor of Myra, providing storage facilities with its huge granary, and connecting a large economic hinterland to the sea, was the most important harbor of Lycia for the regions's inter-regional trade. The Myra–Andriake Excavations revealed that the harbor was actively used from the first century BCE to the seventh century CE.

Five kilometers away from Myra, Andriake provides a typical settlement pattern of a harbor with its granary, agora, shops, baths, and churches. Andriake was not only a transit harbor for inter-regional trade but also an export oriented industrial center with its winery, docks and purple dye production units. The huge granary was used to storage grain from Egypt as well as grain, wine and other commodities produced locally, which were be exported mainly to Constantinople. Huge storage facilities prove that items other than export commodities were stored in order to support military activities of Byzantine navy in the region. At the same time, Andriake served the pilgrims who visited Myra, the holy city of St. Nicholas. This explains the presence of five churches in the harbor area.

Pamela Armstrong (University of Oxford)

Amphoras from the Saraçhane Excavations as Indicators of the Provisioning of Constantinople in Late Antiquity

85% of the pottery sherds collected in the course of the excavations at the church of St. Polyeukos in Constantinople came from amphoras. No other Byzantine site has produced and published the variety of types of amphora that were found there. This paper will examine the important deposits 30 and 32 from the excavation which together were the largest on the site, producing more than 50,000 sherds that spanned the sixth to eighth centuries. Particular attention is paid to coin evidence for the dating of the two deposits. A rough quantification of the different amphoras is provided in the publication, providing significant data for interpretation. Consequently, the origins of the amphoras are considered both in their chronological contexts and frequency of occurrence with a view to identifying the sources of foodstuffs that provisioned Constantinople in late antiquity.

Lajos Berkes (Humboldt-Universität zu Berlin)

The Contribution of the Apion Estate at Oxyrhynchus to the *Annona Civica*

This presentation aims at providing an overview of the collection of the *annona civica* in Egypt and its delivery to Constantinople with a special focus on the contribution of the Apion estate at Oxyrhnchus in the sixth and seventh centuries. At this time, the Egyptian family of the Apions played an important role on an imperial level and held high offices in the court. Thousands of Egyptian papyri preserve the administrative documents of

their estates, most prominently of their landholdings in the neighborhood of the city of Oxyrhynchus. These accounts, legal documents, and letters have been a focal point of late antique economic history in recent decades. These papyri amply attest to the collection and delivery of the *annona civica* on which some recently published accounts provide tantalizing new figures and details.

Jean-Michel Carrié (EHESS emeritus)

The *Annona* of Constantinople at the Crossroads of Issues: Fiscal Matters, Demography, Ideology, Archaeology

In a 2001 conference I focused on the similarities and differences between the public bread dole in Constantinople and the original model in Rome. More than three centuries had elapsed since the regulation by Caesar and Augustus of the Roman *frumentationes*. Moreover, when the *frumentationes* system in the old capital was the result of a long evolution resulting from the political struggles of Republican Rome, the adapted system in the new capital resulted from the agenda of an all-powerful emperor whose intentions were mainly to legitimize the creation of a second Rome, to multiply links of historical continuity between the old and the new caput mundi, and to attract new dwellers and incite the building of private houses. The quantities allowed to the new categories of recipients – the palatine staff, the new householders – were not additional, but included in the total amount of the allotment freely conceded to the city. Such was the trick invented by Constantine to reduce the number of the beneficiaries of plain *annona civica*, for want of any possibility to make its radical suppression politically acceptable and ideologically compatible with his own agenda. In accordance with this restrictive generosity, even the allowance of commodities other than bread (oil, wine, meet) at a reduced price was not transferred from Rome to Constantinople.

That is not to say that feeding a larger part of the Constantinopolitan population would have gone beyond the financial capabilities of the imperial fiscus. The difference between the quantities of staples needed for the Constantinopolitan allocation system and the Egyptian *canon frumentarius* shows that the fiscal delivery more than largely exceeded what would have been needed for supplying the whole population of Constantinople. This observation scales down the role and importance of the imperial civic doles in relation to the imperial economy as traditionally assumed and disqualifies the concept of administrated economy as a suitable way of typifying the Roman economy. The emperor was not only the main landlord of productive soil, but also the main trader of the Roman world, consequently an efficient redistribution operator.

Besides the other official uses of the Egyptian *embolè* (especially the *annona militaris* directed to the Danube military garrison), what remained of the fiscal income could be sold, directly or indirectly, to the open market for provisioning cities (especially the costal towns of Asia Minor, maybe Constantinople as well), providing an extra income melted into the general budget of the Empire. Since the emperor did not finance free bread for all capital dwellers, even more so is excluded imperial financing of doles in a number of provincial cities, as has been asserted by Durliat, with the unique exception of Alexandria for a reason that may be similar to the case of Ostia (*panis Ostiensis*) as interpreted by Domenico Vera.

Jim Crow (University of Edinburgh)

Water and Grain, Comparing the Demands of a Consuming City

Panem et circenses – bread and games, Juvenal sets these as instruments of Roman imperial control, set out to appease, to bribe an unstable urban mass. Rickman in his study of the Roman corn supply instead saw the corn supply as a pragmatic response demanded by the expanding urbanism of imperial Rome. He also recognised the equal importance of water, although for him Rome's aqueducts were more readily studied through their spectacular remains, while for the supply of corn 'we have no single reminder'. For Constantinople it is equally correct that no physical traces of granaries survive, but it is possible to assess the scale of water supply and distribution in late antiquity. In comparing the two urban staples it is also important to recognise the shared commonality of transmission. The city was a great centre of consumption, and both water and grain needed transportation over great distances. For water this required engineering expertise and infrastructure, for corn the empire's bread-basket needed control and management, and a network of shipping all demanding imperial resources. The vectors of transmission presented threats and dangers. Water channels were vulnerable to attackers and to natural catastrophes, the grain ships beset by contrary winds delivered pathogens. The failure to supply either commodity increased urban tensions and created civic violence. Ultimately both water and grain supplies were terminated through foreign invasion and siege in the early seventh century and the medieval city adapted new means of consumption.

Florin Curta (University of Florida)

Garum or Grain? Crimea and the Provisioning of Constantinople (Seventh to ninth Centuries)

Archaeology suggests that during the sixth and seventh centuries, Chersonesus (now Sevastopol) was a major center for the commercialization of salted fish and fish sauce (garum). Out of all 101 vats for garum so far known from Chersonesus, only 19 percent may be certainly dated to the late sixth or early seventh century, but fish-salting cisterns continued to the built in the city through the tenth century. Salted fish was also produced in Bosporus (now Kerch) and in some smaller settlements in its hinterland, such as Tiritake. This production was definitely meant for the market in Constantinople and Crimea served as the main supplier of salted fish and garum. Nothing indicates that that ceased at the end of the seventh century, for the lucrative commerce taking place in Chersonesus attracted the attention of the imperial government, as indicated by finds of seals of *kommerkiarioi*. Moreover, the appearance of the Khazars in the eastern part of the Crimean Peninsula ca. 700 does not seem to have put any obstacles in the way of economic growth. There are clear signs of agricultural intensification in many of the early medieval settlements excavated in the Kerch Peninsula, and clear signs of local amphora production. The paper analyzes all those disparate elements against the background of the common opinion, according to which the ancient city of Cherson(esus) declined and shrank. In fact, because after the loss of Egypt to the Arabs, Crimea was, together with Sicily, one of the granaries of the diminished empire, the Peninsula and Chersonesus may have served as the main supplier for Constantinople, both with garum and grain.

Michael J. Decker (University of South Florida)

Merchants and the Provisioning of Constantinople in Late Antiquity

In this paper, I will examine the evidence for the role of merchants in the provisioning of late antique (fourth-seventh centuries CE) Constantinople. Since, in the East Roman world, merchants did not form a distinct class, there are few direct references to their role in victualling the capital. Scholars have, understandably, rather focused on the role of the state, which was the prime mover in shaping the food supply of the capital. Using a range of textual and material sources it is nonetheless possible to examine private merchant activity in the transport and merchandising of food in Constantinople, and in some instances we are able to discuss merchants and their relationship with the state-sponsored *annona*.

Stella Demesticha (University of Cyprus) and Luca Zavagno (Bilkent University)

"Wherever waves can roll, and winds can blow." Late Antique Cyprus and the State Provision Systems in the Eastern Mediterranean

The enhancement of long-distance exchanges for the provision of Constantinople had a remarkable impact on the local economies and communities of the Empire. Cyprus, an island strategically located in the Eastern Mediterranean, unavoidably found itself across the maritime grain routes from Egypt to the new capital. Moreover, literary sources and archaeological evidence provide good indications about the involvement of the island in State-driven provision networks, possibly with wine packaged in LR1 amphorae, a common type of maritime transport containers in the region. This phenomenon has been associated with the establishment of *quaestura exercitus* (535 AD), an institution introduced to support the *annona militaris*, i.e., the supplies of the Byzantine armies along the Danube. When the eastern *annona* routes were severed first by the Persian invasion of the Near East and then by Arab conquests of Egypt in 640s, the island continued to play an essential role within the fragmented Mediterranean exchange network, acting as a regional bridge between the Byzantine and Caliphal economic systems.

Using Cyprus as a case study, i.e., a maritime province away from the capital, this paper discusses the impact of the imperial administrative and fiscal systems on local economies. We argue that they had a bidirectional effect because the enhancement of traditionally regional economies, such as this of Cyprus, reflected back on centrally organized institutions, like the *questura exercitus*. Although the degree of the island's in-kind contribution to the *annona civica* remains uncertain, it is important to examine the context of its involvement in long-distance exchange networks, with a focus on its own maritime capacity, as well as on its strategic position on the main sea routes that connected the capital with the eastern Mediterranean.

Koray Durak (Boğaziçi University, Byzantine Studies Research Center)

Constantinople's Foreign Trade with the East: Spices

Rome's trade with its eastern and southern neighbours did not diminish in the late antique period. The Roman Empire centred in Constantinople attempted to find new partners such as the Axumite Kingdom in North East Africa and the Türk Empire in western Central Asia to circumvent the international routes controlled by the Sassanian Empire. Precious stones, silk, and especially spices and perfumes constituted some of the major imports that catered to the needs of the prosperous urban classes of the Eastern Mediterranean as well as the political elite of the Empire, especially in its new capital city. The purpose of this paper is to investigate the provisioning of Constantinople with aromatics arriving from outside the borders of the Empire. The routes and actors involved in their transportation as well as the sale and consumption of aromatics in the capital city will be addressed.

Alkiviadis Ginalis (Deutsches Archaeologisches Institut-Istanbul)

The Facilities of the Theodosian Harbor as Indicators for the Provisioning of Constantinople

Since the foundation of Constantinople, its multiple harbors played a major role in the history of Byzantium and its capital. The biggest and most important one constituted the Theodosian harbor, also known as the harbor of Eleftherios. Functioning as the main commercial hub at least since the fifth century CE, it is associated with the provisioning of Constantinople. First and foremost, this included the supply of the city with grain from Egypt and other regions, which is reflected in its close connection to the existence of granaries in its immediate vicinity. However, the operation of granaries and warehouses and their connection to the Theodosian harbor has so far been identified only through their toponyms in written accounts.
In 2004, extensive material remains were brought to light at Yenikapı district during the construction works of the Marmaray and Istanbul Metro line. These comprise not only up to 37 shipwrecks of the early to late Byzantine periods, but also physical evidence of port facilities that belong to the Theodosian harbor. Beyond important information on the development of Byzantine harbor architecture, the various infrastructures verify the written sources regarding the connection of certain granaries with the Theodosian harbor. As such, a comprehensive analysis of the archaeological data offers crucial indications of the change in the provisioning of Constantinople in different centuries.

Andrea U. De Giorgi (Florida State University)

Antioch, Constantinople, and the Economy of the Greek East during Late Antiquity

Life and society in fourth century Antioch are documented by a wealth of textual sources and a staggering amount of modern scholarship. Less known is the administrative profile of the city on the Orontes as Constantinople began to erode her imperial prerogatives and went on to exact fiscal dues. This reconfiguration of the Greek East is the thrust of the talk, with, however, much emphasis on the movement of revenues and commodities from Syria to the Bosphorus. To that end, I will foreground the textual and epigraphic repertoires of the city, while also leveraging archaeological evidence from Antioch's territory and, not least, Seleucia Pieria, Antioch's seaport. This hub remains largely understudied; the archaeological datasets are quantitatively modest, in the main dating back to the 1930s excavations, and silting has greatly compromised the visibility of the site. Nevertheless, the ebb and flow of commercial activities, as well as imperial intervention aimed at making the anchorage and the harbor serviceable, shed light on Antioch's integration in the redesigning of the realities of power in the eastern Mediterranean.

Michael R. Jones (Koç University Mustafa V. Koç Maritime Archaeology Research Center-KUDAR)

Materials for Building and Maintaining Constantinople's Merchant Fleet Before and After the *Annona* (c. 300-1000): Evidence from Shipwrecks and Textual Sources

The imperial capital of Constantinople relied on a large merchant fleet to feed and supply its population, with vessels ranging in size from local coasters to large cargo ships designed to import *annona* shipments from Egypt and North Africa. Each represented a substantial investment in materials and labor, and included both vessels that were built near the capital and in more distant shipyards. Although they can be difficult to interpret, shipwrecks preserve evidence for construction methods and the relative quality of materials used in the fabrication and operation of ships. Indirectly, they also provide evidence for the economic and environmental factors that influenced ship design; for example, 'economizing' construction features have been identified by archaeologists in shipwreck hulls (with varying degrees of confidence), and include the choice of construction materials and hull fasteners. This paper will review the characteristics and (when possible) sources of materials used in pre- and post-*annona* Byzantine merchant ships, including the timber and metal fasteners used in hull construction, waterproofing materials, and rigging and other equipment. Shipwrecks do not provide a full picture of the economic organization and impact of Byzantine commercial shipbuilding, but it is possible to distinguish different vessel types and speculate on their roles, possible building sites or region(s) of origin of specific materials, and relative quality. This evidence can in turn be compared to ethnographic accounts and contemporaneous documents with references to ship construction materials, such as late antique law codes and the tenth-century naval inventory chapter of the *Book of Ceremonies*.

Olga Karagiorgou (Academy of Athens)

The Principle of Inertia in Provisioning the City

When Constantinople became the New Rome and very soon the largest of many cities in the Eastern Empire, a series of important developments took place that affected (among others) also the trade mechanisms of the Byzantine Empire. The capital's transfer on the Bosporus straits upgraded the importance of the Danubian provinces, in particular Scythia and Moesia Secunda, regarded now as the real ramparts of the *Θεοδοσιακόν τείχος*. These conditions created new and pressing demands on the food markets in the wider area, to satisfy both the growing population of the city (*annona civilis*) and the large armed forces (*annona militaris*) stationed along the Danubian *limes* (estimated to at least 75,000 men around the beginning of the 5th c.). Large shipments of grain were transported from Egypt and North Africa to Constantinople and stored in its granaries, named after the emperor who ordered their construction (*horrea* Valentiaca, Constantiaca or *horreum* Theodosianum), or the supply source (*horrea* Troadensia and Alexandrina). The maritime route starting from Cilicia, running along the western Asia Minor coast, and reaching up to Abydos and beyond received heavy traffic due to various goods transported to the capital and the Danubian provinces as attested by literary, epigraphic, archaeological and sigillographic finds throughout the fourth, fifth, and sixth centuries: dedicatory inscriptions of the *primi pilares* from Dacia and Moesia (fourth-fifth centuries), commercial seals from Scythia Minor (fourth-fifth centuries), the tariff of Abydos (ca. 492), *the quaestura Iustiniana exercitus* (May 18, 536), shipwrecks and amphora finds.

After the mid-seventh century, when Syria, Palestine, Egypt and shortly afterwards North Africa were irrevocably lost to the Arabs, the Byzantine State was forced to quickly devise counteractions against the loss of territories, human resources and, of course, revenues. Despite these braking forces, the Byzantine state objected promptly to a change in its velocity (inertia). Already under Constans II and his immediate successors, new breadbaskets for the capital and other sources of important raw materials were sought in Sicily, Thessaly, and possibly Cyprus, new granaries (*tes Lamias*) were constructed in the capital, and innovative economic institutions, the *apothekai*, attested exclusively from the seals of their *kommerkiarioi* (the dignitaries responsible for their operation between ca. the 650s and 730) and an obviously related body, the *imperial kommerkia* (ca. 730 to the early ninth c.), were involved in managing both the supply of the capital and of the armies with grains and perhaps other goods. The geographical distribution of the *apothekai* indicates a centrally devised and flexible plan for the successful exploitation and control of local resources in the various provinces, exactly where all this was urgently needed: in war zones, next to production outlets, along established trade routes and in the vicinity of the capital.

Şenel Kaya (Istanbul Technical University)

Granary of Tenedos: A Storage and Transfer Point for Constantinople's Provisioning

From the fourth to the sixth century a steady supply of grain from Egypt was one of the main sources of Constantinople's provisioning. Due to a variety of reasons, including its geographical location and its natural harbors, Tenedos Island (Bozcaada), which is about 15 km south of the entrance to the Dardanelles, became a significant transshipment point in the official network of transporting grain to Constantinople. According to Procopius, a huge granary was erected on the island during the reign of emperor Justinian in order to prevent the rotting of grain in the ships that would have to wait until weather conditions improved and the winds allowed ships to set sail to the capital.
As pointed out by previous scholarship, there is no archaeological evidence about the granary of Tenedos. However, Procopius's accounts provide some clues on the size and the location of the building. In this study on the role of Tenedos and its granary in the provisioning chain, a proposal about the possible location of the granary of Tenedos will be developed based on observations on the site, the examination of archaeological remains, and the comparisons with other granaries in the Roman world.

Owen Doonan (California State University Northridge) and Paolo Maranzana (Boğaziçi University)

Rural Transition in the Southern Black Sea and Constantinople in Late Antiquity: The State of the Archaeological Evidence

Over the past 4000 years the Black Sea has served as the arena for a fluctuating integrated ecological and economic system (Doonan 2010). Bronze and Iron Age periods were characterized by the emergence of a maritime community exploiting the annual migrations of key fish species (Doonan forthcoming). The maritime culture of the early Black Sea formed the foundation of a robust period of trade and political interactions from the Archaic through the Hellenistic periods, followed by the region's integration into the Roman imperial economy. The foundation of the great imperial seat of Constantinople in the fourth c. CE transformed the nature of the Black Sea economy from a largely internal, regional system to a productive hinterland. The southern coast of the Black Sea played a particularly significant role in this new system. The port of Sinope and its hinterland are considered as a key case study, based on a synthesis of archaeological surveys and excavations carried out by the authors and others. Evidence for the development of the urban center and closely related coastal towns, churches and villas is considered in light of the intensification of the agricultural hinterland (Doonan 2004; Doonan et al. 2021). Evidence for export from Sinope is considered through the distribution of locally produced transport amphoras (Kassab 2010), new evidence from Yenikapı shipwreck 35 (Polat 2019), and survey projects in the southern Black Sea region (Cassis 2015; Haldon et al. 2018; Matthews 2009).

Cemal Pulak (Texas A&M University)

Maritime Provisioning of Constantinople: Comparing and Contrasting Ships of the Early and Middle Byzantine Periods Based on Yenikapı Shipwrecks

Between 2004 and 2013, archaeological salvage excavations by the Istanbul Archaeological Museums in the Yenikapı district of Old Istanbul have unearthed the remains of Constantinople's Theodosian Harbor along with 37 shipwrecks of fifth to eleventh century date. These shipwrecks comprise by far the single largest assemblage of medieval ships discovered at a single site. The wrecks consist of small, medium, and large-sized coasters and merchantmen, along with six small naval galleys, the latter representing the earliest examples of their type. They provide a singular new source of information on the maritime commerce and provisioning of Constantinople, and document the gradual shift from the ancient shell- or plank-based hull construction to the skeleton- or frame-based shipbuilding in the Mediterranean. This change in the philosophy of shipbuilding during the Middle Ages was a complex and gradual process, and likely represents the adaptation by Byzantine shipwrights to the often harsh economic and political conditions of their times.

Michele R. Salzman (University of California at Riverside)

The Food Supply of Rome in Late Antiquity: A New Interpretation

Although the emperor is the figure nominally given the honor that derives from Rome's *annona* system, his absence from the city for long periods from the fourth to sixth centuries shifted the responsibility for this system more squarely onto the local administrators who oversaw food distribution in Rome. In this paper I highlight the still underappreciated role played by senatorial aristocrats in feeding Rome and hence, in ensuring the in-migration of the city's population. Indeed, senatorial aristocrats were the ones on the ground who were responsible for the distribution as well as oversight of the Rome's food supply, and they deserve greater recognition – for good and bad – as the primary actors.

New insights into the role of the urban prefect of Rome, a high senatorial position with increased responsibilities in the fifth and sixth centuries, demonstrates the important role played by senatorial aristocrats in perpetuating and preserving Rome's *annona* system. Because the provisioning system of Rome continued to function, it is a central but still undervalued piece of the puzzle of repopulation into the fifth and early sixth centuries.

Peter Sarris (University of Cambridge)

The Grain Supply of Constantinople and the Political Economy of Empire in the Age of Justinian

This paper will examine three aspects of the grain supply to Constantinople in the sixth century. First, it will examine the supply of Egyptian grain in the context of the broader contribution of Egypt to the economy of the East Roman Empire in the sixth century and the role of Egyptians in the political life of Constantinople at that time. Second, it will examine the fiscal connection between Egypt and Constantinople in the context of other fiscal connections between distant regions of the empire as providing an insight into how the imperial authorities understood the empire to operate. Third, it will examine legal evidence concerning the *annona* which is often overlooked in the context of disputes within the Constantinopolitan elite in the Age of Justinian.

Mustafa H. Sayar (Istanbul University)

The Role of the Harbors on the Propontis Coast in the Provisioning of Late Antique Constantinople and the Overseas Connections

The rescue excavations carried out during the Subway projects in the Yenikapı district uncovered parts of the ancient Eleutherios Port (also known as the Theodosian Harbor) together with 37 ships (and much of their loads). Inscribed objects were also found both in the ships and around them, buried in the sand and soil of the harbor. These finds have a broad chronological range spanning the late Roman to the early and middle Byzantine periods. They consist of handle stamps on amphorae, brick stamps, *grafitti* and *dipinti* on several amphorae and ceramic bowls. Most of the stamped finds were probably produced for trade providing oil and wine for the bustling capital of Eastern Roman Empire. The first part of this presentation will examine oil and wine amphora stamps; the second will discuss some new finds from the area between the Sea Walls and the Great Palace.