Trade and Markets in Byzantium
Dumbarton Oaks Byzantine Symposia and Colloquia

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Trade and Markets in Byzantium

Edited by
CÉCILE MORRISSON
To the memory of Angeliki Laiou—

pathbreaking leader in the study of the Byzantine economy,

inspiring and irreplaceable friend and colleague

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This book emerged from the 2008 Spring Symposium held at Dumbarton Oaks 2–4 May. For their help in organizing the meeting, blessed by clement weather that enabled participants to fully enjoy all the graces of the gardens, I am most grateful to Polly Evans, Danica Kane, Mario Garcia, and Joe Mills, who looked to its smooth running and recording. My warm thanks to Jan Ziolkowski, Director of Dumbarton Oaks, who hosted and welcomed his first Symposium of Byzantine Studies with his characteristic elegance and openness. My special gratitude to the then Director of Byzantine Studies, Alice-Mary Talbot, who directed so graciously and efficiently this thirteenth and last Symposium of her tenure. I also thank the contributors who have taken time out of their busy schedules to participate in the colloquium, to discuss reciprocally their respective papers, and then to create this book.

After the Symposium, it was decided to include two studies of great relevance to our topic: that of Rowan Dorin, doctoral student of Angeliki Laiou, on Adriatic trade networks in the twelfth and early thirteenth centuries and that of Luke Lavan on retail and regulation in the late antique city.

This is the fourth volume in the series Dumbarton Oaks Byzantine Symposia and Colloquia: it was preceded by Becoming Byzantine: Children and Childhood in Byzantium, edited by Alice-Mary Talbot and Arietta Papaconstantinou (2009); The Old Testament in Byzantium, edited by Paul Magdalino and Robert Nelson (2010); and San Marco, Byzantium, and the Myths of Venice, edited by Henry Maguire and Robert Nelson (2010). Editing and producing this book proved to be a longer process than some impatient authors would have liked. The result will, I hope, compensate for their regrets. Alice-Mary Talbot and her successor, Margaret Mullett, were instrumental in preparing the papers for publication, and the Director of Publications, Kathy Sparkes, brought her special skills to the quality of illustrations and her stamina to set the book on track. Joel Kalvesmaki scrutinized the manuscript with his usual acumen. Alice Falk copy-edited the mass of papers with great patience. To all, I extend special gratefulness.

Early in the preparation of this publication, the untimely and shocking death of Angeliki Laiou, an immense loss to the whole world of Byzantine studies, stirred particular grief among all participants in the Symposium, speakers and listeners alike. This had been the last occasion on which she met her colleagues in community and delivered a paper, and the last time she attended a symposium at Dumbarton Oaks, the institution and place to which she had devoted such passionate and clear-minded energy during the years of her directorship (1989–98) and well beyond. There was not a hint of her impending illness; her presence was as imposing and her interventions as sharp and appropriate as ever.

It is just and meet that this book be dedicated to her memory as a modest token of our debt to a great historian. Without her pioneering work on the Byzantine economy, the present studies would probably not have been written or assembled.

Cécile Morrisson
Although trade is often featured in Byzantine archaeological meetings or in those offering a regional perspective, it is rarely the center of them. The symposium that took place in Dumbarton Oaks on 2–4 May 2008 and gave rise to this book was entirely devoted to trade and markets in Byzantium. It was not, however, the first colloquium with Byzantine trade as its main subject. The Oxford conference held at Somerville College on 29 May 1999 (later edited and published by Sean Kingsley and Michael Decker as Economy and Exchange in the East Mediterranean during Late Antiquity) may have been the first to set forth down this path—if “late antiquity” is taken as coterminous with “Byzantine”—and to signal the revived attention spurred by the accumulating wealth of new archaeological material.1 Because of its wider chronological range, the British 38th Spring Symposium of Byzantine Studies titled “Byzantine Trade (4th–12th c.): Recent Archaeological Work,” held in Oxford in March 2004, was advertised as the first symposium directly focused on Byzantine trade.2 Finally, another conference held in Vienna in October 2005, codirected and just published by one of our speakers, Johannes Koder—“Handelsgüter und Verkehrswege: Aspekte der Warenversorgung im östlichen Mittelmeerraum (4. bis 15. Jahrhundert)”—underscored the growing interest in the subject.3

Trade deserves special attention because, as many economic historians have shown, it plays an essential role in the economy and particularly in economic development; the famous slogan “Trade Not Aid” embraced by African leaders and Western economists nicely encapsulates the idea that growth results not from massive aid but from an increase in exports, which—as the examples of Japan, Korea, Taiwan, and now China demonstrate—leads underdeveloped economies out of poverty.4 All things being equal, the evolution of the Byzantine economy from the ninth to the twelfth century and, later, from small-scale trade to far-flung involvement in international exchanges clearly illustrates the correlation between the expansion of trade and that of the economy in general. However they interpret its

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3 E. Kislinger, J. Koder, and A. Künzler, Handelsgüter und Verkehrswege: Aspekte der Warenversorgung im östlichen Mittelmeerraum (4. bis 15. Jahrhundert), Österreichische Akademie der Wissenschaften, Veröffentlichungen zur Byzanzforschung 18 (Vienna, 2010). This volume appeared too late for its contents to be taken into account here.
causes and context, this expansion is now generally recognized by historians. An expanding trade relies on an efficient division of labor, about which Adam Smith said, with typical Scottish humor: “Man has almost constant occasion for the help of his brethren, and it is in vain for him to expect it from their benevolence only.”

Indeed, the permanence of interregional and international relations, defined as the exchange of commodities, information, and population at all levels, which Peregrine Horden and Nicholas Purcell labeled “connectivity,” is a primary concern of their Corrupting Sea and of another magisterial book, Michael McCormick’s Origins of the European Economy, while receiving due consideration in the Economic History of Byzantium, edited by Angeliki Laiou. In her final overview, she pointed to the parallels she had drawn between the West and the Byzantine economy as supporting her “insistence on trade as a dynamic element in the medieval economy, especially in the eleventh and twelfth centuries.” In his no less monumental Framing the Early Middle Ages, Chris Wickham proclaimed that his final chapter, “Systems of Exchange,” was “in many ways the core of the book.” Although it may have been a later addition and a shift of thinking by an author who has reflected for many years on the transformation of the Roman world, it marks a welcome recognition of the importance of trade. The recent assessment of early and mid-Byzantine trade at the regional and international levels provided by the contributions to the Oxford 2004 symposium clearly recognized its vitality and role, even in the dark eighth century, in comparison with “non-economic exchange.”

“Trade and Markets” versus the Byzantine Market Economy

The invitation letter stated that the Symposium would “focus equally on markets and the market place.” Because of the polysemy of the term “market,” this phrase requires qualification. The Dumbarton Oaks meeting did not consider the concept of the Byzantine market, defined as an economic system of transactions to exchange goods and services, nor did it formally assess different models of the extension of the Byzantine market economy, whether constituted in a comprehensive network of relatively independent markets or in fragmented, unconnected markets within the more restrictive frame of a tributary state.

But that long-debated topic could not be passed over entirely; it is treated in the first and last chapters of this volume. In the latter, Peter Temin analyzes the Polanyian concepts of reciprocity, redistribution, and exchange and Frederic Pryor’s differentiation of exchanges and transfers, before stating the conditions in prices and individual behavior that are characteristic of a market economy. The skeptics who deny the existence of a Byzantine “market” should take note that a market economy is one in which market exchanges are the most common type of interaction—other forms of exchanges, whether reciprocal or redistributive, may take place as well, as indeed was the case in Byzantium. In the first chapter, Jean-Michel Carrié recalls the shifting fortunes of the “traditional, innocently modernist” model of late antiquity in the early twentieth century and the “primitivist” one, before offering his own characterization of the late Roman market economy. He concurs with Peter Temin in defining it as a “conglomeration of interdependent markets.” And this notion of the Byzantine economy as a network of interconnected relatively “free” markets implicitly lies behind most of the chapters in this volume.

Trade in the Debate Regarding the Ancient Economy

A short account of the various schools of thought may be of use. Broadly speaking, the “modernists” view the ancient economy as functioning, all things being equal, in ways comparable to the modern one, with differences in quantity and not quality; this idea was maintained by both Michael Rostovtzeff

8 C. Wickham, Framing the Early Middle Ages: Europe and the Mediterranean, 400–800 (Oxford, 2005), 693.
and Henri Pirenne. The “primitivists,” on the other hand, insist, as did Moses Finley in several influential essays, that modern analysts cannot approach the ancient economy using economic concepts ignored by its actors and that it was essentially driven by social forces rather than a desire for profit. The ideal of self-sufficiency (autarkeia) prevailed; there was hardly any division of labor, regional specialization, or technical innovation; goods were traded or rather redistributed mainly for social or political reasons; and trade played a negligible role in the economy. This “academic battleground,” to use Keith Hopkins’s phrase, involved mainly historians of the early and late Roman economy, as Rostovtzeff’s views opposed those of Hugo Jones, but it did not leave Byzantinists untouched. Michael Hendy, who acknowledged his intellectual debt to Finley, Jones, and Philip Grierson, brilliantly took sides with them in his great book and other studies in which he contended that the role of the state in the “Byzantine monetary economy” was paramount: trade, in his view, played no part at all in the state’s monetary policy nor in its resources and only a limited one in monetary distribution and circulation. Evelyne Patlagean also upheld the approach of “primitivists,” relying on the perspectives of Karl Polanyi, Moses Finley, and Marcel Mauss (notably in her paper delivered at Spoleto in 1992).

In contrast, Angeliki Laiou was well aware of the developments of contemporary economic analysis and modern economic history and did not shy from employing their categories in her reasoning. Therefore Patlagean implicitly considered her a “modernist,” in her long, nuanced review of The Economic History of Byzantium in 2004. Yet Laiou’s conception of the Byzantine economy was quite balanced, and she did not belong among those whom Carrié calls the traditional, innocent modernists. Before outlining Byzantine trade in the middle Byzantine period, she devoted an entire chapter to the non-economic forms of exchange as defined by Mauss and Polanyi, which Grierson highlighted in his pioneering and famous article, “Commerce in the Dark Ages.” For the late Roman period, readers should consult the seminal article by Richard Whittaker and his analysis of its “tied trade,” as well as the more recent assessment offered in the introduction to the Cambridge Economic History of Greco-Roman Antiquity.

In that authoritative volume, distribution in the early Roman Empire is viewed from a more balanced perspective, which signals that the debate has subsided and a new consensus has been reached. Neville Morley, among others, recognizes that the Roman economy was “organized through market incentives or directed through requisition and compulsion” and knew a “degree of integration, of the movement of goods, people, and ideas.” In spite of the revival

of the old polemic provoked by Peter Bang’s recent book, the debate has progressed to the point that all participants are at least more aware of the importance for current and future investigations of two elements: on the one hand, quantification of the “performance” of the Roman economy (production, input-output, costs and benefits, population and standards of living, prices, sales, and exports); and, on the other hand, the role of structures such as institutions, technology, ecology, demography, and ideology. Though not put in the same terms, such an approach was by and large that of the Economic History of Byzantium, which provided the framework for this Symposium; we thus did not take up the debate again.

Local, Regional, and Interregional Exchanges: The Evidence

The purpose of bringing together historians and archaeologists was to gather further evidence and present the state of the art of research on the movement of goods—“things that travelled” in the words of David Whitehouse—within the Byzantine world on markets at various levels, especially at the regional scale. Regional trade was rather neglected in previous research, which had long been more interested in interregional and long-distance trade and the mostly prestige or luxury items it carried than in smaller regional and local markets and market-places. The numerous markets that make up the Byzantine market economy imply a chain of transactions in which trade takes place on varied tiers. How to classify these markets is an issue considered by several chapters. Various criteria can be used for this purpose, most notably those offered by Luuk de Ligt in his Fairs and Markets in the Roman Empire: type of transaction, duration, and distance. A combination of the last two, duration and distance—the latter reflecting the constraints on human travel in an ancient or medieval context—seems relatively free from dispute and has been used in this book.

The Three Levels of Trade

Agreement emerged in the Symposium on the following rough limits of the three tiers:

ONE. Local, defined as a one-day transit time, or within a radius of less than about 50 kilometers (31 miles) by land or the distance of one day’s sailing, to a maximum of two or three days’ travel on foot. This is the smallest and the most difficult level to apprehend. But the diffusion of the most ordinary cooking ware generally constitutes a good proxy of a network with a 50-kilometer radius, as shown by Alan Walmesly, who uses as a marker Jerash Bowls, Palestinian Fine Ware from Jerusalem, and Red Painted Ware of Jordanian origin (possibly from Amman). Archaeology is now fortunately devoting greater attention to this kind of ordinary ceramics—witness the now regular meetings on Late Roman Coarse Wares (LRCW), published in three volumes to date—and this area of research,

26 See A. E. Laiou, “Regional Networks in the Balkans in the Middle and Late Byzantine Periods”; S. Redford, “Trade and Economy in Antioch Cilicia in the Twelfth and Thirteenth Centuries”; and J. Koder, “Regional Networks in Asia Minor during the Middle Byzantine Period (Seventh–Eleventh Centuries): An Approach.”
27 L. de Ligt, Fairs and Markets in the Roman Empire: Economic and Social Aspects of Periodic Trade in a Pre-industrial Society, Dutch Monographs on Ancient History and Archaeology 11 (Amsterdam, 1993), 1, 79–81.
28 Laiou, “Regional Networks in the Balkans,” 126 n. 5.
though not systematized, is also being explored in the Byzantine period.

**TWO** Above this limit and below ten days’ travel is the regional level; in terms of distance, it corresponds to a radius of 100 to 300 kilometers. Regional travel also involves professional traders, whereas local trade is still partly or mostly in the hands of the local producers themselves. For this tier, the ongoing study of unglazed coarse pottery is a promising line of research that is beginning to be investigated—for instance, in Amorion by Chris Lightfoot and his team—and still has much to tell us. In defining regional networks, we are also aided by the study of ecological conditions for agricultural and other production. As Johannes Koder highlights, the supply radius from the hinterland to urban settlements varied according to the agrarian productivity of their respective landscapes. All things being equal, local and regional trade mostly concerned everyday staples (foodstuffs) and pottery, but it also handled raw material and energy sources for crafts such as hemp, flax, leather, iron, wood, charcoal, and so on.

**THREE** Interregional trade connects two different regions that each have a radius of 100 to 300 kilometers. It is not necessarily carried over a long distance, but that is most frequently the case, for the two regions are not systematically coterminous. It is often but not always international; conversely, regional exchanges might cross over political boundaries in the middle Byzantine period, as between Byzantium and the Bulgars, or in the later period, as Scott Redford describes, between Armenian Cilicia and the Principality of Antioch, and as was the rule in the “small states” of the fragmented Byzantine world after 1204.

It should be pointed out that for maritime commerce, the distinction between the regional and interregional is more blurred, since the lower cost of transportation does not limit quantities as much as it does in terrestrial trade. Moreover, the two levels often intermingle, since commodities that travel long distances often end up in regional exchanges and vice versa, as the “intra-Adriatic port-hopping” described by Rowan Dorin illustrates.

**Sources: Archaeology, Numismatics, Texts, and Documents**

Another obvious area of agreement pertains to our various sources, and the need to combine and cross-check them. The seminal contribution of archaeology is now fully and universally recognized. In many instances, as will be seen below, it opens entirely new avenues; in others, as in the case of Comacchio described by Sauro Gelichi, it offers a welcome confirmation of the trends suggested by the study of written sources. The abundance of the material yielded by archaeology over the past fifty years, its context, and its wide distribution in themselves argue for a movement that, in the late Roman world as well as in the twelfth century and later, involved trade in a wide range of goods, from luxury items to more common commodities. Ceramics feature in many contributions of this volume: on the one hand, high-value glazed ceramics enable scholars to trace regional and interregional commerce and are a main focus of Demetra Papanikola-Bakirtzi’s and Scott Redford’s chapters; on the other hand, unpretentious and cheaper unglazed or even coarse pottery points to geographically smaller networks with a larger clientele.

The enormous progress made in the classification of amphorae and the location of their production centers, together with the analyses of their contents, enables Dominique Pieri, by plotting the varied provenances against the distribution of finds, not only to outline in detail the long-distance export and distribution of Gaza wine through the Mediterranean and to the West but also to highlight the regional imports in Beirut of Acre amphorae and Bag amphorae, as well as the local distribution of North Syrian ones, attested in Zeugma, Ruşafa, Apameia, and villages in the Limestone massif. “Operational” approaches to amphorae can lead to economic inferences: the implicit relation between the heavy Late Roman African amphorae of some 80 kilograms each and

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31 Koder, “Regional Networks in Asia Minor,” 147 and n. 3.
32 Laiou, “Regional Networks in the Balkans,” 126.
34 Koder, “Regional Networks in Asia Minor,” 155–58.
35 In this volume, R. Dorin, “Adriatic Trade Networks in the Twelfth and Early Thirteenth Centuries,” 264.
36 See in this volume S. Gelichi, “Local and Interregional Exchanges in the Lower Po Valley (Eighth–Ninth Centuries).”
elaborate port facilities; the ergonomic explanation of the curious shape of Aegean Kapitān 2 or Pieri’s Late Roman 9, which was easier for a single stevedore to grasp and carry; and the lightness and thinness of the walls of sixth-century globular amphorae, which made it possible to transport more content for the same tare and were better adapted to beachside or smaller-scale landings as well as to reuse.37

Although ceramics evidence has brought a revolutionary change in our perception and even has enabled us to quantify Roman and Byzantine exchanges, as Pieri emphasizes, the bias resulting from the “invisibility” of commodities transported in perishable packing (bags, skins, or textiles) or simply as a loose cargo, such as grain, lentils and other pulses, textiles, spices, furs, and the like, seems nearly insuperable for archaeological investigation, where they hardly leave any trace. The problem is addressed at length in Michael McCormick’s chapter below. The solution is often to turn to indirect evidence—primarily written documents; for example, their frequent mention of cupae in the West and βοττία in the East points to the key role of wooden containers in transportation.

Some contributors to the Symposium included numismatics—an approach rarely taken before, which bears tribute to the efforts of researchers in that discipline to make its material available to and usable by nonspecialists—even if its evidence, not yet included in a geodatabase, is difficult to interpret because coins change hands so much more easily than do other materials.38 Nevertheless, when considered in aggregate and in relation to other material, whether archaeological or documentary, coin circulation can help define chronological patterns or spatial distribution, as the chapters by Lightfoot, John Haldon, and Laiou show. The latter two authors saw as paradoxical the lack of precious metal coin finds from large and active production and trade centers such as Corinth or Athens, but this phenomenon should not be surprising; indeed, it is common throughout the Byzantine world, due to the higher rate of loss of petty coinage (one is much more likely to expend effort to recover a gold or silver coin than a small one of little value). The coexistence in some particular areas of coins from various political entities sometimes points to a “currency community,” as in the case of the Antioch region and Cilicia in the thirteenth century—a community that is also made visible in a community of taste, as expressed by the motifs of the Port Saint Symeon Ware or its imitations and their standardization.

The testimony of texts on trade have been used ever since Wilhelm Heyd’s Histoire du commerce du Levant au Moyen Âge (1885–86) or Henri Pirenne’s famous Mabomet et Charlemagne (posthumously published in 1937) for their meaningful and picturesque anecdotes, but not until Michael McCormick’s Origins of the European Economy (2001) was the potential of all written sources and documents for statistical analysis fully recognized and exploited. The rich western archives, even when already the object of numerous studies, can provide new perspectives when approached from new angles, as Rowan Dorin does in his study of the regional Adriatic networks in the twelfth and early thirteenth centuries, before Venice had fully established her dominance of the region’s sea-lanes.

More obliquely, literary or religious texts can also yield details in the many metaphors related to commercial practice, the good and evil deeds or the risks incurred as found in Church teachings on virtuous trading, and all the allusions to market-conditioned behavior. Such metaphors also tell us that trade and markets were so common that the many topos based on them were readily understood by churchgoers.39 Previously neglected texts, such as the Arab

39 McCormick, “Movements and Markets in the First Millennium,” analyzes several metaphors on trade, risk, profit, etc. 78–79; C. Morrisson, “Weighing, Measuring, Paying: Exchanges in the Market and the Marketplace,” analyzes cases (legal or literary) of defrauders and swindlers, 587–88, 589–90; L. Lavan, “From polis to emporion? Retail and Regulation in the Late Antique City,” 331–77, examines shops and daily exchanges in late antiquity, passim.
almanacs and chronological treatises examined by André Binggeli, yield precious information on Bilād al-Shām’s fairs (the regular intervals at which they were held and the area from which they drew attendees); those in Filastin; those on the Damascus–Mecca route, which existed in the preceding period under Byzantine rule; and the later ones established in the Jazīra on the Euphrates axis.

Relying on this combined evidence, the essays in the first three sections of the book concur in depicting and analyzing the dynamics of local, regional, and interregional trade and that of the artisanal or manufactured products which were exchanged. The last section is devoted to the practical functioning and environment of the Byzantine marketplace.

**Marketplace and Shops**

The final chapters in this volume consider regulation and control of measures, weights, and payments—an essential institutional condition of the functioning of market exchange generally, and specifically an important foundation of the Byzantine economy—together with indirect taxes from the fifth to the fifteenth century. The unified system inherited from Rome, which was of great benefit in supporting market exchanges and lowering transaction costs, never disappeared even when Byzantium had to agree, from the twelfth century onward, that the privileged Italian merchant communities could use their own measures in their colonies. Brigitte Pitarakis provides a material perspective on this legal and documentary survey by bringing together representations in various media of everyday transactions and installations and the widely attested archaeological remains of measuring and weighing instruments.

Markets as physical spaces have received scarcely any attention, except in the recent studies by Luke Lavan. He offers here an in-depth and innovative study of archaeological evidence for shops and markets in late antiquity, combined with many references to the abundant literary sources. He presents an almost exhaustive survey of present knowledge of material environment for transactions, including market stalls (tables) revealed by slits cut in front of porticoes; wooden tables revealed by postholes and topos inscriptions; cellular shops, often grouped according to their trade and equipped with shelves for the display of goods, counters, and, in the case of taverns, benches or couches for customers; and specialized market buildings, whether tetragonal agoraic or macella or sigma shopping plazas. In addition, he proposes a new interpretation of the legal texts (especially *CTb* 15) that have long been taken as a proof of the encroachment of streets and the transformation of the late antique city into a medina. The overall picture clearly supports his main argument that the “commercialization” of city centers was a sign not of urban decay but of a conscious evolution toward a new monumentality, accepted and even fostered by urban elites in the sixth century. This new urban environment obviously matched the active exchanges inferred elsewhere in the book from other sources.

The subject of shops and markets is also considered by Alan Walmsley in the last section of his chapter, which partly overlaps with Lavan’s observations and complements them: in Byzantine and early Islamic Syria and Palestine, excavations of many secondary urban centers and even big villages (Rusāfa, Palmyra, Pella, Jarash, Skythopolis, Arṣūf, Umm al-Raṣāṣ, Subaytah/Shivta) provide evidence from the sixth through the eighth century for market streets and agglomerated courtyard units, often located near the church or the mosque. The continuity, renovation, and even new construction of these facilities offer yet more proof of the vigorous functioning of local exchange.

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Though it may be bold to generalize, we may draw some conclusions about points of agreement between the contributors: a widely shared focus on

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geographical and ecological constraints to explain the formation and limitations of regional or local markets supplying an urban center, as well as close attention to the division of labor conducive to interregional exchanges. Relying on such analysis, many essays explore the correlation between trade and urbanization, an element most typically at work in the expansion of long-distance and interregional trade in the Adriatic and the Aegean beginning in the twelfth century or even earlier, since larger cities such as Venice or Constantinople could no longer rely on their medium-range hinterland to feed their inhabitants. Whereas the growth of urban centers was both a cause and a precondition for the emergence of interregional networks, the development of rural centers (e.g., in Boeotia) entailed the expansion of regional and local networks as analyzed by Laio and Papanikola-Bakirtzi and in other studies. When examined over the course of centuries, most regions displayed common trends, though the mid-Byzantine decline did not occur at the same date everywhere, and the subsequent recovery started in some places as early as the late eighth or early ninth century, at others only in the late tenth century.

The most striking commonality is a new vision of the so-called dark age (the long eighth century, broadly speaking). It is true that increased localization and decreased quality of production in this period cannot be doubted, as exemplified inter alia by the restricted diffusion of Sagalassos local semi-fine and coarse kitchen wares; but contributors with different emphases and approaches converged in insisting on the continuity of general settlement and economic activity in Asia Minor. They also concurred in describing the resilience of some coastal areas or islands, like Cyprus, due to the survival of long-distance trade. However limited, these long-distance relations can be traced—for example, in the wide diffusion of Crimean transport amphorae as far as Butrint and in the new centers of trade in northern Italian sites like Comacchio. Resilience also characterized certain areas of inland Anatolia, where the decline of long-distance trade, the plague, and other factors had less effect and where the presence of the army stimulated agricultural and artisanal production aimed at satisfying its needs.

At the same time, weight was given to the analysis of regional diversity and to the changing patterns of networks, such as the growing importance of the Black Sea north–south route between Amastris, Paphlagonia, and Cherson; the shift of the Adriatic trade from a north–south to a west–east emphasis; the reorientation of Halmyros trade from its earlier destination, Thessalonike, to its western hinterland; and so on. Better knowledge of common wares or new approaches to documentary analysis enabled several contributors to look for the structure of local or regional networks, stressing the role of secondary distribution centers or differentiating between regular and occasional markets. New aspects or contexts of exchanges were brought to light for the first time, such as informal markets on the beachside and retail sales on board the tramp ships themselves, probably aimed at dodging imperial taxes.

Not all topics or aspects could be addressed, and regional trade in the late Byzantine period, for which contemporaneous documents can certainly yield more information than has already been retrieved, was not thoroughly treated. Few attempts at quantification were made, despite their necessity for valid economic analysis (admittedly, their dependence on ancient and medieval documents obviously limits the precision of such efforts). One of the possible approaches to the subject suggested here relies on a renewed survey of shipwrecks, a much greater number of which are known now (ca. 309 for the Mediterranean, AD 500 to 1500) than in 1992, when Anthony Parker published his pioneering book on the subject. Michael McCormick is aware of the imperfection of this proxy measure of seaborne traffic, due to the influence of such other factors as decline in population and demand, difference in ship sizes and the cargoes transported, variations in the sinking rate caused by different knowledge and conditions of navigation, and the age of the vessel. Yet all these biases can be taken

44 Walmsley, “Regional Exchange and the Role of the Shop,” below, 315, and Dorin, “Adriatic Trade Networks,” below, 271, etc.
45 A. Bingelli, “Annual Fairs, Regional Networks, and Trade Routes in Bilād al-Shām (Sixth–Tenth Centuries).”
48 McCormick, “Movements and Markets in the First Millennium,” 89–98. See also Wilson’s review of Parker’s data in “Approaches to Quantifying Roman Trade,” 219–29, who likewise both emphasizes an increase in the use of barrels rather than amphorae as perhaps leading to the decline in the number of perceived shipwrecks in late antiquity from its peak in the second
into account to qualify the present picture—a lower number of datable wrecks from the ninth to the fifteenth century than from antiquity, though other sources point to considerable numbers of bigger ships in the late medieval Mediterranean. Another task will be to compare assemblages of pottery production or usage, following on the pioneering attempts to quantify the frequency of late Roman sherds of a defined form (ARS) over time. Similarly, the already well-known comparisons of find patterns from late antique Mediterranean sites published by Michael Fulford and Clementina Panella could be extended to the Byzantine period, when more progress has been made in identifying ceramics and publishing sites—provided that there is enough consistency in how finds are recorded, classified, and published that the necessary geodatabases can be built. A number of hurdles, both methodological and practical (notably, unequal distribution of information) are still in the way, but a consensus on what we know, at least qualitatively, and what we do not has been achieved, and several lines of research have been proposed.

From my standpoint as the editor and a historian, such are the main points that I encourage the reader of this book to bear in mind. A genuine economic perspective is offered in Peter Temin’s assessment at the end of this book. The variety and complexity of the exchange networks analyzed by the essays in this volume, the ubiquity of coins or at least the role of money as measure of exchange, the persistence of local exchanges throughout the designated period, and the recovery of long-distance trade from its eighth-century nadir, which signals the return to economic prosperity in the eleventh and twelfth centuries—all characterize the Byzantine markets as free but regulated. It now remains to follow the paths that have been opened in the various chapters of this volume.

Cécile Morrisson, August 2010

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49. Wilson, “Approaches to Quantifying Roman Trade,” 237–43.
I f money is undoubtedly “the great wheel of circulation, the great instrument of commerce,” as Adam Smith claimed, that is because, as we all know since Aristotle, it is “a measure of all things” on the basis of which exchange can take place. It is only natural that in the fourth century, the bishop of Constantinople, St. John Chrysostom, who was born in the great merchant metropolis of Antioch, heralded “the use of coins [which] welds together our whole life and is the basis of all our transactions,” while a roughly contemporary epigram of Palladas in the Anthologia Palatina praised the “fertilizing follis.” But money is only one among many other measures, as traditional images of a Byzantine and a western merchant illustrate: the former carries a jar on his shoulder and holds the scales in his left hand (fig. 15.1), while the latter holds the scales in his right hand and the measuring rod in his left, his conspicuous purse hanging from his belt (fig. 15.2). In the words of Peter Spufford, “To be a merchant is to weigh and measure.” Money, weights, and measures, plus taxes and various excises, always formed the core of the merchant’s culture—as Francesco Balducci Pegolotti put it in the fourteenth century, they are the cose bisognevoli di sapere a mercatanti di diverse parti del mondo (topics that the merchants from various parts of the world need to know).

No treatise on the art of commerce comparable to Pegolotti’s survives from Byzantium, but much information can be gained from several sources: first, the many laws that governed commerce and ensured security and uniformity in weighing and paying in “markets,” be they permanent, weekly, or annual, or local, regional, or international; second, other textual sources giving evidence of daily practice; and, last but not least, the archaeological documentation on instruments of weighing, measuring, and paying. This latter perspective is considered in greater detail in this volume in the chapter by Brigitte Pitarakis, but it cannot be entirely ignored in what follows, which will outline the regulation and enforcement...
of weighing, measuring, and paying in Byzantine markets from the fourth through the fifteenth century. In this longue durée, the power of tradition and material constraints contributed to a certain degree of continuity. Yet political and economic changes and their consequences require a chronological assessment, which here takes the form of a classic three-period division, paralleling the distribution of our sources: late antique or early Byzantine, middle Byzantine, and late Byzantine.

The Early Byzantine Period
(Fourth–Sixth Centuries)

A fourth-century text by Pacatus describes the usurper Maximus (409–11) as staying “at the scales (lances) . . . watching the movement of the weights (momenta ponderum) and the oscillations of the balances (nutas trutinarum) on which are weighed the spoils of the provinces. . . . here, gold taken from the hands of the women; there, bullae torn from the necks of children. . . . Everywhere, coins (pecuniae) were counted up, chests (fisci) were filled up, [bronze] moneys (aera) were heaped up and vessels (vasa) were cut up.”8 In a less dramatic way, the same distinction between weighing and counting was made in the marketplace, where it was customary to pay by weight for precious metal, by tally for small change. This long tradition is summed up in the eleventh century in the versified Synopsis tōn nomōn, where Psellos answers the question about which commodities were sold “by weight, by measure, or by number” with the following examples: “by weight, such things as gold, silver, and lead; by number, small change (noummoi leptoi); and by measure, wine.”9

Market transactions relied on accurate and honest scales or balances, weights, and measures of capacity or length applied to both the various commodities exchanged and the coins used in their payment.

Let us recall briefly the different types of scales and weights, in order to understand better the nomenclature followed in regulation and practice. Heavier commodities were weighed either on a steelyard (Latin *statera*, Greek κάμπανος) or on an equal-arm balance (ζυγός). Many specimens of steelyards, complete or fragmentary, have been found in excavations in western Europe and the Byzantine world (e.g., at Pliska, Sardis, Amorion, and Skythopolis, among many sites) or in shipwrecks such as Yassı Ada or Gruissan. One of the three preserved in Dumbarton Oaks (fig. 15.3a–e) has a four-sided rod, 48 centimeters long, divided into longer (32 cm) and shorter (16 cm) sections. Three of the four sides of the longer section are engraved with varying scales. A counterpoise (7.5 cm high), weighing 510 grams, slid along the longer section and gave the weight when it balanced. On the shorter section, the punched inscription +HDESIOU+ probably gives the name of the owner (fig. 15.3b). This section has three hooks, each attached to a different side of the rod. One hung the steelyard from the hook corresponding to the scale one wanted to read. The hook farthest from the collar served for the lightest amounts, the closest for the heaviest ones. The three marked sides of the longer section are engraved with dotted graduations in *librae* (Roman pounds), referring to weights from ½ pound (1.63 kg) and 1 pound (fig. 15.3a; 3.26 kg) to 12½ pounds (4.07 kg) (fig. 15.3c), from 12 (IB; 3.91 kg) to 38 pounds.

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10 For more on steelyards see B. Pitarakis, “Daily Life at the Marketplace in Late Antiquity and Byzantium,” in this volume, pp. 399–426.
11 *DOCat*, 1: no. 73.
to 2.6 kilos. Their mass could be adjusted by filling the inner part with lead or by adding some lead at its base; tampering and fraud was thus easy, as will be considered below.

Balance scales with equal arms had suspended pans and sometimes could be used even for heavy loads measured with stone weights of some 12 kilos or more; the balance arm would be hung from a strong beam lying on two trestles. But most equal-arm balance scales were used for smaller commodities, such as spices, metal, and of course (and most often) coins. Some of them had a collapsible beam with a joint in each arm, permitting them to be folded and carried in a small container in the pocket.\footnote{Kisch, Scales and Weights, 38–39; see also Pitarakis, “Daily Life,” 422–23.}

\footnote{Ibid., pl. 12.}


\footnote{See the specimens discovered in excavations at Păcuilul lui Soare (Romania) and Shumen (Bulgaria); see P. Diaconu, “Cinci tare pentru verificat greutatea perpetilor de Vicina,” Studii și Cercetări de Numismătica 6 (1975): 243–45.}

\footnote{18 Kisch, Scales and Weights, 38–39; see also Pitarakis, “Daily Life,” 422–23.}

Of much smaller dimensions (ca. 10 cm) and scope were \textit{staterae}, which could be held between two fingers; the counterpoise slid inside one arm incised for the purpose, and the coin or light object was laid on a little pan at the other end.\footnote{B. Kisch, Scales and Weights, 62 (fig. 26), 65. See Pitarakis, “Daily Life,” 407–11.}

\footnote{16 See the specimens discovered in excavations at Păcuilul lui Soare (Romania) and Shumen (Bulgaria); see P. Diaconu, “Cinci tare pentru verificat greutatea perpetilor de Vicina,” Studii și Cercetări de Numismătica 6 (1975): 243–45.}

A less sophisticated device consisted of a small scale with unequal arms (7.8 cm long); lacking a counterpoise, it was designed to balance only when a \textit{hyperpyron} was put in the pan.\footnote{Ibid., pl. 12.}

\footnote{15 Kisch, Scales and Weights, 62 (fig. 26), 65. See Pitarakis, “Daily Life,” 407–11.}

\footnote{17 See the specimens discovered in excavations at Păcuilul lui Soare (Romania) and Shumen (Bulgaria); see P. Diaconu, “Cinci tare pentru verificat greutatea perpetilor de Vicina,” Studii și Cercetări de Numismătica 6 (1975): 243–45.}

In contrast, big steelyards had sizable counterpoises; those preserved range from 1.4 to 2.6 kilos. Their mass could be adjusted by filling the inner part with lead or by adding some lead at its base; tampering and fraud was thus easy, as will be considered below.

Balance scales with equal arms had suspended pans and sometimes could be used even for heavy loads measured with stone weights of some 12 kilos or more; the balance arm would be hung from a strong beam lying on two trestles. But most equal-arm balance scales were used for smaller commodities, such as spices, metal, and of course (and most often) coins. Some of them had a collapsible beam with a joint in each arm, permitting them to be folded and carried in a small container in the pocket.\footnote{Kisch, Scales and Weights, 38–39; see also Pitarakis, “Daily Life,” 422–23.} Balances of Byzantine money changers have been recovered also from shipwrecks, such as the late sixth-century ship sunk near the island of Port-Cros (Var, France;
see fig. 15.5). The best preserved are the well-known specimens from the Flinders Petrie collection found in Upper Egypt, but many others have been brought to light in Turkey by Brigitte Pitarakis’s survey.

We are concerned here not with the problem of the development of Roman and Byzantine measures but with their use and control. Since Augustus, the emperors had aimed at normalizing and unifying measures in their domain, and Roman standards had gradually become the unique measures of the empire, though they long coexisted with local or unofficial measures. Public control was exercised over the original standard measures (étalons or Urmfäße) against which all other weights and measures could be checked or copied. In old Rome they were kept in the temples of Juno Moneta or Jupiter Capitolinus; in Egypt, in the Serapeion, before Constantine I transferred them to the cathedral church of Alexandria. In Constantinople they were probably kept in a similar location and from there distributed all over the empire.

These official standard measures, previously controlled by members of the curia, were in the late antique period directly overseen by state officials.


23 On what follows, see the rarely cited but important article by Schilbach, “Rechtes Maß von Gott gesetzt”: Zur Legitimation von Maßen in Antike und frühem Mittelalter,” above, n. 12.

24 See Sozomen 5.3.3 (Historia Ecclesiastica = Kirchengeschichte, ed. and trans. G. C. Hansen, Fontes Christiani 73.2 [Turnhout, 2004], 1574), on the restoration by Julian to the Serapeion of the Nile cubitus and other standards (υον πήχυν τον Νείλου και τα συμβολα) that had been transferred to the cathedral church by Constantine I. Christophe Giroux suggests (personal communication) that symbolon, which is frequently used by Sozomen to designate a religious insignium, may apply here to insignia of the cult of Serapis.

25 CIB 12.7.2 (slightly shortened in CI 10.7.1.2; emphasis mine): “Imp. Iulianus a. ad Mamertinum praefectum praetorio. empio venditioque solidorum, si qui eos excidunt aut deminunt aut, ut proprio verbo ut cupiditas, adrudent, tamquam leves eos vel debiles nonnullis repudiantium impeditur. idemque placet quem sermo graecus appellat per singulas civitates constituit zygostaten, qui pro sua fide atque industria neque fallat neque fallatur, ut ad eius arbitrium atque ad eius iudicem, si qua inter vendentem empiremque in solidis exorta fuerit contentio, divinatur, dat. viii kal. mai. salonei iuliano a. iii et sallustio cons. (363 apr. 23).” For a zygostates το επολο in Corinthisch, see L. Robert, Hellenica, vols. 11–12 (Paris, 1960), 51. For a mention of Jewish zygostat in, see L. Robert, “Inscriptions grecques de SIDE,” Revue de philologie 52 (1954): 55–57. Denis Feissel (personal communication) knows also of inscriptions mentioning zygostat in Seleueia in Isauria, Korykos, Gadara (Μαξιμιανος ἵ Δημοκρατία), and Bostra. The zygostatata in Alexandria were controlled by the augustal (Justinian Edict XI, CIC 3:777).

26 Ed. Praef. 7. See A. Laniado, Recherches sur les notables municipaux dans l’empire protobyzantin (Paris, 2002), 171. Several seventh-century seals of a Cypriot zygostatata called Epiphanios, with the figure of the homonymous saint on the obverse, are published by D. M. Metcalf and A. Pitsillides, Byzantine Lead Seals from Cyprus (Nicosia, 2004), no. 299.


28 P.Oxy. LXIII 4195, ca. AD 499–500, in which a zygostate certifies the quality of 10 solidi in a loan; cited by C. Zuckerman, Du village à l’Empire: Autour du registre fiscal d’Apollodoti (525–526), Centre de recherche d’histoire et civilisation de Byzance, Monographies 16 (Paris, 2004), 103. For other references, see R. Delmaire, Largesse sacrées et rés privées: L’Aranisme impérial et son administration du IVe au VIe siècle, Collection de l’École française de Rome 121 (Rome, 1980), 217 n. 57.

29 S. Mitchell and M. Waelkens, Pisidian Antioch: The Site and Its Monuments (London, 1998), 226, no. 9, dated to the third century or later with references to the otherwise rare antique inscriptions where this term occurs: Pergamon, Apollonia on the Rhynacos, Aemomia (in the macellum), and Selge.

These were mainly the zygostatai, who were first appointed in each city, according to an edict of Julian in 363, and then elected by the bishop, the inhabitants, and the landlords of the city following a prefectoral edict of 495. In fact they are documented by inscriptions from such places as Boistra, Korykos, Gadara, and Corinthisch and by many papyri from Egypt. A late antique inscription from Antioch in Pisidia even mentions a zygostasion—that is, a building where weighing was carried out and probably the standards were kept.

One of the most enlightening of such inscriptions is that from Andriake, the well-known Lycian port of Myra, where Hadrian had built public granaries that were still in use in the fourth and fifth
centuries. The inscription is dated by its mention of Fl. Eutolmios, prefect of the East between 388 and 392, and is located to the right of one of the central doors to the granaries.

Ἐπὶ τοῦ κυρίου μου καὶ τα πάντα θαυμασιωτάτου τοῦ λαμ(προτάτου) καὶ μεγαλοπρεπεστάτου Φλ(αβίου) [Εὐτολμίου] ἐπάρχου τῶν ιερῶν πραιτωρίων κατεκευάσθη κατά τά ἀποταλέντα φραγέλλια κείμενα ἐν καὶ ξέται χάλκεοι ἐν' ἐθνος τερία αὐγοῦστα καὶ μόδιοι τρίς κατὰ τὴν ποιοτητὴν τῶν ἀποταλέντων παρὰ τῆς μεγίστης ἐξουσίας, ἀφ' ὧν ἐν μὲν φραγέλλιον δέδοτο τῇ Μυρέως μητρόπολι, τὸ δὲ ἕτερον τῇ Ἀρναιατῶν, ὁμοίως δὲ καὶ ξέτης εἰς Μυρέως καὶ ὁ ἕτερος τῇ Ἀρναιατῶν, καὶ τῶν μοδίων δύο μὲν Μυρεῦσιν καὶ ἡμιμόεις δύο, ἐν δὲ Ἀρναιαστές, καὶ ἡμιμόεις ἐν, ἐπὶ τῷ φροντίδι τῶν κατὰ καιρὸν προσποίησιν φυλάττευσαι τὰ τε μέτρα καὶ τὰ σταθμὰ ανεπιβούλευτα τοῖς ὄρρίοις.

Under my lord, admirable in all, lamprotatos and megaloprepestatos Flavios Eutolmios, prefect of the Sacred Praetoria, were prepared according to what had been sent, two iron sticks (phragellia/flagellia) and two bronze xestai having the three augoustia and three modioi according to the quantity of the (standards) sent by the supreme authority. Out of these one phragellion was given to the metropolis of Myra, the other to that of the Arnaiaiatai, and similarly one xestēs to Myra and the other to the Arnaiaiatai, and to Myra on the one hand two modioi with two half-modioi, and on the other hand to the Arnaiaiatai one (modios) with one half-modios, while the measures and weights will be kept untampered for the granaries under the praepositus of the moment.

Several expressions in the text are problematic. First is the word phragellion, which, in his recent com-

importance of the imperial granaries at Andriake is discussed by K. Belke, "Prokops De Aedificis book V und Klein Asien," AnTard 8 (2001): 116–17. He cites Manganaro’s interpretation of the phragellion and seems to accept it; but in n. 19, he gives later parallel examples of a linear measure called bergion (rod), which support the alternative interpretation offered here.

introduced by a kai: sphyragelia sidara duo kai xestai khalkeoi duo . . . kai modioi trii— the xestai khalkeoi duo “having” or “bearing” (not “containing”) “the tria augoustia.” Although no other occurrence of augoustia or augusteia can be retrieved from the Thesaurus Linguae Graecae, in my opinion the phrase can only be understood only as an allusion to augoustia [laurata]. The xestai bore the images of the three emperors, engraved or punched as a mark of validity, as found later on silver plate. In the late fourth century and early fifth century, examples of ingots or weights featuring the busts of various combinations of the three ruling emperors of the time (Gratian, Valentinian I, and Valens, 367–78; Arca- dius, Honorius, and Theodosius II, 402–8) abound (see fig. 15.6). Although no such marked xestai survive (to be sure, their corpus is rather limited), the hypothesis cannot be ruled out and provides the easiest practical explanation of the text now available.

In general the inscription of Andriake is a vivid example of how the edict of 386—which provided that all official measures, including “modii of bronze or stone, sextarii (liquid measures), and pondera (weights)” were to be placed in each station (mansio) and city—was enacted.35 In 545, Justinian I renewed the regulation in greater detail, explaining that the measures and weights of commodities were to be provided to the cities by the prefects—as evidenced in the Andriake inscription—and the weights of gold, silver, and other metals by the Count of Sacred Largesses. The measures and weights were “to be preserved in the most holy church of each city.”36 The role of the church as depository and guarantor of the weights was not only related to the increasing scope of bishops’ functions as leaders of the city;37 it also derived from the trust that could be placed in the “justice” of the Church. The long association of divine justice with good weights and scales (cf. Leviticus 19:35–36),38 as well as the insistence in Church teaching on practicing honest weighing and

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33 Manganaro, “Due note,” 284–85. For the interpretation of the busts on these counterpoises, see Pitarakis, “Daily Life,” 417–
22. The Thesaurus Linguae Graecae search for “augoustia” yields only two instances, both referring to the Spanish city.
34 “Tre di questi onofrioti”—contrappesi, which in Italian are also denominati ‘romani’, certamente di tre diversi valori ponderali, raccordati tra loro—erano contenuti in ognuno dei due xestai, indicati a lin. 4 con una sigla e poi per esteso a lin. 8 . . . ξηραίον καί . . . καὶ θερμός: a mio avviso, prima che di veri sextarii, unità di misura per liquidi e aridi, essi avevano funzione di contenitori per T tre pesi-campioni.”
35 CITh 12.6.21 (AD 386). CITh 12.6.19 (AD 385) already provided that mensurae et pondera must be placed publicly in each mansion. For actual specimens of such measures, see Pitarakis, “Dry and Liquid Measuring Instruments,” in “Daily Life,” 410–16.
36 CI, Novella 128.15; trans. Hendy, Studies, 131.
38 “Do not use dishonest standards when measuring length, weight, or quantity. Use honest scales and honest weights.”

Weighing, Measuring, Paying: Exchanges in the Market and the Marketplace
assaying, pointed to that reliance. It is well exemplified in the edict proclaimed in Alexandria by John the Almsgiver on his accession to the patriarchate in the early seventh century:

He insisted that it should not be lawful to use at will different measures (μέτρα) or scales (στάθματα), whether great or small, throughout the city, but that everything should be bought and sold according to a single standard and weight, whether the “modius” or “artaba” (ἀλλὰ πάντα ἐν ἑνὶ καμπάνῳ καὶ ζυγῷ καὶ μοδίῳ καὶ ἀρτάβῃ πωλεῖν καὶ ἀγοράζειν). . . He sent out an edict signed by his own hand throughout the whole neighbourhood worded as follows: “. . . I exhort you, beloved, since God hates ‘a large and a small balance,’ as the holy Scripture says [Deut. 25:13], never to allow such a transgression of law to be seen anywhere amongst you. But if, after the promulgation of this our edict, subscribed by us, anyone shall be proved to have rendered himself open to such a charge, he shall hand over all his possessions to the needy, whether he will or no, and receive no compensation.”

Except for the law providing that the zygostatēs was to settle disputes that arose between a seller and a buyer of solīdi, all the other regulation dealing with weighing and measuring was directed at protecting both the state and the taxpayer from possible tampering in fiscal transactions, whether payments in cash or in kind. But they give details on procedures that could also occur in the marketplace. The proper method of weighing to avoid fraud is neatly described in the Theodosian Code 12.7.1, a law of 325 which states that

when gold is paid, it shall be received with level pans (aequa lance) and equal weights (libramentis paribus) in such a fashion, naturally, that the end of the cord (summitas

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The correct finger position appears on specimens of an *exagium solidi* (the weight standard for the gold unit) (see fig. 15.6a). In rare cases, cheating could be viewed in a positive light: on his accession, when Justin II reimbursed the debts of Justinian I, the officials who were weighing and paying solidi are described by Corippus as having given “good weight” to the state’s creditors: “they pour out solidi and weigh them, and press down the scales with their thumbs.”

But in most cases cheating was detrimental to taxpayers or buyers, and allusions to *iniusta* or *iniqua pondera* are frequent. Kekaumenos cites such

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40 CTB 12.7.1 = CI 10.7.3 (trans. and comm. by Hendy, Studies, 319; emphasis mine): “Imp. constantinus a. ad eufrasium ratione trium provinciarum si qui solidos appendere voluerit, auri coci septem solidos quaternorum circulorum nostris vultibus figuratos adpendat pro singulis uncis, xiii vero pro duabus, iuxta hanc formam summam summam deferat debiti illaturus. eadem ratione parvisus summo esse debiti curabit, scilicet ut duobus digitis summitas lini retineatur, tres reliquis libris ad susceptorem eminet nec pondera deprimitur nullo examinis libramente servato, nec acquis ac paribus suspenso statere momentis.”


See Hendy, Studies, 312 (citing Cassiodorus and Gregory the Great). The main biblical statements are Proverbs 11.1, “A false balance is an abomination to the Lord, but a just weight is his delight,” and Psalm 61:10: “But vain are the sons of men, the sons of men are liars in the balances: that they may together deceive.” This last is commented on by Neophytos Enkleistas, “Αγίου Νεοφύτου τσ Εγκλείστου, Ερωτήματα του Φαλίτρος και των Πληθών,” ed. Th. Detorakes, in *Αγίου Νεοφύτου του Εγκλείστου Συγγράμματα*, ed. D. Karavidopoulou et al., vol. 4, Εικόνες Ιππικής Βασιλικής και Σποραδογραφίας Μονής Αγίου Νεοφύτου (Paphos, 2000), 229–339, at 356–57 (Ps. 61). For other biblical citations about false weights and scales, see D. Hendin, *Ancient Scale Weights and Pre-coinage Currency of the Near East* (New York, 2007).

43 Kekaumenos, *Strategikon*, chap. 122; *Cecumeni Strategiogon*, ed. B. Wassiliewsky and V. Jernstedt (St. Petersburg, 1896), p. 51, lines 10–13: τήν χρυσοκαταλλακτικοῦ καὶ σημαδαρικοῦ πόρου, *oikonomos* in Constantinople, tells the story of a *trapeziōs* to whom the holy man, then protector—that is, a headquarters officer—went regularly at midnight, with his face hidden so as not to be recognized, to “change gold into a lot of small bronze change for his alms to those in need.” The banker or money changer used the suspicious night visits as a pretext to weigh the gold coins on an unfairly adjusted (*adikoi*) balance. Puzzled by the recurring visits, the money changer sent a young servant to spy on the saint. He saw a miracle accomplished by Markianos, who had resurrected a poor man whom he had found dead and had washed for his burial. When the servant reported the event to his master, naturally the dishonest trapeziōs repented—and on the next visit of the saint, he confessed and reimbursed all that he had unjustly taken.

44 The *Parastaseis*, in its eighth-century version, includes the colorful story of a certain Karkinelos, an argyrokos with “balances
triquées” (false scales, ἐν πλαστοῖς γγαῖς) who lived near the place an enormous elephant used for circus games. As the elephant was ruining his house and he could not get the mahout to settle the matter, he finally murdered the mahout and gave his corpse to the elephant to eat. But as the elephant was wild he killed Karkinelo too. Later a golden statue of the elephant was erected on this spot, which became that of the Basilica.46

How could such wrongdoings in weighing and measuring be checked and deterred? Valentinian’s law of 386, which ordered that standards be placed in each station and city, helps us imagine the procedures: “Each tax-payer, with the established measures of all articles beneath his eyes, shall know what he ought to give to the tax-receiver. As a result, if any tax-receiver should suppose that he may exceed the norm of established measures, liquid measures, or weights, he shall know himself liable to a suitable punishment.”47 Those engaged in transactions taking place in public spaces could resort to checking on “established measures” (constitu ti modii) or could appeal to the zygo statēs. As in today’s markets, word of mouth and reputation probably directed customers to the trustworthy merchants or money changers, whose honest behavior was proposed as an ideal model and transposed into spiritual life by many preachers.48 Now the specialized market controllers were not the agora nomoi, as previously, but curiales, who were responsible for the market and who must have settled disputes arising about transactions.49 Weights referring to curiales (ephoroi) show that municipal authorities could issue measures of reference alongside the two official main groups of weights: commercial or commodity weights, which were the responsibility of the praetorian prefect and the prefect of the city, and coin weights, initially controlled by the Count of Sacred Largesses and later by the prefect of Constantinople.50 They are well known and classified, and we need not take time to review them here.51

Most of our information about fraud and its punishment, not surprisingly, concerns money. Counterfeiting gold coinage was considered treason and punished by some manner of execution, including “burning in flames.”52 Clipping and putting into circulation counterfeit solidi were regarded as equally grievous crimes.53 Casting bronze coins was punishable only by confiscation or minor penalties. But nothing is known about incidents of false measurement, although the insistence of legislation and ecclesiastical texts is abundant proof of that the

46 Patria 917, Scriptores Origium Constantinopolitanarum, ed. T. Preger, vol. 1 (Leipzig, 1901), 40; commented on by G. Dagron, Constantinope imaginaires: Études sur le recueil des Patria (Paris, 1984), 42–43. Note that in the later tenth-century version of the Patria (K III, p. 89; comm. Dagron, 166), the story is modified into an example of an “elephant’s memory”: the trapezitēs who had once given a slight stroke with a pike to the animal on the Milion as it was on its way to the Hippodrome is struck to death by the animal, who recognized him ten years after the incident. Note that the money changer here is no longer a cheating one. Is law more easily enforced under Leo VI, in a smaller metropolis, than in the early Byzantine capital?

47 CTh 11.6.21 (trans. Hendy, Studies, 331; emphasis mine): “Impppp. valentinianus, theodosius et arcadus aaaa. synegyo prae fecto praeatorio. modios aecenos seu lapidos cum sextarios atque ponderibus per mansiones singularaque civitates iussimus collocari, ut unusque tributarius sub oculis constituitur rerum omnium modii sciat, quid debebat susceptoribus dare; ita ut, si quis susceptorum conditorum modiorum sextariorumque vel ponderum normam puraverit exceedendam, poenam se sciat com pente tere esse subiturum. (317 nov. 28)" 48 St. John Chrysostom, In pricipia actorum, PG 51, col. 100.

49 Laniado, Recherches sur les notables, 95 n. 41.


53 CTh 9.11.1 (21 July 317; emphasis mine): “omnes solidi, in quibus nostri vultus ac veneratio una est, uno pretio aestimandi sunt atque vendendi, quamquam diversa forma mensura sit. nec enim qui maiore habuit faciei extenditur, maioris valere credendum est, quum pondus idem existat. quod si quis aliter fecerit, aut capite puniri debet, aut flammis tradi, vel alia poena mortifera. quod ille etiam patietur, qui angustior expressione concluditur, minoris valere credendum est, quamquam diversa forma mensura sit. nec enim qui maiore habuit faciei extenditur, maioris valere credendum est, quum pondus idem existat. quod si quis aliter fecerit, aut capite puniri debet, aut flammis tradi, vel alia poena mortifera. quod ille etiam patietur, qui angustior expressione concluditur, minoris valere credendum est. nec enim qui maiore habuit faciei extenditur, maioris valere credendum est, quum pondus idem existat. quod si quis aliter fecerit, aut capite puniri debet, aut flammis tradi, vel alia poena mortifera. quod ille etiam patietur, qui angustior expressione concluditur, minoris valere credendum est.”
practice was common. However, the long tradition of trade, the force of legal and moral penalties, and the disgrace of the parazygiasitēs may have led to a certain amount of self-discipline and self-regulation in the marketplace.

The Middle Byzantine Period (Leo VI to the Twelfth Century)

It is impossible to trace the evolution of the previous regulations and practice in the seventh and eighth centuries, although the Basilics took over almost unchanged the Justianic prescriptions: most likely, however, the shrinkage of cities and the decline of the earlier municipal institutions led to the disappearance or transformation of many elements. The zygostrētēs, for instance, was now a member of the sakellion, the central financial administration—initially a high-ranked one, as several seventh-century seals of ύπατος and ζυγοστάτης demonstrate. Some seals call him basilikos. In the ninth and tenth centuries he is mentioned in the three official lists of titles and offices (taktika) of 842–43 (Uspeński), 899 (Philothēs), and 971–75 (Escrual). Philotheos gives him the higher dignity of spatharios and puts him in the third position in the sekreton. After him the same list mentions metrētai, who also appear on seals and in the Basilics. A certain Nicholas, “metrētes of the Phylax”—an imperial private treasury, close to the eidikon—possessed a lead seal in the eleventh century. To modern editors, he “seems to have been a professional weigher who performed services for the crown.” This is not entirely convincing, since we know that the mint department of the brýsocheion (gold foundry) was part of the eidikon and that there were also metrētai in the sakellion. Metrētai must have also been imperial officials like the Nicholaos, “metrētēs of the Phylax,” cited above. The functions of these middle Byzantine officials are unclear, but probably had to do with the measurement of all items coming into and out of the treasuries or kept therein: coins, metal, silk, and other commodities. The standard weights and measures must have also been under their control.59

Fortunately the Book of the Prefect brings us closer to ordinary dealings in the market, at least that of the capital. As in the late sixth century, the prefect still controls weights, measures, and scales and μέτρα (measures), which are marked by his seal.60 False weighing (παρακαμπανίζειν) is of course still severely punished by flogging and tonsuring (see fig. 15.7).61 Moreover, the silk merchants (μετάξωπράται) must use steelyards (ζυγοστάτης) and bolia (bolia) sealed with his stamp.62 Since no surviving Byzantine scales or steelyards bear any imperial stamp or inscription, but only names of individuals, as Brigitte Pitarakis notes in her chapter, we must imagine that they were provided at some point with a lead or wax seal like the official labels or seals appended to

54 W. Brandes, Finanzverwaltung in Krisenzeiten: Untersuchungen zur byzantinischen Administration im 6.–9. Jahrhundert (Frankfurt am Main, 2002), 642, with references.
55 Hendy, Studies, 317–18, with references.
57 DOStils, 5:68–69, no. 272.
59 Note that in Constantine VII Porphyrogenetus, De thematibus 15, ed. A. Pertusi (Vatican City, 1952), 61–62, the ἄργυρα ἀργυρά (silver plate) “inscribed with the name of Jordanes, strateles of Anatolia and other peoples of Asia Minor”—i.e., Jordanes, magister militum of Leo I in 466–67.
60 Eparchenbuch 13.2.
61 Ibid., 16.6. Fol. 45v of the Skylitzes Matritensis (fig. 15.7, below) illustrates the description of Theophilos’s weekly visit to the market by Skylitzes. The text does not mention flogging but notes only the interest taken by the emperor in the price of goods, especially food and drink, cloth, and heating materials, and the fear his punishment inspired in the adıkos (Ioannis Skylitzes Synopis historiarum, ed. I. Thurn [Berlin, 1971], 50–51). The fact that the Skylitzes Matritensis painter chose the flogging scene as exemplary implies that the punishment was known and practiced in the twelfth century. Zonaras, who describes the same visits, recalls that the emperor, after finding that his brother-in-law Petronas had behaved contrary to the law, had him stripped of his clothes and publicly whipped on his back and on his chest in the marketplace (Zonaras, Ioannis Zonaras Anales, vol. 3, Epitome Historiarum libri XVIII, ed. M. Pinder and T. Büttner-Wobst [Bonn, 1897], 356–57).
62 Koder here understands bolia as Seidengewichte (silk weights). But assuming some symmetry in the sentence, one could take it as a name for an equal-arm balance used for silk. That Schilbach (Byzantinische Metrologie) does not deal with this word suggests that he did not consider it a weight measure. For a different interpretation of bolia, see below, note 69.
63 Eparchenbuch 6.4.
weighing instruments in our open-air markets or shops today. Similar control was exercised over innkeepers (κάπηλοι): their measures were inspected each time they received deliveries of wine. The prefect’s assessor (σύμπονος) was to come and force them to “prepare the weights and the vessels in which they sell wine corresponding to those in which they had bought it.” Their vessels (ἀγγεῖα) had to be of the proper weight (the metron should weigh 30 pounds, or ca. 10 kg, and the mina 3 pounds) and bear the usual seal. The innkeepers whose vessels were found not to have the proper weight or not to bear the usual seal were to be “flogged, tonsured, and expelled from the guild.” The soap traders were also obliged to have a steelyard (καμπανος) with such a seal. The silk merchants were subject to a tax called kankelarion, not otherwise attested. It was charged “only on hundreds (kentenaria),” insistence on using similar measures in buying and selling was intended not only to prevent tampering but also to control the profit margins of merchants—an effort for which we have several examples (A. E. Laiou, “Exchange and Trade, Seventh–Twelfth Centuries,” in EHB, 2:719; J. Koder, “Πρακτικά του Αʹ Διεθνούς Συμπόσιου Η καθημερινή ζωή στο Βυζάντιο” [Athens, 1989], 363–71, at 369–71). This is confirmed by Eparchenbuch 13.5, which allows the grocers a profit of 2 miliareia per nomisma (2/12) but punishes them if they are shown, through a check of their exagia (nomisma weight), to have earned a greater profit.

65  Eparchenbuch 19.4. The proper weight of the metron is cited in 19.1. 66  Ibid., 12.9. 67  J. Koder, “’Problemwörter’ im Eparchikon Bibliion,” in Lexigraphica Byzantina, ed. W. Hörandner and E. Trapp, ByzVindo 20 (Vienna, 1991), 185–97, refers (189–90) to the employees (Untergebene) of the prefect of that name (καγκελλάριοι) mentioned in a novel of Constantine VII and proposes that the tax took its name from them.
which Johannes Koder assumes to be hundreds of “cords or bolia”—presumably bales of silk cloth tied together with cords and sealed. As Koder recently recalled, the sealing of various wares (βουλλεύειν; see Eparchenbuch 4.4) was entrusted to the boullotai (Eparchenbuch 8.3), dependents of the prefect. Two such boullotai are mentioned as very wealthy in the twelfth century: John Tzetzes reports that they owned precious kodikes that he could borrow from them. The regulations were to prevent fraud not only on measures but also on coins: the trapezitai must not accept any clipped miliariares, nor must they themselves practice filing (xnein), clipping (tennin), or forging (parakhatarain). Forgery required specialized skills that the bankers possessed, but filing and clipping were certainly widespread and punished especially among perfumers and grocers. Penalties for forgery were less harsh than in the Roman period or in contemporary western Europe, where counterfeiters were boiled in a cauldron: in Leo VI’s time, the culprit was whipped and his property confiscated.

The Book of the Prefect is also one of the few sources mentioning the factual context of coin exchange: it commands the trapezitai to remain in their shops on the fixed market days with their “assistant” (στήτωρ, steítoyn) and have the stock of coins present in the front of their stall (αββάκιον) in miliariares (or “with nomismata and miliariares set out before them”). Each banker must have two employees in charge of the heaping up (ἐπισώρευσις, episōrēsis) of small coins (νομία). The presence of the money changer is essential to the functioning of the market, since he provides small change to buyers who have only gold or silver coins. The famous affair of the foundax (depot) of Rodosto (ca. 1075) is one of the rare recorded events that throw some light on the functioning of provincial markets. Before the light on the creation of the foundax by Nikephoritzes, logothete of Michael VII, and the enforcement on its monopoly on wheat trade, “Many carts used to bring the grain to the kastron of Raides and sell it retail to the hostels ( xenodochiaia) and depots (katatopia) of the monasteries, of the Great Church itself, and of many inhabitants, and they would carry out their sale freely without hindrance to whoever wished. . . . Anyone who wanted to buy grain contacted a seller, and if he was not satisfied in a depot (καταστοπία) went to another, eventually to another one, and the sale took place directly from the carts[.]” But afterward the “inhabitants of the region and those of Raidestos” were “forbidden to sell the produce of their lands on their own premises, and their measures (medimnoi) were confiscated and the foundax alone became master of the measures (medimnoi).” It is clear that the landlords had measures of their own, and transactions taking place on private premises apparently could avoid being taxed (probably on the pretext of their local

69 Eparchenbuch 6.4. Bolia designates either dice (as in Leonius’s Life of Symeon Salus, ed. L. Rydén, Das Leben des heiligen Narren Symeon von Leonius von Nesopolis [Uppsala, 1963]; rep. in A.-J. Festugière, Vie de Symeon le Fau, Vie de Jean de Chypre [Paris, 1974], 99 [Greek text], 155 [French trans.]) or seals. In Constantin VII Porphyrogenetos, Le Livre des Cérémonies, ed. A. Vogt (Paris, 1967), i.79: 214.4, 145.6, bolia or boulla is applied to the seals of the prefect that are affixed to the urn used for drawing (rirer au sort) the starting places of the Hippodrome races; see G. Dagron, “L’organisation et le déroulement des courses d’après le Livre des Cérémonies,” TM 11 (2000): 151–52. Here obviously it must have applied to a category or package of pieces of silk that were sealed. Cf. Eparchenbuch 8.9, which mentions “mantles found wrapped in rolls which did not bear the boulla of the prefect.” The term has survived in modern Greek to describe a long silk scarf. Therefore Koder (“Problemwörter,” 186–87, and C. Morrisson, “Manier l’argent à Byzance au Xe siècle,” in Empychia: Mélange Hélène Abrouwer, Byzantine Sorbonnessia 16, 2 vols. (Paris, 1998), 2957–65, at 560. 73 The translation of Hendy (Studies, 242) is more readily understandable and logical in concrete terms than Koder’s “das Geld in Form von Miliaria.” It is clear that the landlords had measures of their own, and transactions taking place on private premises apparently could avoid being taxed (probably on the pretext of their local...
The Late Byzantine Period: Encroachments on the Unified System of Weighing, Measuring, and Paying

In the late Byzantine period, the availability of a large number of archival sources, whether Italian or Byzantine, greatly enlarges the amount of our documentation. But because it is less systematically arranged than before, we have to glean information from numerous texts. Parallel economic growth in Byzantium and in the West added substantially to the complexity of weighing and measuring, as markets in both areas opened with the grant of privileges to merchants of Venice, Pisa, Genoa, and elsewhere. The opening of the markets entailed the use of a much greater variety of measures than before.

In Gostantinopoli e in Pera si à di più maniere pesi e misure come dividerà qui appresso in questa altra faccia che segue,” begins Pegolotti, and the explanation goes on eight more pages, reflecting the diversity of trade in Constantinople. Apparently an implicit rule was that the various commodities were measured according to the standards of their country of origin: for cloth, for instance, “si conviene che l’venditore faccia al comperatore ciascuna pezza tanti picchi secondo la terra ove il panno è fatto, come dirà ordinatamente in questo libro.”

Gone was the former unity of Byzantine official measures, though their long-established position ensured that they retained an important role. Thus, the account book of Badoer (1436–39) reveals that he kept his accounts in perperi and often used Byzantine measures, starting from the carat and the saggio/exagium to its larger multiples, the pound or rotolo (72 saggi) and the cantar/centenarium (100 rotoli). But equally often he used Italian or other foreign units and carefully noted in his ledger which standard of pexo was being employed.

When the item was destined for
Weighing, Measuring, Paying: Exchanges in the Market and the Marketplace

resale in Constantinople, he would convert its entry into the Byzantine standard.\[^{85}\]

For some two centuries Italian merchants, starting with the Venetians in 1265, had been authorized to use their own weights.\[^{86}\] In 1304 Andronikos II granted the Genoese "omnimodam livertatem et franchisiam ad ponderandum mercaciones corum,"\[^{87}\] and before 1346 even the merchants from Narbonne enjoyed the same privilege.\[^{88}\] The importance to the different communities of weighing and measuring is underlined in several earlier sources going back to the twelfth century, when control of balances, weights, and measures (\textit{staterae, metrae, pesae et mensurae})\[^{89}\] was granted to various institutions. But at that time, their authority did not include the franchise of using foreign weights; it pertained only to Byzantine weights and the profit derived from the right to control them.

The profit from weighing is demonstrated by the story of the church of St. Akindynos in Constantinople: in 1107 the doge donated it to the patriarch of Grado together with its balances (\textit{staterae}), weights (\textit{pesae}), and liquid and capacity measures (\textit{metrae} and \textit{mensurae}), which no other Venetian could possess.\[^{90}\] In 1169 the patriarch of Grado leased the revenue of the church, including this monopoly of weighing and measuring, for 500 pounds of Veronese deniers a year (approximately 2.40 hyperpyra, a substantial amount).\[^{91}\] Note that the Latin names do not imply that the measures were Venetian but instead reflect the origin of the document: \textit{pesae} covers the exaction and its multiples up to the pound, the centenarion, and the \textit{πίσσα} itself (= 4 centenaria, some 128 kg), while \textit{metrae} refers to the current Byzantine unit for wine (\textit{μέτρον}) and the \textit{misurae} to the \textit{μοιζώρα}, the other name of the modios.\[^{92}\]

Other similar Italian documents give details of the fees demanded for weighing on the balances and standards of other colonies: in 1147, in Rodosto, where the weights were deposited in the church of St. George—which was a branch of San Giorgio Maggiore in Venice and enjoyed the same monopoly—for each \textit{milarian} (\textit{migliaro}) of wares traded, presumably mostly wheat, two \textit{stamines} (silvered bronze coins worth 1/48 hyperpyron) were demanded from Venetian merchants and four from Byzantines.\[^{93}\]


\[^{88}\] L. T. Belgrano, “Prima serie di documenti riguardanti la colonia di Pera,” in \textit{Atti della Società Ligure di Storia Patria}, vol. 13 (Genoa, 1877–84), 106; see also Zepos, Jais, 1:529. For a confirmation of this right in 1117, see Belgrano, 119; cited by M. Balard, \textit{L. T. Belgrano, Prima serie di documenti riguardanti la colonia di Pera}, no. 62, line 111 (transcribed with slight modifications from idem, “Pesi e misure del commercio veneziano a Bisanzio: Dal libro dei conti di Giacomo Badoer,” in his \textit{Denaro, navi e mercanti a Venezia: 1200–1440}), s.v. “zera.”


\[^{91}\] DCV, vol. 1, no. 255.

\[^{92}\] Ibid., nos. 245, 238–39. The concession applies “to the whole territory of the doge of Venice and enjoyed the same monopoly—for each \textit{milarian} (\textit{migliaro}) of wares traded, presumably mostly wheat, two \textit{stamines} (silvered bronze coins worth 1/48 hyperpyron) were demanded from Venetian merchants and four from Byzantines.

\[^{93}\] The importance to the Church of this right in 1317, see Belgrano, 119; cited by M. Balard, \textit{L. T. Belgrano, Prima serie di documenti riguardanti la colonia di Pera}, no. 62, line 111 (transcribed with slight modifications from idem, “Pesi e misure del commercio veneziano a Bisanzio: Dal libro dei conti di Giacomo Badoer,” in his \textit{Denaro, navi e mercanti a Venezia: 1200–1440}), s.v. “zera.”

\[^{94}\] This control was always maintained by Latin churches, and it supplanted part of their revenues. See, e.g., the various documents pertaining to the Pisan church of Sts. Peter and Nicholas in Constantinople, whose \textit{introitum} consisted of weighing \textit{statera}, at the rate of 1 stamen in per centinarium, or 1/4 for Pisans, and measuring with rubo et metro at the same rate; see J. Müller, \textit{Documenti sulle relazioni delle Città Toscane coll’Oriente cristiano e coi Turchi fino all’anno 1531} (Florence, 1879), nos. VIII (1162), XVI (1180), and XLIII (1197). Schilbach (\textit{Byzantinische Metrologie}, 1207), s.v. “rubo,” cites not our Pisan or Venetian documents but only Pegolotti, \textit{La pratica della mercatura} (102, 19), who mentions a rubo of 4 ruotoli used for weighing wax.

\[^{95}\] If the Venetian \textit{miliglio} (477 kg, approximately 57 1/4 modios) is implied here, and assuming that we are dealing with wheat (the main object of trade in Rodosto) costing 1/3 hyperpyron in the late twelfth century, we get 2 stamens (1/4 hyperpyron).
"If it were really necessary, the Venetian will have a half metro and rubo with him and will sell up to 50 pounds and if he wishes to sell above these 50 pounds, he will take the metro from the aforesaid church, and for each metro he will pay to the church one tetarteron and if he prevails on retail (per minitum) (2) more than 50 pounds, he must take the rubo from the church and give, according to what will appear from the account (sicut per racionem advene), two stamines per milliare without any contest." 94

The importance of a thriving mint, just weights, and commercial regulation for the market and a prosperous economy is highlighted in Gregoras's report of Agathangelos’s visit to Cyprus in the 13.4os. In his comprehensive general narrative, he pointed to what is especially worth seeing on the island, both overall and what is in the theaters, the marketplaces, and the courts—the stability in coins and issues over time that change neither in any way nor in the slightest degree, and how every sort of salable goods in each instance would be sold and bought according to weights and scales [used for] measuring,96 not as each of the sellers might choose, but as the long-standing principles of the state dictate, not as the appetite for gain of the wealthy wishes to profit unjustly, but as the salvific laws of heavenly order ordain for all time.

An important Byzantine document, the prostagma of Andronikos III for the Monemvasiots of Pegai (1328),97 throws light on the various taxes that could be levied on sea traders and their market transactions.

In no way during the practice of their business will they be hindered by anyone or made liable to requests for kampanistikon, mesitikon, metritikon, opsonion, skaliatikon, dekateia, tetramoiria, orike, kastroktisia, mageireia, antinaulon, kormiatikon or to any other chapter (kephalaion) of all these taxes, but they will remain absolutely untouched and undisturbed. Similarly nothing will be demanded for kommerkion from those who sell to them [the Monemvasiots] or who buy from them, either beasts or natural commodities or something else, whether in God-honored Constantinople or in other places of my Empire, because of the depheudeusis of these Monemvasiots.[98

The prostagma had stated in detail the places of their trade and the commodities affected by the reduced rate of kommerkion (2 percent) granted to them:

my Majesty grants... the present prostagma according to which is stated that the aforesaid Monemvasiots in whatever affairs they will undertake either in God-honored Constantinople, in Herakleia, in Selymbria,

94 Tafel and Thomas, Urkunden, 1:103–4, no. XLVII (11.45), and 107–8, no. XLIX (11.47). The church will possess in perpetuity sus proprias rubos et metras atque modas sus propria and hence may gain from any of the above-mentioned measures (quaecunque his pretatis mensuris lucrare poterit). 95 Nikephoros Gregoras, Romaïke Historia 25.12, ed. B. G. Niebuhr (Bonn, 1835), 2:14. I am grateful to Elizabeth Fisher and Denis Sullivan for their help with the translation.
96 Because there is no connective between μέτροις and πλάστιγχοι, Fisher and Sullivan suggested this translation.
97 Ed., trans., and comm. P. Schreiner, "Ein Prostagma Andronikos' III. für die Monembasioten in Pegai (1318) und das gefälschte Chrysoobull Andronikos' II. für die Monembasioten im Byzantinischen Reich," JÖB 27 (1978): 203–28. The reader should keep in mind that the data of the forged chrysoobull of Andronikos II (1316) are considered as authentic in older studies (F. J. Dölger, "Zum Gebührenwesen der Byzantiner," Études dédiées à la mémoire d'André Andréadès [Athens, 1939], 31–59, though Dölger later drew attention to its status as a forgery without dismissing all its contents; idem, Regesten der Kaiserurkunden des oströmischen Reiches von 565–1453 [Munich, 1977], no. 2383) as well as in recent reference works.
in Raidestos, in Gallipoli and other coastal sites of Macedonia [i.e., Thrace], either in Ainos or other ports of call nearby, be it with grain on the Proshorion [marketplace in the harbor in Constantinople of that name] or anywhere of their choice, be it with wine, or with prosphagia pasta [salted fish or meat], or xylakbyros [wood and straw], or tzokharikê [woolen cloth] or four-footed animals or other wares of their choice, will give as kommerkion according to quantity two hyperpyra on a hundred hyperpyra.100

I will not dwell on the kommerkion, since this tax—also called dekaton (tenth) or pratikion, amounting to 10 percent of the value of the merchandise and levied on movements or sale of goods—has been extensively studied,101 mainly with respect to the exemptions conceded to Italian merchants and their consequences on Byzantine trade and finances.102 Instead, I will focus on the other charges on the circulation of commodities, their means of transportation, and sales, which have attracted little attention103 and whose economic significance was relatively restricted, according to Nicolas Oikonomides.104 In the list in the prosthagma we find several charges for the official measuring or weighing of merchandise that were intended to protect from cheating not just the public but also the state, since other taxes—mainly the kommerkion—were based on the value of traded commodities, which in turn was calculated on their weight or other measurement. These charges for measurement were the kampanistikon (weighing tax: from kampanos, "balance")105 the metritikon (measuring tax for liquids)106 the modiatikon (measuring tax for grain)

The other charges directly related to commercial transactions are the mesitikon (brokerage)107 the sklaiatikon (landing tax)108

99 Ibid., 207 n., for references on these technical names.
100 Ibid., 106–7.
101 Sec. principally, Antoniadis-Bibicou, Dounanes; Oikonomides, "Role of the Byzantine State," 978–80, 1042–43.
104 Oikonomides, "Role of the Byzantine State," 1000.
105 The only comparable evidence of such a tax is found in a chrysobull of Andronikos II for the monastery of the Theotokos in Stélaria (on the Çesme Peninsula opposite Chios; see Y. Kavari, "Nouveaux documents du monastère de Philotheou," TM 10 (1987): 261–356, at 270): among the properties of the monastery were ηδοργάστερια δύο και έσωεργαστήριον ἐρωμον ἐν, μετά τῶν δοκιμασμάτων αὐτῶν ἔτι καταναλώσας μηνικτικόν καὶ καταθέσεως, "two [outer] forges and a similar inner workshop with their rights consisting in weighing, mina measurement, and deposit"; Aites de Philothee, ed. W. Regel, E. Kurtz, and B. Koralev, Actes de l’Athos 6 (St. Petersburg, 1913), app. I, 11 (no. 5). I am grateful to Christophe Giros for discussing this text with me; in his view, “Les ateliers dont il est question sont situés à proximité du monastère. Je comprends que le monastère détient deux forges à l’extérieur du monastère (exergastéria kai sidérokauzes duo) et un atelier semblable (c’est-à-dire un atelier de forge) à l’intérieur du monastère, probablement dans une cour annexe à la cour principale abritant l’église et le réfectoire. Les droits associés à ces forges me paraissent être au nombre de trois. On sait que la livraison de vin pouvait entrer dans la rétribution des ouvriers, ce qui expliquerait la mention de cette redevance dans le texte. La katathèse m’est inconnue. Le terme renvoie à un dépôt, mais de quoi: matière première, ou approvisionnement des forgeons?” Anastasia Kontogiannopoulou, whom I also consulted, agreed with this interpretation. See her “La fiscalité,” 58–59.
106 It is also mentioned in the imperial document (February 1214) exempting the ships (πλατύδια) of the monastery of Patmos from skalaticus, komerktikos, . . . praktikos, metriktikos; Acta and Diplomata Graeca Medii Aevi Sacra et Profana, ed. F. Miklosich and J. Müller, 6 vols. (Vienna, 1860–90), vol. 6, no. LII, 165–66 = Vranousê, H εσωτερική πολιτική του Αυτοκρατορίου Πατμος, in Stèlaria (on the Lesbos Peninsula opposite Chios; see V. Kranavés, "Les impôts directs et indirects," REB 67 (2009): 5–57. I am grateful to Anastasia Kontogiannopoulou for letting me consult her article before publication.
107 See Antoniadis-Bibicou, Dounanes, 116. Her alternate interpretation of mesiatikon as a measuring tax, derived from messa = barrel—attested only in Brabant by Pegolotti, La pratique della mercatura, 252 n. 8—is not compelling, since there is no Italian or Greek measure with this signification.
108 Sklaiatikon is already mentioned in a twelfth-century document stating that Pisan ships could remain in the Pisan scala two months without paying it; Müller, Documenti, no. VIII, 10. It also was calculated on their weight or other measurement. These charges for measurement were the kampanistikon (weighing tax: from kampanos, "balance") the metritikon (measuring tax for liquids) the modiatikon (measuring tax for grain)
perhaps the *dekateia* (tenth), if we consider it to be the *dekateia* or *dekatosis* of the *oinara* or *oinaria* charged on the transportation and sale of wine\(^{109}\) the *zygastikon* cited in the false chrysobull of 1316; attested in Latin sources,\(^{110}\) it might refer to weighing with a *ζυγός* (steelyard) as opposed to the *κάμπανος*\(^{111}\)

I leave aside the other charges in the list: *opsonion* (tax on provisioning, “Verproviantierungs-abgabe”), *tetramoira* (a tax—4 percent?—on a fisherman’s catch, according to Christophe Giros, rather than on ships), *orikē* (tax on the exploitation of forests, or on pasture in mountainous areas), *kastroktisis* (repair of forts), *mageireia* (support for feeding the poor, “Leistung für den Unterhalt der Armen”\(^{[?]}\)), *antinaulon* (payment in lieu of the obligation to transport certain people or commodities), and *kormiatikon* (a hapax, difficult to interpret).\(^{112}\) They all apparently concerned the Monemvasiots insofar they were liable to requisitions in kind or in service (*aggiareiai*, “corvées”), which these payments could forestall.

Comparable weighing, measuring, and brokerage taxes are clearly described in Pegolotti:

> “Senseraggio di mercantantia in Gostantinopoli e in Pera”: the seller as well as the buyer must pay 3 carats per cantar on all commodities sold by the cantar (indigo, wax, skins, tallow, raisins, soap, almonds, honey, cotton, rice, gall nuts, figs, orpiment, safflower, henna, cumin, pistachios, sulfur, senna, pitch, litharge, salted meat, cheese, flax, wool, chestnuts).\(^{113}\)

> “Senseraggio di mercantantia in Gostantinopoli e in Pera”: the seller as well as the buyer must pay 4 percent “di perperi” for brokerage on all commodities whether they are weighed or not. The tax is usually assessed on value, at 6 percent on grain, or for retail sale (a *minuto*) on pieces (*pezza* of cloth) or on the cask (*botte* of olive oil or wine) at the rate of 3 carats per *pezza* and 2 carats per *botte*, respectively.\(^{114}\)

*Garbellatura* is a control tax charged on spices in the same places. Pepper, incense, ginger, mastic, cinnamon, zedoary, and other *spezierie grosse* are taxed at 1 carat per hundredweight; cloves “because their control is tedious” at 1 carat per 10; cubeb, mace, nutmeg, rhubarb, galangale, cardamom, spike lavender, and other *spezierie sottili* at 3 carats per hundred pounds.\(^{115}\) Comparable control is extended over skins (*cuions*) by the *cernitori* of the Comune, or over wine that is tasted by the *cernitori* at the rate of 6 carats per 100 *botte* and seen at between 6 and 12 per 100 *botte*.\(^{116}\)

A special measurement tax (*per farlo picoare cioè misurarare*) is charged on woolen cloth (*panni lani*) at ½ carat per *pezza*, or for olive oil (*misuraggio*) at 2 carats per *botte*.\(^{117}\)

Without examining the other fees exacted for discharging, storing, transporting, binding, or packing,\(^{118}\) we have a picture of the Constantinople and Pera markets showing that they were efficiently controlled to ensure the security of transactions. Estimating the cost of these fees remains to be attempted. Accepting Oikonomies’ low rating of their importance, we may assume that their revenue accrued partly to the public authority (the emperor in Constantinople, the Comune in Pera) and partly to the various inspectors (*pesatori, cernitori*, etc.), as did the *synêtheiain* (gratuities) of the early Byzantine period.

The numerous Byzantine documents of the period preserved in monastic archives also give patchy information about taxes exacted on inland fairs, many of which were controlled by churches or monasteries. When in the 1270s Michael VIII confirmed and increased donations to St. Sophia in 1396

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\(^{109}\) Oikonomies, “Role of the Byzantine State,” 104.3.

\(^{110}\) See references in D. A. Zakynthinos, *Le chrysobulle d’Alexis III Comnène, empereur de Trébizonde en faveur des Vénitiens* (Paris, 1912), 65, to the treaties drawn respectively between Pisa and the king of Tunis (1353) and between Venice and Tripoli (1356).

\(^{111}\) Antoniadis-Bibicou, *Donaines*, 157.

\(^{112}\) See references and discussion by Schreiner, “Prostagma,” 208–9 n.; see also Oikonomies, “Role of the Byzantine State,” for *orikē* (1026) and *naulon* (1044); C. Giros, oral communication.

\(^{113}\) Pegolotti, *La pratica della mercatuna*, 33–35 (items listed).

\(^{114}\) Ibid., 44–45.

\(^{115}\) Ibid., 44.

\(^{116}\) Ibid., 47.

\(^{117}\) Ibid., 46. *Picoare* derives from *pico*, the Byzantine Πῆχυς (some 57 cm; see Schilbach, *Byzantinische Metrologie*, 43). But “when oil is sold in jars, you don’t have anything to pay, because they are not measured” (*e quando veni l’olio in giare non ai pagare niente, perché non si misurano*).

\(^{118}\) For a detailed study of such expenses in Badoer, see J. Lefort, “Le coût des transports à Constantinople, portefaix et bateliers au XVe siècle,” in *Eupsychia*, 2:413–25.
chrysobull, he mentioned the two villages of Thermon and Loulon, together with the poron (a toll exacted on the crossing of fords), the kommerkion, the ennonion (a tax on common pasture), and the topiatikon. This last tax was charged to each vendor, as is still done today in open-air markets, for the right to set up a table or simply display merchandise on the spot. It is probably identical to the praktikion and the plateaticum attested in Puglia in the Lombard and Norman periods and known in an eleven-century document as πλαττα. Among the fairs controlled by Lavra we learn from a 1317 praktikion that the one held twice a year (on St. Nicholas’s feast and at Christmas) in the village of Doxompoous, southeast of Lake Achinos on the lower Strymon, yielded 10 hyperpyra, and 50 hyperpyra for gomarati ton (a commercial tax on each load of merchandise), kommerkion, opsoni on, and katagōgion. The large praktikion of Pergamē nos and Pharisaios (1321) reports a revenue of 6 nomismata from the fair of St. Constantine in the land of Pinnōn (Pissōn) and 3 nomismata from another fair of St. Elias, whose location is not stated. For a vivid representation of a traditional fair in the preindustrial world, see Jacques Callot’s seventeenth-century engrav ing of the Fair of Impruneta (Musée historique lorrain, Nancy). For a vivid representation of a traditional fair in the preindustrial world, see Jacques Callot’s seventeenth-century engraving of the Fair of Impruneta (Musée historique lorrain, Nancy). See D. Ternois, “La foire d’Impruneta,” in Jacques Callot: Deuxième partie, Catalogue de l’œuvre gravé (Paris, 1992), 241–56, and J. Lieure, “La Bithynie au Moyen Âge,” ed. B. Geyer and J. Lefort, Réalités byzantines 9 (Paris, 2003), 88 n. 141. 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Some of these charges and the officials responsible for their collection, or similar ones with different names, still existed in the fifteenth century, as can be observed in the ledger of Badoer, where we encounter some of these charges and the officials responsible for their collection, or similar ones with different names, still existed in the fifteenth century, as can be observed in the ledger of Badoer, where we encounter sanseria, sansaria, sensoria (brokerage tax) at a 0.5 percent rate on sales and acquisitions, at 0.25 percent on barter transactions payments to the pexador the practice of picar, measuring in picchi in Constantinople and in Pera tarizador stimador boleta de Grixi for the seal (bola) applied to merchandise, especially textiles (reminding one of the bola in the Book of the Prefect) Markets in Byzantium long benefited from a unified system of control of paying and weighing. In the later period the influence of this long-established system of paying and weighing extended well beyond the boundaries of the empire, as evidenced by the presence of similar systems in the Islamic world and in the Byzantine successor states. For a vivid representation of a traditional fair in the preindustrial world, see Jacques Callot’s seventeenth-century engraving of the Fair of Impruneta (Musée historique lorrain, Nancy). See D. Ternois, “La foire d’Impruneta,” in Jacques Callot: Deuxième partie, Catalogue de l’œuvre gravé (Paris, 1992), 241–56, and J. Lieure, “La Bithynie au Moyen Âge,” ed. B. Geyer and J. Lefort, Réalités byzantines 9 (Paris, 2003), 88 n. 141. See references s.v.v. in U. Dorini and G. Bertelè, ed., Il libro dei conti di Giacomo Badoer (Costantinopoli 1336-1448): Complemento e indici (Padua, 2002). A similar tax in Corvin, Venice, or Trebizond was called mesetaria, a term more akin to the Greek mesetikon. Dorini and Bertelè, eds., Badoer, carta 107, p. 217, line 4: “peza 1 de pano chupo, fo quella che fo chonprada a denar chon dori, a car. 4½ per bota” of olive oil from Puglia. E.g., ibid., chap. 11, line 8: “e per pichar e tarizar, chon tadi ai tarizador e al pichador a car. 3 per peza” of Flemish cloth (pansi locisti of Alost). E.g., ibid., chap. 189, p. 380, line 5: “per stimadori e tarizadori, a car. 4½ per bota” of olive oil from Puglia. E.g., ibid., chap. 9, p. 18, lines 19–20: “per boleta al prete del chapetanio e barche de galia e boleta de Grixi e cortexia a quei da la porta, in tuto car. 1 per cholo” (“di stagni fasi”: i.e., cargoes of tin in “loads,” an equivalent of the Greek γομαρία). On the wards of city gates (da la porta), see K.-P. Matschke, “Tore, Torwächter und Torzöllner von Konstantinopel in spätbyzantinischer Zeit,” Jahrbuch für Regionalgeschichte 96.2 (1989): 42–57. In his first message to Congress on 8 January 1790, President George Washington declared: “Uniformity in the currency, weights and measures of the United States is an object of great
and elaborate tradition was still felt, even though part of the empire’s regulatory power devolved to privileged western communities. Charges and regulations of transactions can now be better appreciated; they were not higher or tighter in Constantinople than in other trading places of the Mediterranean. They aimed at, and certainly contributed to, the smooth and correct functioning of very active markets, which Brigitte Pitarakis will describe in the following chapter, using archaeological and iconographical evidence.
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Title</th>
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<tr>
<td>AA</td>
<td>Archäologischer Anzeiger</td>
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<tr>
<td>AASOR</td>
<td>The Annual of the American Schools of Oriental Research</td>
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<td>AASS</td>
<td>Acta sanctorum (Paris, 1863–1940)</td>
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<td>AB</td>
<td>Analecta Bollandiana</td>
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<tr>
<td>ActaArchHung</td>
<td>Acta Archaeologica Academiae Scientiarum Hungaricae</td>
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<td>ADAJ</td>
<td>Annual of the Department of Antiquities of Jordan</td>
</tr>
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<td>ADSV</td>
<td>Antichnistva drevnost’ i srednie veka, Sverdlovsk</td>
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<td>L’Année épigraphique</td>
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<td>Anatolian Archaeology. British Institute at Ankara Research Reports</td>
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<td>Annales: Economies, sociétés, civilisations</td>
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<td>AnTard</td>
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<td>AntJ</td>
<td>The Antiquaries Journal</td>
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<tr>
<td>Άρχ.Διλτ.</td>
<td>Ἀρχαιολογικὸν δίλτιον</td>
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<td>ArSonTop</td>
<td>Araştırma Sonuçları Toplantısı</td>
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<td>ArtB</td>
<td>Art Bulletin</td>
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<td>ASAtene</td>
<td>Annuario della Scuola archeologica di Atene e delle Missioni italiane in Oriente</td>
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<td>ASIt</td>
<td>Archivio Storico Italiano</td>
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<tr>
<td>AttiLinc</td>
<td>Atti della Accademia nazionale dei Lincei</td>
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<tr>
<td>BAC</td>
<td>Bulletin archéologique du Comité des travaux historiques et scientifiques</td>
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<td>BAR</td>
<td>British Archaeological Reports</td>
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<td>BASOR</td>
<td>Bulletin of the American Schools of Oriental Research</td>
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<td>BASP</td>
<td>Bulletin of the American Society of Papyrologists</td>
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<td>BBA</td>
<td>Berliner byzantinistische Arbeiten</td>
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<td>BCH</td>
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<td>BCTH</td>
<td>Bulletin du Comité des Travaux Historiques</td>
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<td>BEODam</td>
<td>Bulletin d’études orientales de l’Institut français de Damas</td>
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<td>BHL</td>
<td>Bibliotheca hagiographica latina antiquae et mediae aetatis, Subsidia hagiographica 6 (Brussels, 1898–1911; new suppl. 1986)</td>
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<td>BMGS</td>
<td>Byzantine and Modern Greek Studies</td>
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<td>BnF</td>
<td>Bibliothèque nationale de France</td>
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<td>BSA</td>
<td>The Annual of the British School at Athens</td>
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<td>BSOAS</td>
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<td>Byzantina Vindobonensis</td>
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<td>CabArch</td>
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<td>CCSL</td>
<td>Corpus christianorum, Series latina</td>
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<td>CDS</td>
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<td>CFHB</td>
<td>Corpus fontium historiae byzantinae</td>
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<td>Corpus iuris civilis, ed. P. Krüger et al. (Berlin, 1928–29; repr. 1993)</td>
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<td>CIL</td>
<td>Corpus inscriptionum latinarum (Berlin, 1862–)</td>
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<td>CMG</td>
<td>Corpus Medicorum Graecorum</td>
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<tr>
<td>CRAI</td>
<td>Comptes rendus de l’année de l’Académie des Inscriptions et Belles-Lettres</td>
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<td>CSEL</td>
<td>Corpus scriptorum ecclesiasticorum latinorum</td>
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<td>CSHB</td>
<td>Corpus scriptorum historiae byzantinae</td>
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<td>CTb</td>
<td>Theodosiani libri XVI cum constitutionibus Sirmondianis et leges novellae ad Theodosianum pertinentes, ed. T. Mommsen and P. M. Meyer (Berlin, 1905)</td>
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<td>ΔXAE</td>
<td>Δελτίον τῆς Χριστιανικῆς ἀρχαιολογικῆς ἑταιρείας</td>
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<td>DCV</td>
<td>R. Morozzo della Rocca and A. Lombardo, eds., Documenti del commercio veneziano nei secoli XI–XIII, 2 vols. (Rome, 1940),</td>
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<td>DenkWien</td>
<td>Österreichische Akademie der Wissenschaften, Philosophisch-historische Klasse, Denkschriften</td>
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DOCat  

DOP  
*Dumbarton Oaks Papers*

DOSeals  

EHB  

EHR  
*English Historical Review*

Eparchenbuch  
*Das Eparchenbuch Leons des Weisen*, ed. J. Koder (Vienna, 1991)

FGH  
*Fragmenta historicorum graecorum*, ed. C. Müller (Paris, 1841–70)

GCS  
Die griechischen christlichen Schriftsteller der ersten [drei] Jahrhunderte

GOTR  
*Greek Orthodox Theological Review*

GRBS  
*Greek, Roman, and Byzantine Studies*

HZ  
*Histories der klassischen Altertumswissenschaft*, ed. I. Müller; new ed. by W. Otto et al. (Munich, 1923–)

Hesp  
*Hesperia*

IGLSyr  

ILA  

INA  
*Institute of Nautical Archaeology*

IstMitt  
*Istanbuler Mitteilungen*, Deutsches Archäologisches Institut, Abteilung Istanbul

JAOB  
*Journal of the American Oriental Society*

JHS  
*Journal of Hellenic Studies*

JMedHist  
*Journal of Medieval History*

JORB  
*Jahrbuch der Österreichischen Byzantinistik*

JRC  

JRA  
*Journal of the Royal Asiatic Society*

JRS  
*Journal of Roman Studies*

KazSonTop  
*Kazi Sonuçları Toplantısı*

Lib.ann  
*Studium biblicum franciscanum: Liber annus*

MGH Capit  
*Monumenta Germaniae historic, Capitularia regum Francorum*

MGH Form  
*Monumenta Germaniae historic, Legum sectio V, Formulae*

MGH ScriptRerGerm  
*Monumenta Germaniae historic, Scriptores rerum Germanicarum*

MGH ScriptRerMerov  
*Monumenta Germaniae historic, Scriptores rerum Merovingicarum*

NC  
*The Numismatic Chronicle [and Journal of the Royal Numismatic Society]*

NDCV  

NZ  
*Numismatische Zeitschrift*
<table>
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<th>Abbreviation</th>
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<td><strong>ÖJh</strong></td>
<td><em>Jahreshefte des Österreichischen Archäologischen Instituts in Wien</em></td>
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<td><strong>ÖJhBeibl</strong></td>
<td><em>Jahreshefte des Österreichischen Archäologischen Instituts in Wien</em>, Beiblatt</td>
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<td><strong>OrChr</strong></td>
<td><em>Orientalia christiana</em></td>
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<td><strong>PBSR</strong></td>
<td><em>Papers of the British School at Rome</em></td>
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<td><strong>PEQ</strong></td>
<td><em>Palestine Exploration Quarterly</em></td>
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<td><strong>PO</strong></td>
<td><em>Patrologia orientalis</em></td>
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<td><strong>RBK</strong></td>
<td><em>Reallexikon zur byzantinischen Kunst</em>, ed. K. Wessel (Stuttgart, 1963–)</td>
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<td><strong>RBN</strong></td>
<td><em>Revue belge de numismatique</em></td>
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<td><strong>REA</strong></td>
<td><em>Revue des études anciennes</em></td>
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<td><strong>REB</strong></td>
<td><em>Revue des études byzantines</em></td>
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<td><strong>RHC HOcc</strong></td>
<td><em>Recueils des historiens des Croisades</em>, Historiens occidentaux (Paris, 1844–95)</td>
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<td><strong>RIS</strong></td>
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<td><strong>RN</strong></td>
<td><em>Revue numismatique</em></td>
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<tr>
<td><strong>RSBN</strong></td>
<td><em>Rivista di studi bizantini e neoellenici</em></td>
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<td><strong>RSBS</strong></td>
<td><em>Rivista di Studi bizantini e slavi</em></td>
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<tr>
<td><strong>SBMünchen</strong></td>
<td><em>Sitzungsberichte der Bayerischen Akademie der Wissenschaften</em>, Philosophisch-historische Klasse</td>
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<td><strong>SC</strong></td>
<td><em>Sources chrétiennes</em></td>
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<td><strong>SEER</strong></td>
<td><em>The Slavonic and East European Review</em></td>
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<td><strong>SEG</strong></td>
<td><em>Supplementum epigraphicum graecum</em>, ed. P. Roussel et al. (Leiden, 1923–)</td>
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<td><strong>SubsHag</strong></td>
<td><em>Subsidia hagiographica</em></td>
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<td><em>Transactions of the American Philosophical Society</em></td>
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<td><strong>TIB</strong></td>
<td><em>Tabula imperii byzantini</em>, ed. H. Hunger (Vienna, 1976–)</td>
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<td><strong>TM</strong></td>
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<td><strong>VizVrem</strong></td>
<td><em>Vizantinski k vremennik</em></td>
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<td><em>Jus graecoromanum</em>, ed. J. and P. Zepos (Athens, 1931; repr., 1962)</td>
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<tr>
<td><strong>ZPapEpig</strong></td>
<td><em>Zeitschrift für Papyrologie und Epigraphik</em></td>
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<tr>
<td><strong>ZRVI</strong></td>
<td><em>Zbornik radova Vizantološkog instituta</em>, Srpska akademija nauka</td>
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