BYZANTIUM
AND
ISLAM
AGE OF TRANSITION
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**BYZANTIUM**

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As the Arab Spring transforms countries from Tunisia to Syria and down the Red Sea to Yemen, “Byzantium and Islam: Age of Transition (7th–9th Century)” offers a unique opportunity to understand a climactic transformation in the region’s earlier history, an era that remains influential today. Between the seventh and the ninth centuries, the wealthy southern provinces of the Byzantine Empire, extending around the Mediterranean basin from Syria to Egypt and across North Africa to Spain, long part of the Hellenistic tradition and the Roman world, became part of the emerging Islamic world. The Christian and Jewish populace went from being central to the fortunes of the Christian state ruled from New Rome, Constantinople (modern Istanbul), to being governed initially by the Muslim Umayyads from Damascus in modern Syria and ultimately by the Abbasids in Baghdad in modern Iraq. The trade route along the Red Sea past Yemen once dominated by Byzantine allies became part of the new Islamic order.

“Byzantium and Islam: Age of Transition,” the Museum’s fourth major exhibition on the art and culture of the Byzantine Empire, displays the exceptional traditions of the southern provinces of the empire in the seventh to ninth century and traces their impact on Christian communities under Islamic rule and the emerging aesthetic of the first generations of Islamic art and culture. In so doing, this exhibition concludes the exploration of the arts of Byzantium surveyed in the Museum’s earlier landmark shows—“Age of Spirituality: Late Antique and Early Christian Art, Third to Seventh Century” in 1977; “The Glory of Byzantium: Art and Culture of the Middle Byzantine Era (A.D. 841–1261)” in 1997; and “Byzantium: Faith and Power (1261–1557)” in 2004. Together these exhibitions have expanded our understanding of the importance and accomplishments of an empire whose influence was at one time nearly forgotten.

Exhibitions of this international scale are increasingly rare; this project and its predecessors are among the most ambitious undertaken during the past three decades. We appreciate the major loans from forty-nine institutions in fifteen countries that have made this exhibition possible. Most especially, we thank the Benaki Museum in Athens and the Department of Antiquities in Jordan, whose extensive loans have enabled us to display appropriately the arts of the first centuries of Islamic rule in the region. As this publication goes to print, we continue to hope that events of the Arab Spring will allow works of art from the Holy Monastery of Saint Catherine at Sinai and the Islamic and Coptic museums of Cairo to be present in New York for the exhibition.

“Byzantium and Islam: Age of Transition” has been made possible by generous donors who have long been committed to the Metropolitan’s work in this field. Mary and Michael Jaharis have once again provided exceptional leadership support. The Stavros Niarchos Foundation has also continued its generous commitment to scholarship in this area. Under the leadership of Ralph Minasian, The Hagop Kevorkian Fund’s long-standing dedication to our Byzantine projects is remarkable. The major support provided by these donors is a reminder that, with an inspirational idea and enthusiastic friends, anything is possible. We also thank the National Endowment for the Arts for its renewed support of the Museum’s exhibition program. Additionally, we would like to recognize the Federal Council on the Arts and Humanities for granting an indemnity for this project.

Conceived more than six years ago by its curator, Helen C. Evans, under my predecessor, Director Philippe de Montebello, and Mahrukh Tarapor, former Associate Director for Exhibitions and Director of International Affairs, “Byzantium and Islam: Age of Transition” has been brought to a most successful conclusion through the strong support of Jennifer Russell, Associate Director for Exhibitions; Peter Barnet, Michel David-Weill Curator in Charge of the Department of Medieval Art and The Cloisters; and Brandie Ratliff, Research Associate for Byzantine Art in the Medieval Department, as well as many other members of the Museum staff.

Thomas P. Campbell
Director
The Metropolitan Museum of Art
Sponsors’ Statements

Inspired by the wealth of knowledge and beauty presented in the series of special exhibitions on Byzantium held at The Metropolitan Museum of Art in 1977, 1997, and 2004, we are honored and pleased to support “Byzantium and Islam: Age of Transition (7th–9th Century).”

We are very proud to have supported the Metropolitan Museum through the Mary and Michael Jaharis Galleries for Byzantine Art, the first permanent installation of Byzantine art in an encyclopedic museum. These permanent galleries contain works that reflect many of the concepts of “Byzantium and Islam: Age of Transition,” especially the importance of the southern provinces of the Byzantine state.

Given our personal interest in the art of this era and our Hellenic heritage, we are grateful to the Metropolitan Museum for its groundbreaking initiatives and efforts in presenting a magnificent series of exhibitions that focus on the art and culture of the Byzantine world.

Mary and Michael Jaharis

In 2004 the Stavros Niarchos Foundation provided major support for The Metropolitan Museum of Art’s groundbreaking exhibition “Byzantium: Faith and Power (1261–1557).” In supporting the exhibition, the Foundation expressed its commitment to enhancing public perception and understanding of Byzantium’s remarkably beautiful and influential artistic heritage. It is in the same spirit and with great pleasure that the Foundation has collaborated again with the Metropolitan by becoming a major contributor to “Byzantium and Islam: Age of Transition (7th–9th Century),” the fourth exhibition in Museum’s series on Byzantine art and civilization. While most view the period from the seventh to the ninth century as a time of continuous conflict, it was also an era of cultural dialogue and interaction between two important artistic traditions, one established and the other developing. The Stavros Niarchos Foundation is pleased to support an exhibition that will reveal to the public, for the first time in such a comprehensive way, the profound artistic and cultural transformations that resulted from Byzantium’s interaction with Islam.

The Board of Directors
Stavros Niarchos Foundation
A particularly fruitful relationship with the Fund was forged in 1983 when it supported the fellowship of Helen Evans as a doctoral student in Byzantine art at New York University's Institute of Fine Arts. Since that time, the Fund's dedication to Dr. Evans's widely acclaimed exhibitions, catalogues, and projects—from explorations of the artistic achievements of Byzantium to the acquisition of Armenian masterpieces—has not wavered. We are particularly proud to help realize her present endeavor, the first exhibition to merge the study of Byzantine art with that of the cultural achievements of the Islamic world, both of which were so beloved by our founder.

Ralph D. Minasian
President
The Hagop Kevorkian Fund
Acknowledgments

Without the support of many institutions and individuals it would have been impossible to bring together the works and the intellectual content of “Byzantium and Islam: Age of Transition (7th–9th Century).” We would like to thank all who gave advice on the project directly or indirectly. Most especially, we wish to thank the staffs of the forty-nine institutions that have lent to the exhibition. Many generously supported the Museum’s earlier exhibitions on Byzantium—“Age of Spirituality: Late Antique and Early Christian Art, Third to Seventh Century” in 1977; “The Glory of Byzantium: Art and Culture of the Middle Byzantine Era (A.D. 843–1261)” in 1997; and “Byzantium: Faith and Power (1261–1557)” in 2004—while others are participating for the first time.

In Austria, at the Austrian National Library in Vienna, we thank Johanna Rachinger, Director General, and Bernhard Palme, Peter Prokop, and Angelika Zdiarsky; in Canada, at the University of Toronto Art Centre, Niamh O’Laoghaire, Director, and Heather Pigat; and in Denmark, at the David Collection in Copenhagen, Kjeld von Folsach, Director, and Mette Korsholm.

In Egypt, many people sought to make participation in the exhibition possible. Mohamed Ibrahim Ali and Mostafa Amin, Secretaries-General of the Supreme Council of Antiquities, and Zahi Hawass, former Secretary General and Minister of State for Antiquities, understood the significance of the project from its conception. Lyn Younes, Nadja Tomoun, and Iman R. Abdulfattah must also be thanked for their efforts on our behalf.

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In Greece, the Benaki Museum in Athens under its director, Angelos Delivorias, has been especially generous with its loans. Members of the museum’s staff who have provided outstanding support include Anna Ballian, Mina Moriatou, Anastasia Drandaki, and Irini Yeroulanou. Mata Tsolozidis-Zisiadis and Eleni Strataki deserve thanks, as do Yannis S. Costopoulos, Chairman of Alpha Bank, and Hector P. Verykios, Director of the J. F. Costopoulos Foundation. In Israel, appreciation is owed to Dieter Vieweger, Director General, and Barbara Herfurth of the Deutsches Evangelisches Institut für Altertumswissenschaft des Heiligen Landes in Jerusalem and to George Blumenthal for their efforts on our behalf. In Italy, Vera Valitutto, Director, Maria Prunai Falciani, former Director, and Anna Rita Fantoni, Dina Giuliani, and Leonardo Meoni of the Biblioteca Medicea Laurenziana in Florence are to be thanked for their generous support, as are Claudio Salsi, Director, and Francesca Tasso, Valentina Ricetti, and Elena Ottina of the Castello Sforzesco, Milan. At the Biblioteca Nazionale di Napoli, we are grateful to Mauro Giancappro, Director, and Vincenzo Boni, Valentina Cosentino, and Maria Francesca Stamuli. Special thanks are also due to Patricia Lurati for her efforts on our behalf in Italy.

In Jordan, the Department of Antiquities has been especially generous in its understanding and support. Faris Al Hmoud,
Acting Director General, and Huda Kilani are to be thanked for their exceptional efforts in completing the loan process begun under Fawwaz Al-Khraysheh and Ziad Al Saad, former Directors General. The department’s Tamam Ahmad Khasawneh, Catreena Hamarneh, and Maysoun Qarneheh have provided valuable assistance, as have Robert Schick and Bill Lyons. We also thank Father Carmelo Pappalardo of the Franciscan Archaeological Institute at Mount Nebo for his interest in our undertaking. Barbara Porter, Director of the American Center for Oriental Research in Amman, has been a source of invaluable advice throughout the planning process. In Russia, in Saint Petersburg, we are grateful to Mikhail Piotrovsky, Director of the State Hermitage Museum, and Natalia Kozlova, Anatoly Ivanov, Olga W. Oscharina, Vera Zalesskaya, Anastasia Miklaeva, Andrei Terchenin, and, especially, Yuri Piatnitsky. Also in Saint Petersburg, Anton Likhomanov, Director of the Russian National Library, Vladimir Zaitsev, former Director, and Olga Vasilyeva, in particular, have been supportive of our requests.

In the United Kingdom, at Cambridge University Library, Jill Whitelock, Head of Special Collections; Ben Outhwaite, Head, Taylor–Schechter Genizah Research Unit; and Don Manning have offered welcome support. In London, at the British Library, gratitude is due to Dame Lynne Brindley, Chief Executive, and Scott McKendrick, Ilana Tahan, Colin F. Baker, Andrea Clarke, Barbara O’Connor, Laura Fielder, and Andrew Gough. The British Museum has lent generously to the exhibition through Neil MacGregor, Director, with the help of Venetia Porter, Chris Entwistle, Robert Owen, and Agata Rutkowska. At the Victoria and Albert Museum, we are indebted to Martin Roth, Director, Sir Mark Jones, former Director, and Paul Williamson, Helen Persson, Mariam Rosser-Owen, Rebecca Wallace, Roxanne Peters, Miranda McLaughlan, Peter Ellis, Elizabeth-Anne Haldane, Claire Johnson, Jon Thompson, and Alanna Davidson. Recognition is also due to Maria Balshaw, Director, and Frances Pritchard of the Whitworth Art Gallery, University of Manchester, and to Christopher Brown, Director, Ashmolean Museum of Art and Archaeology, University of Oxford, and Aisha Burtenshaw, Katherine Wodehouse, and Amy Taylor. The interest Paul Ruddock and Sam Fogg have taken in our project is also much appreciated.

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Helen C. Evans
Mary and Michael Jaharis Curator of Byzantine Art, Department of Medieval Art and The Cloisters

Brandie Ratliff
Research Associate for Byzantine Art, Department of Medieval Art and The Cloisters
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The many languages used in this publication were transliterated as far as possible according to the systems established for foreign languages in the *Oxford Dictionary of Byzantium* and the Museum’s Masterpieces from the Department of Islamic Art in *The Metropolitan Museum of Art*. In most other cases, the Library of Congress transliteration systems were followed. For Arabic and Persian terms, *ayn* and *hamza*, letters of the alphabet, are marked, but other diacritical signs are not used. Translations of passages in the Bible are based on the New Revised Standard Version. References to and translations of the Qur’an are taken from *The Holy Qur’an: English Translation of the Meanings and Commentary* (Medina, 1989). As this catalogue was edited before the Museum’s new *Masterpieces from the Department of Islamic Art in The Metropolitan Museum of Art* was published, references to it are not included here, most relevantly for cat. nos. 154, 160, 167, 171, 185, and 192.

Throughout the catalogue, dimensions are given in the following sequence: height precedes width precedes depth. When necessary, the abbreviations H. (height), L. (length), W. (width), and Diam. (diameter) are used for clarity.
Weights and Measures from Byzantium and Islam

Stefan Heidemann

The rapid conquest of Egypt and Syria by the Islamic armies brought almost no change to the daily economic life of the people living in either the cities or the countryside, since the Muslim elite was interested in a functioning economy that would yield a high tax return. In the late fourth to fifth century, churches and basilicas became the new focus of urban life, supplanting temples and complexes for public entertainment. The transition to pack animals for transportation meant that large streets for wheeled traffic were no longer needed, and shops began to crowd the edges of the roads. When congregational mosques were established, they created new urban centers. The Early Islamic steelyard (cat. no. 93A) might be an example of this slow change. The technical design is eastern Mediterranean, dating to the end of the Roman Empire. The steelyard has two scales; one indicates pounds by long incised lines, half pounds by a short notch and three dots, and values by Greek numerals. The second scale, on the opposite side of the tetragonal long arm, shows notches for every pound, and for every five pounds an incised line, but the value is indicated in Arabic characters and symbols that have not yet been deciphered. Whereas Byzantine steelyards are usually decorated with animal and human effigies, this one is embellished with scrolling vine leaves and foliage, which allows it to be dated into the eighth or ninth century. The new decorative design indicates a shift in taste inspired by Islamic religious art.

The most decisive change for weights and measures was the reforms by the caliph ‘Abd al-Malik ibn Marwan (r. 685–705). Besides introducing Arabic as the language of administration, he reduced the weight of the Byzantine gold nomisma (4.55 g) to the mithqal (4.2 g) and that of the still current Sasanian silver coin (4.2 g) to the dirham weight (2.9 g). Mithqal-dinar and dirham became the basic units for precious metals and other valuable substances. The ‘atī (between 337 and 440 g) took the place of the Roman pound (ca. 440 g), but it was never completely standardized throughout the empire. Its weight varied both from region to region and over time.

Egypt had a special position in terms of the administration of weights and measures and the materials used for them. In the Late Roman–Byzantine period, weights for coins and substances were usually simple bronze disks or flat bronze “bricks” with the value incised, usually in combination with a cross. In Egypt, however, weights were made of glass and stamped with the Greek monogram of the responsible officer and sometimes even with his effigy. Glass has advantages. The amount for a certain weight can be measured precisely and then melted into a blob, which can be stamped. Any alteration of the weight is immediately visible as a chip.

The Byzantine practice continued probably into the first decades of Arab rule. The Umayyad governor of Egypt, Qurra ibn Sharik (r. 709–14), Arabized the administration and reorganized the fiscal system of Egypt in every regard. Precisely adjusted glass tokens were stamped in Arabic with the name of the governor, sometimes with that of the responsible officer, and usually with the value; sometimes Coptic numerals and Greek letters were added. In Syria glass weights were used only for brief periods, and they never became popular. Likewise, in all other regions of the eastern Mediterranean, bronze or lead weights were preferred. In Egypt, by contrast, while bronze and lead weights existed side by side with glass weights beginning in the Fatimid period (969–1171), glass weights...
continued to be used until the Mamluk period (1250–1517). Qurra and his Umayyad and Abbasid successors in Egypt also regulated all other weights and measures used in public, through official stamps. Thousands of glass weights and vessel stamps of Qurra and his successors survive. Vessel stamps were flat blobs of glass set usually in place below the rim of an already blown and adjusted glass container and then stamped.

The weights and measures indicated their value not only in general terms; many are more specific, such as the ratsl for meat, the measure qist for olive oil, and the mikiyala for white cumin. Stamps for more than a hundred pharmaceutical substances are named on glass. This system of controlling all measurements and weights with stamps was abandoned by the Tulunid period (868–905), and only coin weights continued to be made of glass until the Mamluk period.

The steelyard was a Roman invention that allowed a scale for heavier weights to be made much lighter and that used just one weight instead of a set of weights. Another improvement was the inclusion of two or three different scales on the longer arm, which permitted greater precision. The technology continued uninterrupted in the marketplaces of the eastern Mediterranean under Islamic rule. Many Late Roman steelyards have survived, but Early Islamic ones are rare. The only visible change is in the taste for embellishment—vine scrolls instead of figural images—and the numbering system. The measurements themselves remained the same.

The steelyard hung on one of two hooks (Lat. fulcrum), which was the point of suspension. One of the hooks is still attached to this steelyard; the second hook would have hung from the loop hole on the upper side of the arm. The long steelyard arm, obviously meant for quite heavy loads—at least forty Roman pounds (about 27 1/2 lbs [12.5 kg])—is calibrated on two sides with notches and numerals, each side providing a different scale. The object to be weighed hung from a weighing collar (now missing) near the end of the shorter arm. The shorter the load arm, the higher the maximum load. Once the steelyard was set up with the object to be weighed, the counterweight was allowed to slide along the edge of the long arm with the 45-degree offset scale until it reached a notch where it was in balance. The state of equilibrium meant that the counterweight had compensated through its distance from the point of suspension for the weight of the load hanging from the shorter arm. To change the scale, the steelyard was suspended from the other hook, and the counterweight was slid along the notches of the second scale.¹

¹ Garbsch 1988a, 1988b.

References: (A, B) Unpublished.
vessel stamps. If the vessel breaks, part of it remains as a shard attached to the thick stamp. Only this part usually survives. The stamps indicate a measure of a quarter and a half qist, respectively. Due to the nature of broken glass, we do not know the precise value of the qist. A qist can be estimated, however, to be about 1.5 liters (a little more than 1 1/2 quarts). The vessel attached to the shard measured a quarter qist, probably about 0.38 liter (a little more than 1/25 cups), the second about 0.75 liter (a little more than 3 cups).

The first stamp (A) was manufactured under the Umayyad financial director 'Isa ibn Abi 'Ata (r. 743–49; 745–49). The authorizing governor of the second container was 'Abdallah ibn Yazid (r. 751–53; 755–58). The high-ranking official responsible for weights and measures is named as Muhammad ibn Shurahbil, who served several governors in the Abbasid period in this capacity.

(Provenance: [Michael Casira, Cairo (until 1908)]. Condition: The vessel stamp is attached to a glass shard showing parts of a rim. The Metropolitan Museum of Art, New York, Rogers Fund, 1908 (08.256.7).

94A. B Vessel Stamps

**A. Quarter Qist**
Egypt, 743–49
Glass, bottle green
3.5 × 2.5 cm (1 3/8 × 1 in. )
Inscribed: In Arabic,

بسم الله ( امر )/عبد الملك بن ( يز )/( يـ ) ـد بصنعه نصف

3.5 × 2.5 cm (1 3/8 × 1 in. ); 4.19 g
Inscribed: In Arabic, obverse, center,

(mithqal weight),

(dinar [three dots]),

(full [weight]); obverse margin,

What the amir al-Hasan ibn al-Bahbah ordered, may God preserve him); on reverse,

بيـم الله الرحمن الرحيم

The first stamp (A) was manufactured under the Umayyad financial director 'Isa ibn Abi 'Ata (r. 743–49; 745–49). The authorizing governor of the second container was 'Abdallah ibn Yazid (r. 751–53; 755–58). The high-ranking official responsible for weights and measures is named as Muhammad ibn Shurahbil, who served several governors in the Abbasid period in this capacity.

(Provenance: [Michael Casira, Cairo (until 1908)]. Condition: The vessel stamp is attached to an irregular glass shard. The Metropolitan Museum of Art, New York, Rogers Fund, 1908 (08.256.3).

95. Coin Weight

**…………………..**
Egypt, 808–10
Glass, blue-green
Diam. 2.9 cm (1 1/8 in. ); 4.19 g
Inscribed: In Arabic, obverse, center,

بسم الله الرحمن الرحيم

(Dinr) ـد بصنعه نصف

A value of the coin weight was stamped under the governor of the second container was 'Abdallah ibn Yazid (r. 751–53; 755–58). The high-ranking official responsible for weights and measures is named as Muhammad ibn Shurahbil, who served several governors in the Abbasid period in this capacity.

(Provenance: [Michael Casira, Cairo (until 1908)]. Condition: The vessel stamp is attached to a glass shard. The Metropolitan Museum of Art, New York, Rogers Fund, 1908 (08.256.1).

96. Ring Weight

**…………………..**
Egypt, 847–61
Glass, bottle green
6.7 × 5.7 × 5 cm (2 5/8 × 2 1/4 × 1 15/16 in. ); 381.5 g
Inscribed: In Arabic,

بسم الله الرحمن الرحيم

(Dinar) ـد بصنعه نصف

A value of the coin weight was stamped under the governor of the second container was 'Abdallah ibn Yazid (r. 751–53; 755–58). The high-ranking official responsible for weights and measures is named as Muhammad ibn Shurahbil, who served several governors in the Abbasid period in this capacity.

(Provenance: [Michael Casira, Cairo (until 1908)]. Condition: The vessel stamp is attached to a glass shard. The Metropolitan Museum of Art, New York, Rogers Fund, 1908 (08.256.20).

Only about ten complete measures have survived, but there are hundreds of reverse would have given the name of the person in charge, but the glass was stamped in its viscous state, and the inscription became blurred when the glass cooled.


Dry Egyptian soil preserved perfectly the weight of this mithqal, the weight of a dinar, the legal standard of gold. This coin weight was stamped under the governor al-Hasan ibn al-Bahbah (r. 808–10). The
included heavier weights, produced at the same official glass workshops as coin weights and vessel stamps. These heavier weights usually took the form of large glass disks or heavy glass rings, made by folding thick bars of viscous glass. Glass rings could be suspended from a string. Due to the thick, hot, viscous material of these large objects, the inscription of the stamp is rarely clearly legible. This one names the caliph al-Mutawakkil ‘ala Allah (r. 847–61) and has the weight of a ratl.


For the first 150 years after the Umayyad caliph 'Abd al-Malik ibn Marwan (r. 685–705) introduced new weight standards for precious-metal coinage, coins were carefully adjusted in the mints, but this rigid control faded in the middle of the ninth century, and the weighing of coins in circulation was left to the public. Everyone handling money needed a balance and coin weights. Early Islamic bronze weights are distinguished from Late Roman ones by shape, punched decoration, assayer marks, and, most of all, by their belonging to the new weight systems of the mithqal and dirham. Whereas Byzantine weights are in simple forms such as a disk or a square “brick,” Early Islamic weights take the form of a barrel, a truncated bicone, or a polyhedron; for the smaller weights the very common brick shape prevailed. Bird’s-eyes were punched on the facets and/or a peripheral groove was incised along the edge of a planar surface, sometimes with one word or a name punched into it indicating a validation or an assayer’s name. None of these weights, however, has a mark indicating the weight standard applied or the value it represents. The largest and heaviest barrel-shaped weight of this sample measures fifty dirhams, the smallest probably just half a mithqal.

This group was excavated in the Byzantine and Early Islamic port city of Ayla, modern-day Aqaba, at the northern tip of the Red Sea, which connected Arabia, Byzantine Palestine, and Egypt. The weights were discovered in archaeological layers from the Abbasid to the Fatimid period and concentrated in the central building, behind the western Egyptian Gate and also behind the southern Sea Gate—places within the city where market activities can be assumed to have taken place.