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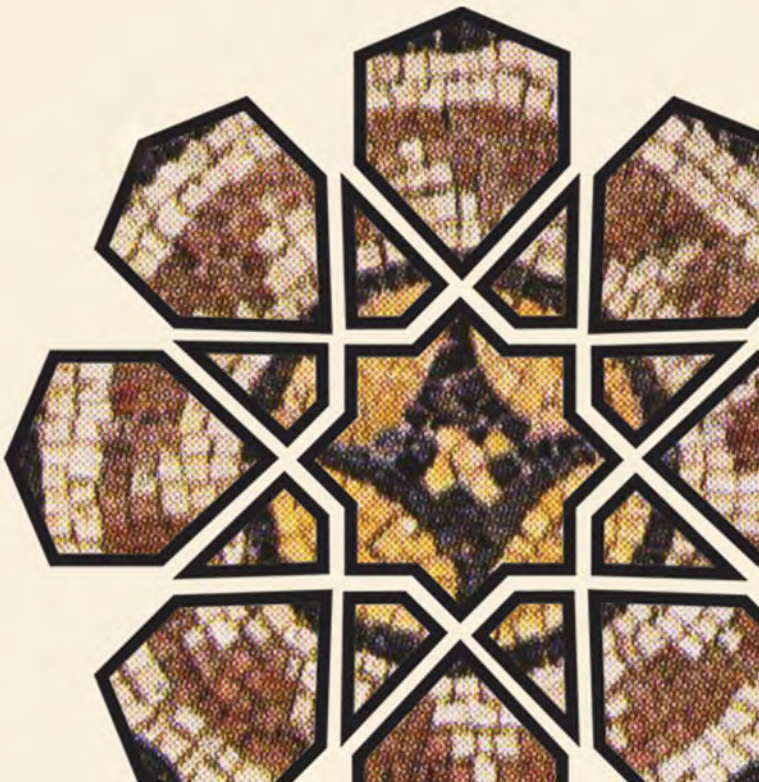

JMR

ULUDAG UNIVERSITY JOURNAL OF MOSAIC RESEARCH

AIEMA - TURKEY

EDITED

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AIEMA – Turkey is a research center that aims to study, introduce and constitude a data bank of the mosaics from the ancient times to the Byzantine period. The best presentation of the mosaics of Turkey is the ultimate goal of this center functioning depending on AIEMA. A data bank of Turkey mosaics and a corpus including Turkey mosaics are some of the practices of the center. Additionally, this center also equips a peiodical including the art of ancient mosaics and original studies namely JMR.

The JMR (Journal of Mosaic Research) is an international journal on mosaics, annually published by the Uludag University Mosaic Research Centre. The aim of this journal is to serve as a forum for scientific studies with critical analysis, interpretation and synthesis of mosaics and related subjects. The main matter of the journal covers mosaics of Turkey and other mosaics related to Turkey mosaics. Besides, the journal also accommodates creative and original mosaic researches in general. Furthermore, together with articles about mosaics, the journal also includes book presentations and news about mosaics.

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PREFACE

Mosaic Research in Anatolia initially began in the beginning of the 20th century and it gained more interest through the activities of Association internationale pour l'étude de la mosaïque antique (AIEMA) which was established under the French Science Academy. The contributions of scientists in this respect such as Jean Pier Darmon, Werner Fuchs and David Parrish are noteworthy. AIEMA has continued its contributions in the field of mosaics of Turkey, supported the establishment of the Uludağ University Mosaic Research Center and included our center (AIEMA-Turkey) in this large mosaic family as well as Spain (l'AEM), France (l'AFEMA), Italy (l'AISCOM), England (l'ASPROM), Tunisia (CTEMA) and North America and Canada (North American Branch of AIEMA) branches.

Despite the fact that Turkey is one of the richest and most important places in the world in terms of mosaic cultural heritage, the necessary care has not been taken in creating databases in a certain format and in their dissemination. Thus they have remained among our neglected cultural assets. One of the aims of our center is to start a project called Mosaic Corpus of Turkey and collect them within series. This will eventually lead to a corpus in the near future covering all mosaics of our country. The first book of this series, "The Mosaic Corpus of Turkey – Xanthos: The East Basilica", will be published in a short time.

AIEMA played a leading role in mosaic research especially under the administration of J.P. Darmon. "Le Decor Geometrique de la Mosaique Romaine" consisting of two volumes which was prepared under the presidency of Darmon is still the basic source of reference.

One of the most significant encouragements of AIEMA in mosaic research is the colloquium held every four years. The first one was held in Paris in 1963, and then in Wien (1971), Ravenna (1980), Trier (1984), Bath (England) (1987), Palencia-Mérida (Spain) (1990), Tunis (1994), Lausanne (1997), Rome (2001) and Conimbriga (2005). We feel very excited to be the host of the 11th Meeting in 2009.

The index called "*Bulletin de l'Association international pour l'Etude de la Mosaïque antique*" organized by AIEMA is one of the most important works in mosaic research in which all the mosaic related study worldwide every two years are available.

Prof. Dr. Henri Lavagne, member of the editorial board of our journal, is still the president of AIEMA. The previous president was Jean Pier Darmon. Prof. David Parrish (USA) and Prof. Dr. Werner Jobst (Austria) are among the executive board of AIEMA.

Although the mosaic studies have been neglected so far in our country, it can be seen that they have recently gained momentum with the efforts of Mosaic Research Center. Turkish scientists have also made efforts to protect and publicize the mosaic heritage of their country. However, it is noted that they cannot publish their studies in a fast and quality print. We would like to present a new media organ to eliminate this unfavorable condition and provide opportunity to publish them in a quality manner as much as themselves. Our aim with our journal, planned to be published twice a year, is not only to publish studies in Turkey but also all studies qualified by the board of referees. We therefore hope to fill a large void in the field of mosaics. We invite all local and foreign scientists in the field of mosaics to cooperate with our center.

We owe the realization of our new media organ "Journal of Mosaic Research" to the kind favors of AIEMA.

Uludağ University is proud to take part in this international initiative. Mosaic Research Center considers the invaluable mosaic and cultural assets of Anatolia not only its own heritage but that of all humanity. Thus, the articles in our journal will cover not only mosaics from our country but those from other countries, hopefully making it a mixture where the global mosaic heritage is blended just like the history of mankind. We hope to succeed in our initiatives with this respect.

Bursa – 2009

Prof. Dr. Mete Cengiz
Rector

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Der Einfluss der Mosaiken des vorderen Orients auf hispanische Mosaiken am Ende der Antike

José María Blázquez*

Object of this study are the mosaics in Hispania at the end of the Antique that have an influx of oriental mosaics. These mosaics are those of Eros and Psyche in Fraga (Huesca), who have an influx from Antioch and Syria; of Daragoleja (Granada), of Puerta Oscura (Málaga), with an influx from Greece and Syria-Palestine; of Baños de Valdearados (Burgos), with Dionysus; of Dulcitius the hunter, el Ramalete (Navarra). The abundance of mosaics decorated with geometric themes and representations of abstract ideas have an oriental influx. A Syrian mosaist from the later Antoninian period made the cosmogonic mosaic of Augusta Emerita, that is full of abstract personifications and that reminds of one in Gaza and of the mosaic with the birth of Venus in Italica, also of Syrian origin. The Augusta Emerita mosaic with the poets from the 2nd century is the work of Selecus and Anthus. The mosaics with the Seven Wisemen of Greece in Augusta Emerita and with homeric themes in Cabezón del Pisuerga (Valladolid) are owed to Greek artists. Several paleochristian mosaics in the Balearic Islands owe their influx to Palestinian synagogues, probably coming through artists from Orient or copy-books.

Bu çalışmanın konusu oryantal mozaiklerden etkilenmiş olan Hispania'daki Antik Çağ'ın sonuna ait mozaiklerdir. Bunlar, Fraga (Huesca), Daragoleja (Granada) ve Puerta Oscura'da (Málaga) bulunan Antakya ve Suriye akımından etkilenmiş olan Eros ve Psyche figürlü mozaiklerdir ile Yunan ve Suriye-Filistin akımından etkilenmiş olan Baños de Valdearados (Burgos)'da bulunan Dionysos figürlü mozaik, Avcı Dulcitius mozaiği, el Ramalete (Navara) mozaikleridir. Geometrik bezemeli mozaiklerin bolluğu ve soyut fikirlerin sunumu doğu akımı etkilerinin belgeleridir. Geç Antoninus döneminden Suriyeli bir mozaik ustası tarafından yapılan Augusta Emerita'nın kozmogonik mozaiği 'soyut' kişileştirmelerle doludur ve bu Gazze'dekini ve yine Suriye kökenli Italica'daki Venus'ün doğumu mozaiğini andırır. 2. yüzyıldan, üzerinde şairler olan Augusta Emerita mozaiği Selecus ve Anthus'un eseridir. Augusta Emerita'daki Yunanistanın yedi bilgeleri mozaikleri ve Cabezon del Pisuerga (Valladolid)'daki homerik konulu mozaikler varlıklarını Grek sanatçılara borçludurlar. Baleares adalarındaki muhtelif eskihıristiyan mozaikleri stillerini muhtemelen doğulu sanatçılar ve patron kitapları yoluyla Filistin sinagoglarına borçludurlar.

Key words: myths, geometric, Augusta Emerita, paleochristian, copy-books

Hispanien hatte in der Spätantike intensive Beziehungen mit dem Nahen Orient. Ein Aspekt innerhalb dieser Beziehungen ist der Einfluss der orientalischen Mosaiken auf die hispanischen. Es genügen einige Angaben als Einführung zu diesem Thema.

Hispanier waren der Kaiser Theodosius und seine Gattin Flacilla. Er war der letzte Kaiser, der das Imperium ungeteilt regierte; und auch die Gruppe der Hispanier, wie Flavius Timaisus, Nebridius, Maternus Cygnelius und Nummius Aemilianus Dexter (Chastagnol 1965: 289-290) hatten hohe Verwaltungsposten inne.

D. Fernández Galiano (1983: 411-430) weist auf den starken Einfluss der Mosaiken des Orients am Ende der Antike auf einige hispanische hin. Diese Einflüsse sind folgende: seit der Mitte des IV Jh. zeigt sich deutlicher Einfluss auf hispanische Mosaiken. Er umfasst die Technik und neue Entwicklungen, neue Beiträge und neue Betrachtungsweisen der figürlichen Thematik, neue Kompositionsschemen, unveröffentlichte geometrische Motive und verschiedene Behandlungsarten schon vorhandener. Die orientalischen Einflüsse können zwei Ursachen haben: die Ankunft orientalischer Künstler, die in Hispanien arbeiteten, oder das Erscheinen von *copy-books*.

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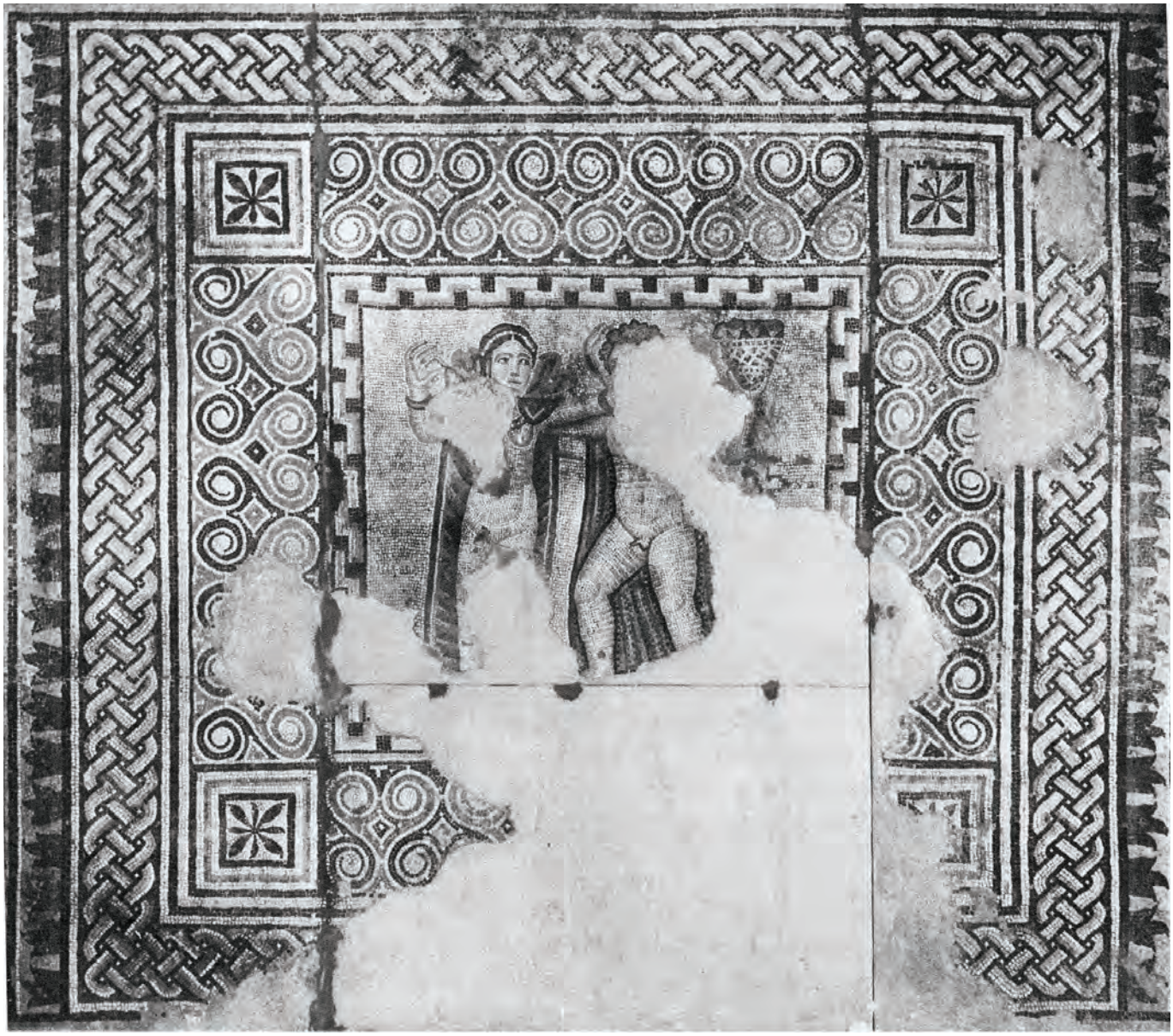

Abbildung 1
Mosaik mit Eros und Psyche

Zwei Motive mit griechischen Mythen zeigen die Mosaiken aus Fraga (Huesca), aus der zweiten Hälfte des IV. Jh. Der Künstler wurde vermutlich im "Zentrum der Mosaiken" des Orients ausgebildet, in dem der Einfluss der hellenischtischen Welt sehr stark war bis zum Anfang des IV. Jh.; er dauerte sogar bis zum Anfang des VIII. Jh. Diese Mosaiken stellen Eros und Psyche dar (Abb. 1) und Eros und Venus (Abb. 2). Die rein malerischen Szenen, der Kanon der Gestalten und die Starrheit ihrer Tátigkeiten führen uns zu den Mosaiken von Antiochia des IV. Jh. und zu denen von Syrien. Die geometrsichen und pflanzlichen Motive erinnern uns an diese Gebiete.

Es erscheinen neue Techniken auf den hispanischen Mosaiken, seit der Mitte des IV. Jh., wie die Anordnung der Mosaiksteinchen in Fächerform für ein Untergrund mit Figuren ab der zweiten Hälfte des IV. Jh. bis zum V. Jh. Diese Technik erscheint auf Mosaiken in Antiochia und in Kilikien im V. Jh.

Auf einem Mosaik der Villa Daragoleja (Granada), aus der Spätantike, erscheint das Thema zweier gegenüberstehender Truthähne auf einem Krug (Abb. 3), eine häufige Komposition auf den Mosaiken des Orients. Die Anordnung eines

Abbildung 2
Mosaik mit Eros und Psyche

Abbildung 3
Detail des Mosaiks von der Villa Daragoleja (Granada)

figürlichen Themas in einem geometrischen Feld, ohne Trennung noch Rahmen, ist charakteristisch bei den Mosaiken in Syrien, wie z.B. auf dem Mosaik von Phoenix aus Daphne, aus dem Ende des V. Jh. Es gibt auch Beispiele aus Antiochia und Apamea.

Die Mosaiken von Bellerophon und der Chimäre aus Puerta Oscura (Málaga) (Abb. 4) und aus Córdoba (Abb. 5) mit den vier Jahreszeiten, werden wegen ihres Stils mit den späten Mosaiken aus Griechenland unf Syrien-Palästina in Verbindung gesetzt. Einige Schemen reflektieren ein neues Empfinden, begründet in den Verflechtungen.

Die Mosaiken der Villa in Baños de Valdearados (Burgos) (Abb. 6) zeigen starken orientalischen Einfluss. Ein Mosaik aus dem V. Jh. ist mit acht spitz auslaufenden Schildern in Kreisform geschmückt (Abb. 7). Diese Dekoration ist weder in Hispanien noch im gesamten westlichen Mittelmeerraum zu finden, aber sie ist eine vereinfachte Form eines Mosaiks in der Basilika von Misis-Mopsuhestia (Kilikien) (Abb .8). Ein vereinfachtes Schema wiederholt sich auf einem Mosaik in Saloniki, in dem Palast des Galerius.

Abbildung 4
Mosaik mit Bellerophon und Chimäre aus Puerta Oscura (Málaga): Blázquez 1981: 77-78 Abb. 61

Ein Mosaik aus Almunia de Doña Godina (Zaragoza) (Abb. 9), aus dem V. Jh., zeigt ein in Hispanien und im Okzident unbekanntes Schema, aber es ist bekannt aus der Basilika von Ermione (Abb. 10) und aus Betlehem (Abb. 11).

Das Schema des Dulcitius-Mosaiks (Abb. 12), das aus einem zentralen Kreis besteht, der von acht kleinen umgeben ist, die unter sich und mit den inneren Kreisen verflochten sind, steht in Beziehung zu orientalischen und Beispielen aus Italica aus dem V. und VI. Jh. Es erscheint im Odeus in Saloniki und im Palast des Galerius, ähnlich und identisch in der Kirche con Herbet-Muqa, aus den Jahren 378 und 385. Die italischen Mosaiken (Basilika von Santa Maria delle Grazie in Grado, VI. Jh., die Basilika Santa Eufemia, zwischen 571-586, und die Basilika von Canzian d'Isonzo), aus der zweiten Hälfte des V. Jh., etc., sind später entstanden als in El Ramalet, am Ende des IV. oder Anfang des V. Jh.

Eine Tendenz zur Verminderung der Figuren tritt auf den Mosaiken ein und wird abgelöst durch eine vermehrte Entwicklung geometrischer Elemente, und allegorische Darstellungen, von denen später gesprochen wird, bestätigen den starken Einfluss orientalischer Mosaiken auf die hispanischen.

Es erscheinen nun neue geometrische Themen auf den hispanischen Mosaiken. Die Blumenrahmen mit Göttergestalten schmücken die Mosaiken der Villa von Fraga und sind praktisch einmalig in Hispanien, aber zahlreich in Syrien-Palästina.

In der Spätantike gibt es überaus zahlreiche Mosaiken, geschmückt mit geometrischn Themen (Fernández Castro-Blázquez 1982: 61-75, Abb. 27-42). Es genügt an einige Beispiele zu erinnern: alle sechzehn Mosaiken (Blázquez-Mezquiriz 1985: 31-52, Abb. 19-32), ausser einem, in der Villa von Rielves in Toledo; in der Villa von Lieden in Navarra, ausser einem bacchantischen und einem mit Vögeln und kantharoi; ebenso die Mosaiken der Villa in Villafranca (Blázquez-Mezquiriz 1985: 74-84, Abb. 45-49) und auch in Navarra; alle Mosaiken, ausser zwei, mit den Büsten der Abundantia, in Cuevas de Soria (Fernández Castro 1983, in Blázquez-Ortego 1983: 53-79, Abb. 6-22, 25); in

Abbildung 5
Mosaik mit Bellerophon und Chimäre aus Córdoba: Blázquez 1981: 36-38 Abb. 22

Quintanares (Blázquez-Ortego 1983: 16-38, Abb. 1-12, 26-36) und Santervás del Burgo (Blázquez-Ortego 1983: 40-49, Abb. 13-22); in der Villa von Almenara de Adaja (Neira-Mañanes 1988: 16-29, Abb. 1-12, 25-31, Fig. 2-4); in Valladolid, ausser zwei Mosaiken, eins mit Fischen und das andere mit der Toilette von Pegasus; auch in der Villa del Prado (Neira-Mañanes 1988: 53-62, Abb. 18-24, 37-40, Fig. 8-10), ausser einem Emblem mit Diana. Alle diese Mosaiken, geschmückt mit geometrischen Themen, stammen aus der späten Kaiserzeit.

Die vier Efeublätter auf dem Mosaik der Villa in Baños de Valdearados wiederholen sich in Antiochia, Soria, Jericho, Gaza, Gerasa und Saloniki. Die in Kreisen gebildeten Bänder, eines über das andere, sind im Okzident unbekannt, aber dagegen häufig im Orient zu finden, z.B. in den Basiliken in Khalde, im Libanon und in Nea Paphos, in Zypern. Die Dekoration zweier parallelen, ineinanderverschlungenen Stäbe mit einer wellenförmigen Linie, in der Villa von Albadalejo (Ciudad Real), ohne Parallelen im Okzident, aber wohl bekannt auf Mosaiken in Griechenland, wie in den Basiliken von Ermione, von Theben und Ephesos.

D. Fernández Galiano denkt an die Anwesenheit orientalischer Künstler in Hispanien, ausgebildet in den Werkstätten des Orients.

Personifizierte Allegorien auf hispanischen Mosaiken

Es ist ein dekoratives Motiv, das mit Sicherheit aus dem Orient kam. Das Thema ist von G. López Monteagudo (1997: 335-361) gründlich studiert worden. Die Personifizierungen sind folgende:

Auf den Mosaiken des Orients wurden häufig abstrakte Ideen mit allegorischen Bildern gezeigt, hauptsächlich die Tugenden in Verbindung mit der politischen Macht, und erhielten Kultbedeutung. Es gab viele allegorische Darstellungen mit abstrakten Ideen, die in Beziehung zum Kosmos standen (Aion, Annus, die Jahreszeiten, Aeternitas, Kronos, etc.), mit geographischen Orten (Mons, Gé, Thalassa, Caellus), mit der Kultur, wie den Museen, und mit Ideen und philosophischen Konzepten (Philosophie, Weisheit, Wohlergehen, Schönheit, Edelmut, Glückseligkeit, Gerechtigkeit, Anmut, etc.). Einige dieser abstrakten Ideen wurden zu Göttern erhoben.

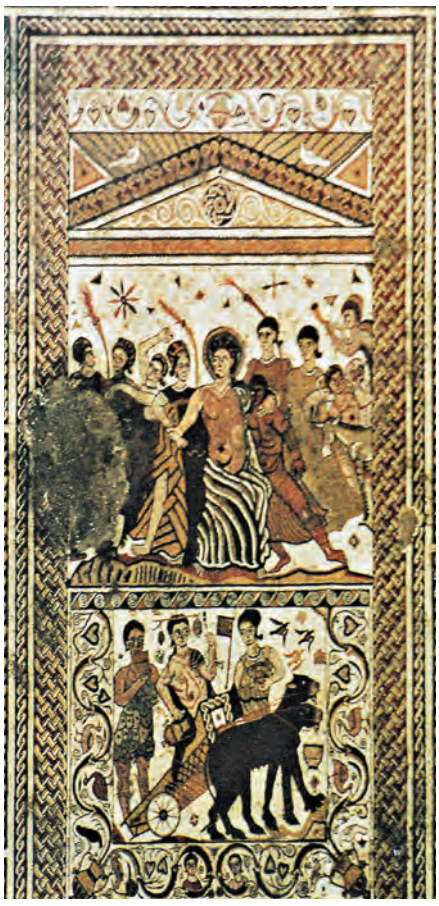

Abbildung 6
Mosaik von der Villa in Baños de Valdearados (Burgos): López Monteagudo-Rosario de Palol, 1998: 13-20 Abb. 1-5

Diese Tendenz der Personifikation wurzelt in der Götterlehre des Hesiod, und sie teilt sich in zwei grosse Kategorien: eine ist die Personifizierung der Abstraktionen; die zweite umfasst die Personifizierung der Elemente mir archaischen Religionen. Zeitweise vermischen sich beide Kategorien oder sie überdecken sich.

Die allegorischen Personifizierungen der Tugenden und Laster der Seele erscheinen bald in Griechenland, nicht nur in der Philosophie und Literatur, sondern auch in der Mythologie. Die Tendenz zur Abstraktion ist Zeuge in der Kunst und in der Dichtung Griechenlands ab dem VI. Jh. v.C., und motiviert die Erschaffung neuer mythischer Personen, entstanden aus den Konzepten. In der klassischen und hellenistischen Kunst entstehen Ilias und Odysee, die Weisheit und andere Abstraktionen.

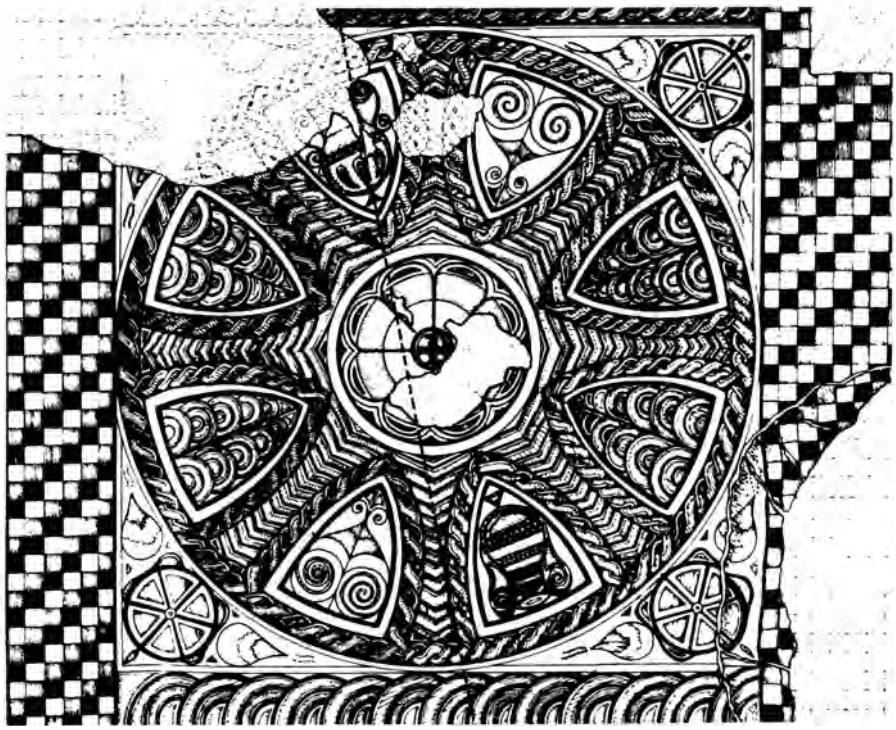

Abbildung 7

Die römische Kunst empfing dieses Erbe der Personifizierung abstrakter Ideen der griechischen Kunst auf vier grossen Gebieten: dem Mythos, der Kunst, der Poesie und dem Kult. In der byzantinischen Kunst waren die Personifizierungen der abstrakten Konzepte weit verbreitet. Die allegorischen Darstellungen der klassischen Kunst neigen mehr zu metaphysischen Wesenheiten und haben einen mehr unpersönlichen Charakter; in der byzantinischen Kunst dagegen einen konkreten Charakter, und sind konventioneller und abstrakter. Mit der Zeit verlieren die Personifizierungen der abstrakten Konzepte ihre Persönlichkeit und verwandeln sich in allgemeine Symbole; sie identifizieren sich durch die Inschriften, die sie begleiten.

In Griechenland und Rom war die Vergöttlichung der abstrakten Ideen in Beziehung zu den Tugenden der politischen Macht: Themis, Nike, Eirene, Eukleia, Eumonia in Griechenland, und Virtus, Victoria, Concordia, Pax und Fides in Rom. Die Griechen waren die ersten, welche die Abstraktionen zum Kult erhoben. Zuerst waren es Gottheiten, und danach Abstraktionen. Man denkt, dass jede Personifikation aus einer Gottheit entstand. Es bestehen Zweifel, ob zuerst die Abstraktion oder die Gottheit da war. Bei Homer und den archaischen Poeten erscheinen Abstraktion und Gottheit zusammen, und die Gottheit wird als Personifikation angesehen. Oft ist es schwierig eine Gottheit von einer allegorischen Gestalt zu unterscheiden. Die Personifizierungen sind weniger individualisiert als die Gottheiten und die anderen mythologischen Gestalten. Man glaubt, dass in der römischen Kunst dieser Prozess umgekehrt verlaufen ist. Die Gottheiten waren einfache Abstraktion und später verwandelten sie sich in Götter.

Am Ende des Hellenismus spielten die Tugenden eine wichtige Rolle im Orphizismus, im Neuplatonismus und im Gnostizismus, und sie waren die Erschaffer der grossen kosmologischen Schemen, und bildeten die vorhandene Einheit zwischen den Göttern, dem Universum und der Menschheit, wie die Stoiker annehmen. In Rom waren die Tugenden politische Begriffe, sie erhielten Kult durch den römischen Staat und die einzelnen Personen. Der Tugendkult ging von der

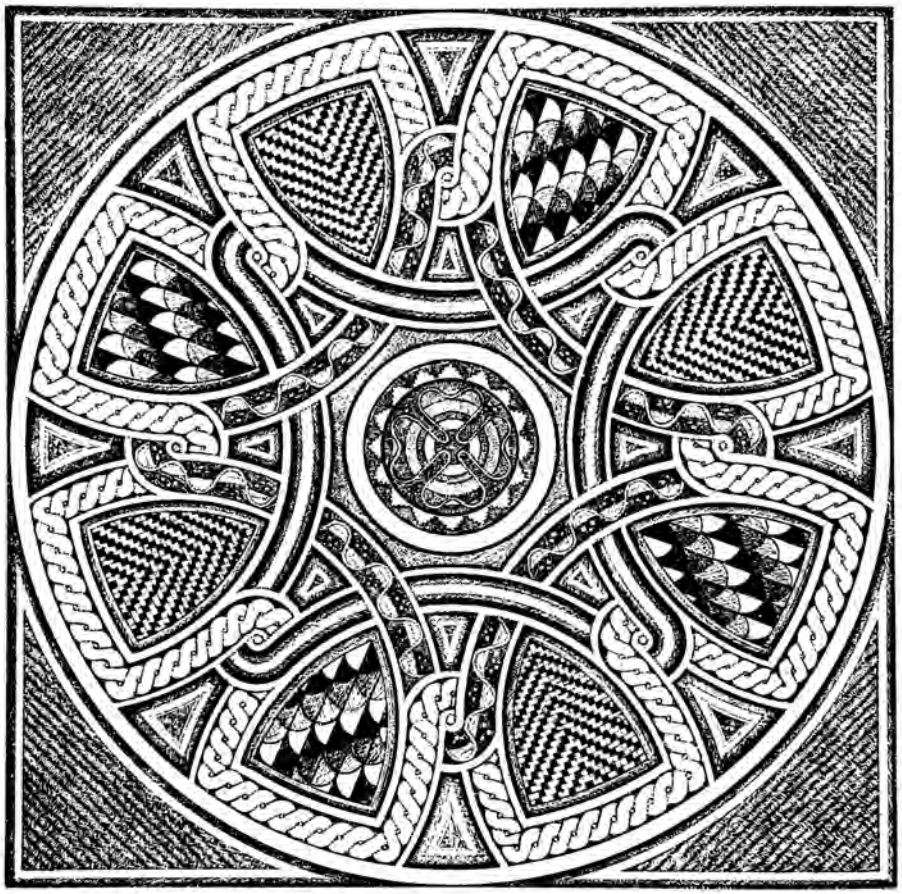

Abbildung 8
Mosaik in der Basilika von Misis-Mopsuhestia (Kilikien)

klassischen Epoche bis zum Ende der Antike und durch das Christentum bis zum Mittelalter in der Theologie und in der christlichen Ikonographie. Die Sophia verwandelte sich auf diese Weise in das Symbol der Weisheit Gottes. Diese Personifizierungen verallgemeinern sich erheblich nach Konstantin I.

Zum Studium der abstrakten Ideen und Allegorien auf hispanischen Mosaiken eignet sich am besten Syrien und besonders die Hauptstadt Antiochia, wo sich die abstrakten Ideen oder die Allegorien ausbreiteten, als zentrales Emblem dargestellt. Die Mehrheit der auf syrischen Mosaiken dargestellten Themen

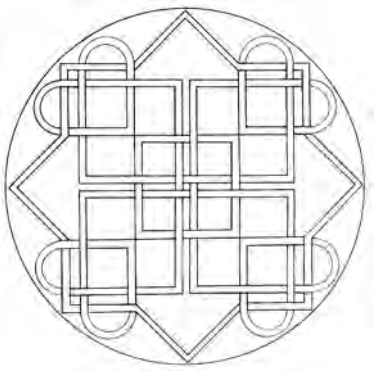

Abbildung 9
Detail des Mosaiks aus Almunia de Doña Godina (Zaragoza)

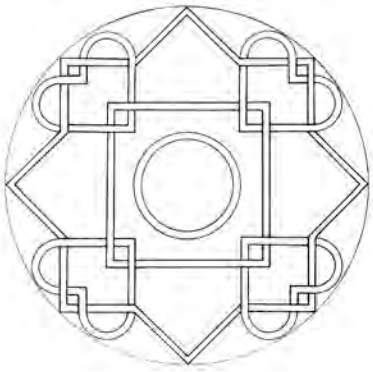

Abbildung 10
Detail des Mosaiks aus der Basilika von Ermione

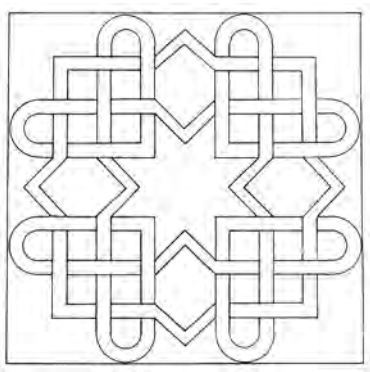

Abbildung 11
Detail des Mosaiks aus Betlehem

Abbildung 12
Das Dulcitius-Mosaik: Blázquez-Mezquiriz 1985: 63-69 Abb. 39-40

gehorchen der klassischen Tradition und beweisen das Überleben des Hellenismus bis in die späte Antike; hauptsächlich die symbolischen und abstrakten Darstellungen, die Mythen und die Bildnisse der Weisen und Philosophen. Die Abstraktionen auf den syrischen Mosaiken stehen in Beziehung zu den philosophischen oder auch religiösen Ideen aus den Anfängen des Hellenismus. Diese Allegorien sind: Ambrosia, Amerinnia, Ananeosis, Apolausis, Athanasia, Bios, Chresis, Dynamis, Eukarpia, Euphrasia, Euprepeia, Eutekneia, Evandria, Ktiosis, Megalopsychia, Philosophia, Sophia, Typhe. Zuerst ist der gesamte Körper dargestellt, begleitet von der Inschrift. Diese Allegorien stellen die Tugenden oder die philosophischen Konzpete dar. In Syrien beginnen die Darstellungen der abstrakten Ideen am Anfang des III. Jh. in Shahba Philippolis. Ab dem IV. Jh. allgemein auch in grossen Städten, wie Apamea und Antiocha, bedeutende Kulturzentren.

Das Mosaik von Shahba Philippolis mit den drei Grazien, zusammen mit den vier Jahreszeiten, gehört in die zweite Hälfte des III. Jh. Euphrasia, Symbol der Fröhlichkeit, befindet sich zwischen dem Frühling und dem Universum, und Pannuchis, eine Anspielung auf nächtliche Feste, zwischen dem Sommer und dem Herbst.

Euphrasia erscheint erneut auf einem Mosaik in Sarachanelasi, von einem Mann begleitet, auf ihrer rechten Schulter einen vollen Korb mit Früchten und in der linken Hand einen Hahn.

An das Ende des III. Jh. oder an den Anfang des folgenden gehört das Mosaik von Shahba Philippolis, mit Eutekneia, Symbol der Fruchtbarkeit, auf einem Thron sitzend, zwischen Dikaiosyne, Allegorie der Justiz und Philosophie.

Abbildung 13
Mosaik von der Villa Los Quintanares:
Blázquez-Ortego 1983: 16-19 Abb. 1

Auf dem Mosaik der Hochzeit des Ares und Aphrodite in Shahba Phillipopolis, aus dem zweiten Viertel des IV. Jh., begleiten das Ehepaar Euprepeia, der Wohlstand, Charis, die Anmut, und Skope. Euprepeia in Gesellschaft von Eirene und dem Frieden, befinden sich auf einem Mosaik aus dem IV. Jh., im Museum von Antalya, als weibliche Büsten in inneren Kreisen dargestellt. Auf einem Mosaik in Byblos, aus der Mitte des III. Jh., erscheint Charis, die Perfektion; rechts befindet sich Eros oder Theros. Akmé erscheint hier zum letzten Mal.

Akmé ist nur einmal in Nea Paphos, Zypern, im Haus des Dionysyos, dargestellt, in Begleitung des Weingottes und des Ikarus. Die Szene ist eine Allegorie der Glückseligkeit, die den mässigen Weingenuss empfiehlt.

Auf einem Mosaik in Apamea, mit dem Thema das Urteil der Nereiden, nehmen Peitho, die Überzeugung, die Krisis, das Urteil, und die Apotheose teil. Dieses Mosaik und verschiedene andere aus der zweiten Hälfte des IV. Jh. erscheinen vermutlich in der von Julianus gegründeten neoplatonischen Schule. Die Krisis ist aus früherer Zeit bekannt, aus der zweiten Hälfte des III. Jh., mit dem gleichen Thema in Palmyra und in dem Haus des Aion von Nea Paphos, auch mit dem Urteil der Nereiden, in Begleitung von Kairos, der Gelegenheit; das Mosaik stammt aus der zweiten Hälfte des IV. Jh. Auf Mosaiken aus Shahba Philippopolis erscheinen weitere Allegorien mit symbolischem Inhalt in mythologischen Szenen: Pothos, der Wunsch, auf der Hochzeit von Dionysos und Ariadne, aus dem zweiten Viertel des IV. Jh., bezugnehmend auf die

Abbildung 14
Mosaik von der Villa Santervás del Burgo, Soria: Blázquez-Ortego 1983: 42-44
Abb. 18

Erzählung von Nonnos (XLVII.443); Theros, die Fruchtbarkeit, und Plutos, der Reichtum, bei der Ehrung der Gottheiten der Erde, Agros und Opora, oder bei der Hochzeit von Dionysos und Ariadne, aus der Mitte des III. Jh., zur Zeit im Museum in Souweida. Die Konzeptionen werden durch die Gestalten der Götter oder ihrer Bezugspersonen dargestellt, wie Dionysos und Ariadne; die Allegorien von Agros und Opora, und Eros und Psyche; Eros, der Wunsch, die Harmonie, Beschützer des sozialen Lebens in den städtischen Einrichtungen; die Wesiheit, symbolisiert durch Odysseus, Silen oder Herkules, etc.

Auf Mosaiken in Nea Paphos wird der philosophische Inhalt der Komposition verstärkt, wie zum Beispiel auf den Mosaiken im Haus des Aion, mit Darstellungen der Theogonia, Symbol der Geburt der Götter, von Nektar und Ambrosia, die Unsterblichkeit verleihen, und in in der Villa von These, mit der Darstellung der Ambrosia im ersten Bad des Achill, aus dem IV. Jh. Ambrosia weist darauf hin, das Achill seit seiner Geburt göttlich ist.

In der Villa von Homs erschien ein Mosaik aus dem III. Jh. in vier Tafeln aufgeteilt, welche graphisch verschiedene Episoden aus dem Leben des Herkules beschreiben. Sie beginnen mit der Kindheit und enden mit der Apotheose. Auf der ersten Tafel erwürgt Herkules als Kind die Schlangen. Er wird von seiner Mutter Almene und seinem Bruder Ifikles begleitet. Amphytrion und die Therapenides sind in dieser Szene anwesend. Auf der zweiten Tafel sitzt Alkmene nachdenklich in einem Sessel. Hinter ihr steht Agucia, die Unwissenheit. In der letzten Szene thront Zeus Olympos und empfängt Herkules in Begleitung der Athanasia, der Unsterblichkeit, und die Apotheose erreicht für den Helden ihren

Abbildung 15
Mosaik aus Emerita Augusta: Blanco 1976: 35-38 Abb. 28-39 Fig. 1; Quet 1981; Dunbabin 1999: 147-150; Lancha 1997: 223-230

Höhepunkt. Ab dem Ende des III. Jh. zeigt sich die Tendenz Personifizierungen der abstrakten Ideen und die symbolischen Interpretationen der Mythen im gesamten Orient und in Syrien darzustellen. Die Hypothese wurde vorgeschlagen, dass die Mosaiken mit Inschriften pädagogischen Zwecken dienen, und die ohne Legenden einen allegorischen Sinn in Verbindung mit philosopischen Ideen haben, und sich an die kultivierte Menschheit wenden. So bilden die Mosaiken mit Odysseus und dem Therapenides aus Apmea ein philosophisches Manifest hellenistischer Werte und eine Ablehnung der vom Christentum gebrachten Ideen. Diese beiden Mosaiken und zwei Nereiden, der gleichen Herkunft, feiern, nach Balty, höchste Autorität syrischer Mosaiken, den Sieg der Weisheit, der der Seele des Weisen erlaubt, die Unsterbichkeit zu erreichen. M.H. Quet schlägt als Interpretation der Allegorie vor, dass jeder Mensch Odysseus nachahmen kann, Model der menschlichen Kondition, und die Kenntnisse (Therapenides) erreichen und zur Philosophie (Penelope) Zutritt erlangen, und von dort die Weisheit erreichen könnte.

Auf den Mosaiken in Antiochia ist eine grosse Zahl allegorischer Gestalten. Die Personifizierung der abstrakten Ideen auf den Mosaiken in Antiochia steht in

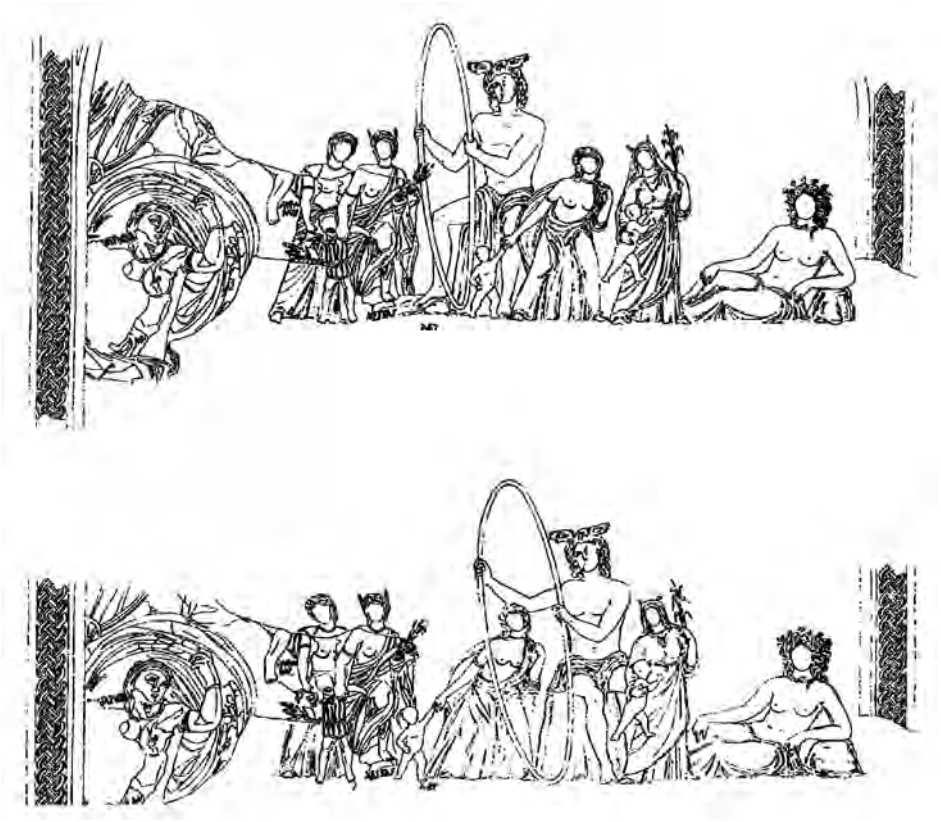

Abbildung 16
Nach der Rekonstruktion von M.L. Musso

Beziehung zu den philosophischen Konzpeten. Amerinnia, der Friede der Toten, befindet sich in einem Grab. Er ist dargestellt wie eine thronende Matrone. Amerinnia ist dem lateinischen Ausdruck Seguritas gleichwertig, eine vergöttlichte Personifizierung der Sicherheit des Staates. Diese Bennenung passt nicht gut in die der Mosaiken von Antiochia, sondern, wie Tryphe, Vergnügen und Musse, Bios, das Leben, im House of the Drunken Dionysos, stehen in Beziehung mit der gefälligen Lebensführung, im Gegensatz zu den von der Philosophie gepredigten Tugenden. Tryphe wird als sitzende Matrone dargestellt, und Bios auf dem Boden ruhend. Sie ist auf einem Mosaik als Frauenbüste im House of the Peddler of Erotes dargestellt, aus der Mitte des III. Jh. Tryphe ist im House of Menander als Büste dargestellt. Chresis, die Verwendung des Reichtums, befindet sich als sitzende Matrone mit cornucopia im House of the Triumph of Dionysos. Ktisis, Besitz oder Stiftung, ist auf einem Mosaik in Antiochia sehr gut abgebildet. Im Haus mit ihrem Nahmen, befindet sie sich als weibliche Büste in einem Kreis, aus der Zeit etwas vor 500. Im Haus der Gé und der Vier Jahreszeiten wiederholt sich die weibliche Büste gegenüber der Ktisis.

Im House of the Sea Goddes, befinden sich die Büsten der Ktisis, der Anneosis (Erneurung), der Evadria (Männlichkeit oder Reife) und der Dinamis (Charakterstärke oder kreative Macht). Sie könnten die Personifizierung der Vier Jahreszeiten sein, oder die Lebensabschnitte des Mannes. Die vier und zwei verlorene Figuren wiederholen sich in der Villa Constantiniana. D. Levi stellt klar, dass in dieser Villa die Personifizierung der abstrakten Ideen den gleichen Charakter hat wie die Allegorien aus byzantinischer Zeit.

Ktisis erscheint häufig auf den Mosaiken des Orients und in Zypern. Ihre Büste befindet sich in den Thermen im Haus von Eustolios, aus dem IV. Jh. Ktisis leitet sich von Dynamis ab und ist ein philosophischer Terminus der stoischen Philosophie, mit der Bedeutung schöpferischer Macht. Auch Dynamis bezieht

Abbildung 17
Mosaik aus Gaza

sich auf die kosmischen Anfänge. Sophia ist eine der am häufigsten dargestellten Allegorien in der byzantinischen Welt. In einer byzantinischen Kirche in Petra, wird Sophia von den personifizierten Jahreszeiten begleitet. Gé, Thalassa, Evandria stehen in Beziehung zu Dynamis, eine bewunderte Tugend der Stoiker. Die drei Abstraktionen Ktisis, Dynamis und Evandris stehen unter sisch in Bezug, vielleicht auch Ananeosis, die Erneurung, die in der Halle von Philia als gekrönte Büste mit Früchten dargestellt ist. Sie stammt aus dem letzten Viertel des V. Jh. D. Levi nimmt an, dass das Mosaik von Ananeosis, von 450-457, eine heidnische Version des synkretischen Konzeptes aus dem Ende der Antike ist. Sie hat die gleiche biblische Form, die auf dem Mosaik von Philia steht. Diese Personifikationen wurden vom Christentum übernommen. Agora, der Überfluss, und Eukarpia, die Fruchtbarkeit, befinden sich bei einem Begräbnisbankett, in

Abbildung 18
Mosaik von Shahhba Philippopolis

Geselsschaft der Jahreszeiten, als weibliche Büsten in dem Grab der Mnemosyne, aus den Jahren 350-400. Im oberen Teil erwähnen zwei Inschriften Mnemosyne, das Gedächtnis, und die Aioxia, das Bankett. Im Bad der Apolausis befinden sich im innern der Medaillons zwei Figuren mit ihren Schriften; sie stellen Soteria, das Wohlergehen, und Apolausis, das Vergnügen, dar. Beide Damen personifizieren abstrakte Ideen. Es sind Anspielungen auf die Beschreibungen, die Libanis über die Quellen von Antiochia macht. Apolausis ist erneut in einer Blumenkrone auf einem Mosaik von Argos dargestellt, aus der Zeit um 500, und auf einem zweiten Mosaik unbekannter Herkunft, möglicherweise aus dem Libanon, aus dem VI. Jh. Beide gleichen dem erwähnten Mosaik von Byblos, mit Akme und Charis. Apolausis ist sitzend im ganzen dargestellt, mit einer Blumenkrone geschmückt. Ihre linke Hand liegt auf der Schulter Plutos, dem Reichtum. Im Bad D in Antiochia, befindet sich die Büste Gethosynas, mit ihren Inschriften. Dieses Mosaik datiert aus den Jahren 300-325. Die letzte Personifizierung der philosophischen Gedanken auf Mosaiken in Antiochia ist Megalopsychia, der Edelmut. Ihre Büste, in einem Medaillon, beherrscht ein Mosaik aus dem V. Jh. im Yakto Complex, mit Jagdszenen auf denen die Jäger mit Namen aus der griechischen Mythologie bennant sind: Adonis, Aktos, Meleagros, Tiresias, Hippolytos und Narziss, die auf die Grosszügigkeit des Grundbesitzers anspielen, der die Jagd veranstaltet.

Abbildung 19
Detail des Mosaiks aus Aranjuez, Madrid

Auf hispanischen und nordafrikanischen Mosaiken befinden sich zahlreiche Personifizierungen, die auf das Wetter oder den Kosmos anspielen, auf Aion, Annus, die Jahreszeiten, die Monate und die Musen. Die Personifikationen der

Abbildung 20
Mosaik aus Augusta Emerita

abstrakten Ideen auf hispanischen Mosaiken, ausser dem kosmogonischen in Augusta Emerita, tragen keine Inschriften. Sie werden nur durch ihre Attribute identifiziert. In der Villa Los Quintanares (Abb. 13), hält die weibliche Büste der Abundantia eine cornucopia, Symbol des Reichtums. Die Büste von Los Quintanares weist stilistische Parallelen mit den Büsten von Soteria, Apolausis, Ananeosis und Megalopsychia auf, Mosaiken aus Antiochia. Chresis, in dem erwähnten House of the Triumph of Dionysos, hält auch eine cornucopia. Eine weitere Büste der Abundantia, auch mit cornucopia, befindet sich auf einem Emblem der Villa Santervás del Burgo, Soria, aus dem IV. Jh. (Abb. 14).

Die Abundantia, als sitzende Matrone, ist vermutlich auch auf dem Mosaik in Lusitania in einer Villa von Rabaçal, aus dem IV. Jh. Auf einem Mosaik der Villa von Tarazona de la Mancha, Albacete, ist Virtus oder Salus zu lesen, begleitet von einer Menade.

Abbildung 21
Mosaik aus Cabezón de Pisuerga: Neira-Mañanes 1988: 36-46 Abb. 13-17 35-36; Lancha 1997: 184-187

In einer zweiten Arbeit hat G. López Monteagudo (2000: 35-153) die Darstellungen der Zeit auf den römischen Mosaiken Hispaniens und die im Norden Afrikas studiert. Aion befindet sich auf wenigen hispanischen Mosaiken, im Gegensatz zu Nordafrika, wo er häufig dargestellt ist, wie z.B in Haidra, Hippo Regius, Karthago, Dougga, El Djem und Hippona.

Auf hispanischen Mosaiken ist er auf dem kosmogonischen in Emerita Augusta (Abb. 15), aus antoninischer Zeit, zu finden. Genauer gesagt, gab es zwei Skulpturen des Aion in dem Mithras-Heiligtum in Augusta Emerita, aus der Mitte des II. Jh.

Die Inschrift Aet(ernitas) unter der Gestalt eines nackten Jünglings, die Anwesenheit der Jahreszeiten, Aestas und Auntumnus, nach der Rekonstruktion von M.L. Musso (Abb. 16), sind dabei den Tierkreis zu durchschreiten, und lassen diesen als Aion erkennen.

Auf dem kosmogonischen Mosaik gibt es Darstellungen der Elemente und geographischer Orte. Diesem Mosaik wird ein mithraischer Charakter (Blázquez 1993: 380-385) zugesprochen, durch die Darstellung von Himmel, Erde und Luft. Die Figuren sind mit Inschriften versehen; dadurch ist die Identifizierung gesichert. Nach der Interpretation von A. Blanco, wird die Komposition von einer Triade angeführt, bestehend aus der Zeit (Saeculum) und seinen Söhnen, dem Himmel (Caelum) und dem Chaos. In ihrer Gesellschaft befinden sich die Titanen, Söhne des Himmels und der Erde: der Pol (Polum), der Donner (Tonitrum) und, um sie herum, die grössten Gestirne: die Sonne (Oriens), der Mond (Occasus), die Winde (Boreas, Zephyrus, Notus und Eurus) und die Wolken (Nubs und Nebula).

In der Mitte des Bildes, das am meisten zerstört ist, sieht man die Natur (Natura), die Jahreszeiten (Aestas, Autumnus), einen Berg (Mons), möglicherweise der

Abbildung 22
Mosaik der Villa von Hinojal: Blanco 1976: 52 Abb. 95-96

Olymp; er hält in seinen Armen ein schlafendes Mädchen, mit dem Namen Nix (der Schnee). Inmittten der gennanten Figuren befindet sich eine männliche Person mit Flügeln an den Schläfen. Sein Name beginnt mit den Buchstaben AET und entspricht Aether oder Aeternitas, gleichwertig mit dem griechischen Aion.

Auf dem inneren Drittel, auf grünem und blauem Grund, herrschen die Personifizierungen des Wassers vor: die grossen Flüsse der zivilisierten Welt, der Nil (Nilus) und der Euphrat (Euphrates); der Hafen (Portus), vielleicht der Portus Ostiensis von Rom, und sein Leuchtturm (Pharus), welcher auch der von Alexandria sein könnte, und schliesslich der Ozean (Oceanus), das Meer (Pontus), der Wind, welcher die Schiffahrt begünstigt (Tranquilitas), die Navigation (Navigia) und die Früchte der Erde (Copiae), welche die Schiffe von einem Hafen zum andern transportieren. Diese Beschreibung des Firmamentes und der Welt, stammt aus der Beschreibung des Achillesschildes durch Homer (Il. XVIII. 483-489), und der von Euripides im Ion (1141 und folgende).

Johannes aus Gaza (Abb. 17), zu justinianischer Zeit, beschreibt ein Bild oder Mosaik aus Gaza oder Antiochia, das sich in Winterthermen befand, und das er „kosmisches Bild“ nennt. Es befand sich auf einer Wand oder in einem Gewölbe. Das Datum dieser Komposition ist ungewiss. Die Mehrzahl dieser Figuren waren mit Wörtern zur Identifizierung versehen. Es sind folgende: Kreuz. Uran. Gé mit Karpoi und Angelos. Helios mit Atlas. Areté und Sophia. Thálatta mit Angelos. Okéanos mit Bythós und Angelos. Aion. Hésperos. Cheimón. Hámaxa. Bronté und Angelos. Cheimón mit Ombroi. Astrapé und Angelos. Selene. Iris. Notos. Euros. Zéphyros. Boreas. Phoenix. Euphóriai. Eos mit zwölf Horai. Orthros. Anatolé. Nyx. Vier Horai Aithér mit Kosmos unf Physis.

Abbildung 23
Mosaik aus Augusta Emerita: Nogales 2000: 65 Abb. XIII; Álvarez-Nogales 2005: 1228 Fig. 1

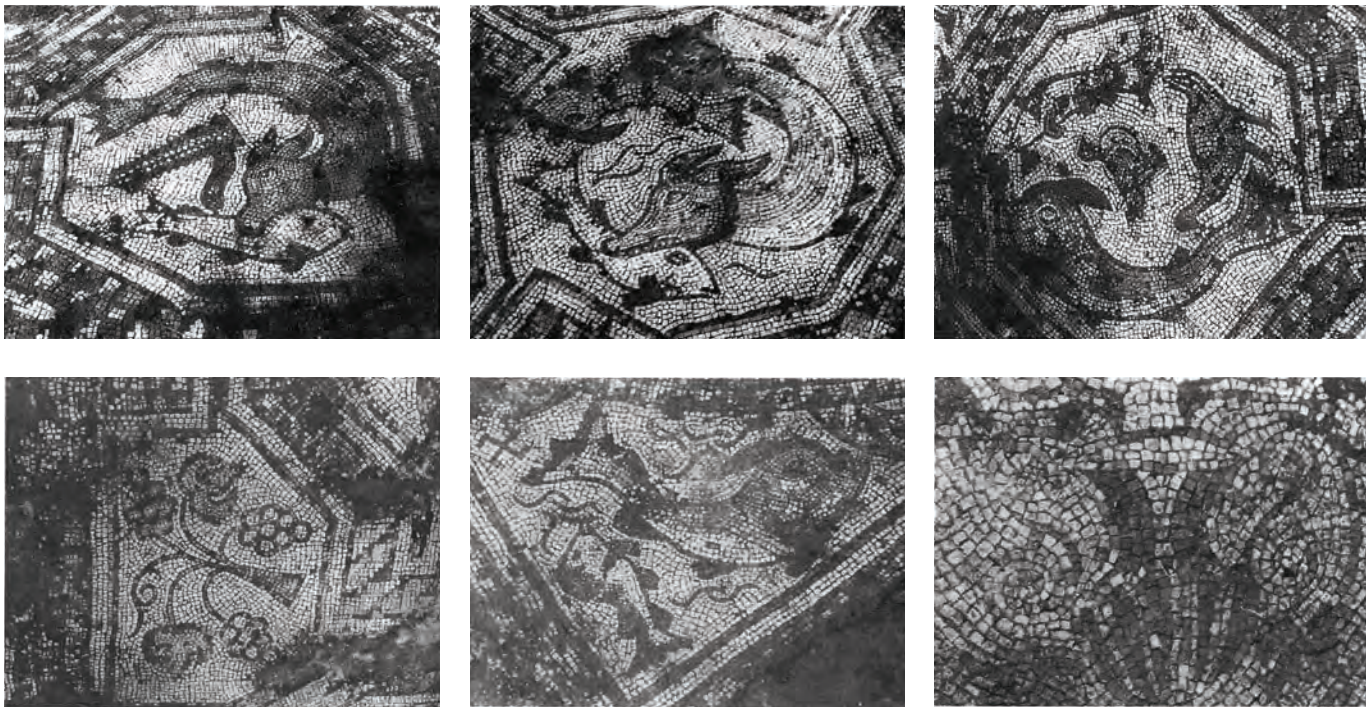

Abbildung 24
Mosaik von der Villa von San Martín de Losa (Burgos): López Monteagudo-Navarro 1998: 31 Abb. 17-18

Abbildung 25
Mosaik in Cardeñajimeno, Burgos: López Monteagudo-Navarro 1998: 27 Abb. 9

Die Übereinstimmung des kosmogonischen Mosaikes aus Augusta Emerita mit der von Johannes von Gaza geschriebenen Komposition, ist erstaunlich, und ebenso mit der Gesamtheit des syrischen Mosaikes von Shahhba Philippopolis (Abb. 18), aus der zweiten Hälfte des III. Jh. Zusammenfassend ergibt sich folgende Tabelle:

Mosaiken aus Merida	Johannes aus Gaza	Mosaiken von Chehba
Saeculum	Ouranos	
Caelum	Aither	
Nox (?)	Nyx	
(Ton)itrum	Bronté, Astrapé	
Nubs und Nebula	Cheimon. Ombroi	Drósoi
Notus	Nótos	Nótos
Zephyrus	Zéphyros	Zéphyros
Eurus	Eûros	Eûros
Boreas	Boréas	Boréas
Oriens	Anatolé	
Occasus	Seléne	
Polum Mons	Atlas	
Natura	Physis (in Gestalt eines Löwen, am Fuss des Kosmos)	
Autumnus Aestas, etc.	4 Horai	Tropai
Aet(ernitas)	Aión	Aión
Tellus (?)	Gaîa	Gê
Copiae	Karpoi	Karpoi
Oceanus	Okéanos	
Pontus	Thálatta	

Abbildung 26
Mosaik mit der Hochzeit von Gadmos und Harmonia: Fernández Galiano 1992: 162-177: Royo 1992: 148-161; Balty 2005: 1307-1323; Canto 1976: 293-338; Blázquez 2003: 45-142; Bowersock 1992

Die Beschreibung aus Shahba Philippopolis, nach J. Balty, erweckt die philosophischen Diskussionen der neuplatonischen Schule in der Zeit Plotins, bezüglich der Relation zwischen der absoluten Zeit, Aion, und der relativen Zeit, Chronos.

Das Mosaik in Augusta Emerita ist voller abstrakter Personifizierungen. K.M.D. Dunbabin glaubt, dass es zur malerischen Tradition aus dem II. und III. Jh. gehört. Der Künstler könnte Syrier gewesen sein, aber das Mosaik wurde in Hispanien angefertigt.

Ein vielfarbiges Emblem aus Aranjuez, Madrid (Abb. 19), zeigt die Büste eines mit einer Krone aus Früchten und Blättern gekrönten Jünglings. Er hält eine cornucopia. Diese Attribute sind für Aion und Annus bezeichnend. Die Krone aus Früchten und Blättern ist auf den Mosaiken von El Djem und von Volubilis zu finden, aus der Zeit der Severer und von Dougga, aus der ersten Hälfte des IV. Jh. Ein Jüngling mit cornucopia befindet sich auf den Mosaiken von El Djem, aus dem Ende der Antoninen Periode; in Hadra, aus dem Ende des III. Jh. oder dem Anfang des IV. Jh.; auf dem in Karthago und Hippo Regius, aus der ersten Hälfte des IV. Jh. Diese Büste ist eine abstrakte Personifizierung der Fruchtbarkeit.

Eine gekrönte weibliche Büste mit Weizenähren, Blumen und Früchten wurde als Aion oder Tellus ausgelegt, oder wie eine Personifizierung des Jahresgenius.

In diese Gruppe der Personifikationen der abstrakten Ideen gehören die Darstellungen der Musen, die in Hispanien auf den Mosaiken von Arróniz, Mérida,

Abbildung 27
Mosaik von La Illeta del Rei:
Schlunk-Hausduld 1978: 184-186

Italica, Torre de Palma, Moncada und Montemayor (Blázquez 1993: 411-412) abgebildet sind.

Auf den Mosaiken in Hispanien fehlen aber die Personifizierungen der abstrakten Ideen, die in Beziehung zu der Philosophie und dem Neuplatonismus stehen, und im allgemeinen, mit den Konzepten, die auf den Mosaiken des Orients häufig zu finden sind und vorher erwähnt wurden. Im Orient waren diese Ideen im Umlauf, aber nicht im Okzident (Fontaine 1980: 241-330; Blázquez 1998: 463-490; Id. 1989: 307-322: Id. 1993: 99, 137: Id. 2004: 179-185). Ohne Zweifel war die mythologische Kultur bei der besitzenden Klasse in Hispanien erstaunlich. Einige Mythen sind äusserst selten und auf den Mosaiken der späten Kaiserzeit kaum dokumentiert (Blázquez 1993: 275-317, 386-444).

Im IV. Jh. hatte das Christentum nur geringe Fortschritte gemacht, ausser in dem Tal der Betis; das übrige Land war gröstenteils heidnisch.

Weitere hispanische Mosaiken mit vermutlich orientalischem Einfluss

Eine bedeutende Gruppe hispanischer Mosaiken haben auch vermutlich orientalischen Einfluss, da die Mosaikkünstler aus dem Orient kamen, oder copybooks hatten, oder von hispanischen Künstlern stammten, die in orientalischen Werkstätten ausgebildet waren.

Das Mosaik in Augusta Emerita mit den Sieben Weisen aus Griechenland (Älvarez 1990: 69-79, Abb. 32-38: Lancha 1997: 184-187), die im unteren Teil die griechischen Namen Agamemnon, Achill, Odysseus und Briseida aufweisen, wurde vermutlich von einem orientalischen Künstler hergestellt, der in Augusta Emerita (Abb. 20) arbeitete.

Auf einem Mosaik aus Cabezón de Pisuerga (Abb. 21) in Valladolid, mit dem Kampf zweier Paare griechischer Krieger, eines mit griechischen Buchstaben, das andere in Latein, bewahren nur die Endungen der Verse aus den Liedern der Iliade (VI.120; XX.159; XXIII.814). Sie erwähnen den Kampf zwischen Glaukos und Diomedes, Aienas und Achill, una Ayax und Diomedes. Mit höchster Wahrscheinlichkeit handelt es sich um das erste Paar. Die zweite Inschrift in Latein, bezieht sich auf das zweite Paar und sagt aus, dass die Krieger nach dem Kampf sich die Hände reichten und die Waffen austauschten, was auch in der Iliade erwähnt wird (IV.119-236). Die Krieger sind Glaukos und Diomedes. Der herstellende Künstler stammte vermutlich aus dem Orient.

In der Villa von Hinojal (Abb. 22), nahe Augusta Emerita, sticht ein Jäger mit einer Lanze auf ein Wildschwein. Eine ähnliche Szene ist auf einem Mosaik von Antiochia dargestellt, das Haus der Megalopsychia (Levi 1947: Abb LXXVII b), mit einer Aufschrift die zeigt, dass es sich um Adonis handelt, der ein Wildschwein jagt. Der Künstler könnte aus dem Orient stammen.

Auf einem in Augusta Emerita gefundenen Bild, sticht eine Person mit einer Lanze auf eine Löwin (Abb. 23). Eine ähnliche Parallele, sogar in Details, befindet sich auf einem Mosaik mit einer ähnlichen Szene in dem Grossen Palast von Istambul (Cimok 1997: 12-13; Blázquez-García Gelabert 1989: 29-37; Jobst 2005: 1083-1011; Parrish 2005: 1103-1117).

Auf einem Mosaik der Villa von San Martín de Losa (Burgos), sind die achteckigen Felder mit Fischen, Delphinen, Seeungeheuern und Vögeln geschmückt. Sie sind einzeln oder bilden Paare, oder fressen sich auf (Abb. 24). Ein dekoratives Motiv, das auch auf einem Mosaik von Antiochia dargestellt ist; ein Mosaik das „The striding Lion“ (Levi 1947: 321-323, Abb. LXXIV a) gennant wird, innerhalb rechteckiger Tafeln aus der späten zweiten Hälfte des V. Jh. Die gleichen Themen und aus späterer Zeit, gegen 575, wiederholen sich in Madaba, Jordanien (Piccirillo 2002: 153).

Auf einem Mosaik in Cardeñajimeno, Burgos (Abb. 25), ist die äussere Einfassung mit Köpfen von bärtigen, alten Männern geschmückt, eine Dekoration die dem Geschmack des Orients auf Mosaiken entsprach, wie in der Villa Constantiniana in Antiochia (Levi 1947: 16-21, Abb. I b), in Bichapour und Shahba Philippopolis (Balty 1981: 396-404, Abb. XXXIV, 12) und in der Kirche von Al-Khadir in Jordanien (Piccirillo 1993: 131). Der Wechsel von menschlichen Köpfen und von Tieren wird in der Villa des Falkners in Argos und in Hagios Taxiarchis belegt, aus dem Anfang des VI. Jh. (Akerstrion-Hougen 1974: 59-69, Abb. I-V, X) Alle diese Mosaiken sind aus der Spätantike.

Das Mosaik mit den Hochzeiten con Gadmos und Harmonia (Abb. 26), in Begleitung der Götter des Olymps, ist unter den hispanischen Mosaiken einzigartig, auch in der hohen Qualität seines Stiles. Vermutlich war der Künstler ein Syrier.

Einige orientalische Künstler fertigten in Hispanien Mosaike an und hinterliessen ihre Namen. Seleucus und Anthus stellten in Augusta Emerita auf den Mosaiken am Ende des III Jh. Dichter und Musen dar, und in der Umrandung, den Kampf der Pygmäen und der Kraniche (Blanco 1978: 30-32, Abb. 12-19).

Auf einem Mosaik mit dionysischem Thema in Andelos, Navarra, liest man nur die Endung des Künstlernamens in griechischer Sprache (Mezquíriz 1987: 59-62). Diese orientalischen Künstler arbeiteten an den Stätten, wo die Mosaiken sich befanden. Die Mosaiken der Sieben Weisen aus Griechenland und die beiden Krieger aus Cabezón del Pisuerga, sind Arbeiten orientalischer Künstler, die In Hispanien lebten.

Die Namen der Künstler, welche die Mosaiken in Hispanien anfertigten, sind ausser zweien, keine griechischen (Lancha 1984: 46-61; Id. 2000: 130; Id. 1997: 167, Abb. LXX; Blázquez 1996: 49, Fig. 8), sondern scheinen afrikanischen Ursprungs zu sein.

Orientalischer Einfluss auf den Balearen

Abbildung 28
Detail des Mosaiks von Es Formás de Torello: Schlunk-Hausduld 1978: 182-184 Abb. 78-79

Verschiedene Basiliken auf den Balearen (Blázquez 1978: 163-177), wie Son Bou, La Illeta del Rei (Abb. 27), Es Formás de Torello (Abb. 28) und Puerto de Fornelló, weisen jüdischen Einfluss des Orients auf. Die Fussböden der Basilika von La Illeta del Rei ähneln denen von Es Formás de Torello, die mit dem Mosaik der Synagoge von Hamman Lif verglichen wurden. Die längliche Halle des Tempels von Es Formás de Torello zeigt einige Dekorationsmotive ähnlich mit denen des Diaconicon des Tempels der Propylala, in Gerasa. Man hat Ähnlichkeiten zwischen den beiden Böden in Menorca und denen der Synagoge von Palästina festgestellt. Die Mosaiken auf Menorca geben ein Beispiel des frühchristlichen Einflusses des Westens.

Die Mosaiken von Es Formás de Torello und von La Illeta del Rei sind mit zwei symmetrisch angeordneten Löwen auf dem Lebensbaum geschmückt, wie in der Synagoge von Ma'on (Nirim), nahe Gaza, aus der Zeit um 238, wo die beiden gegenüberstehenden Löwen die *menorah* umgehen. Ähnliche, sich gegenüberstehende Löwen, erscheinen in der Synagoge von El Hammeh; in der Synagoge von Na'aran; auf dem Mosaik von Beter Alpha, aus dem Ende des V. Jh. oder aus den Anfängen des VI. Jh.; in der Synagoge von Tiberias, aus dem VI. Jh., und in der Synagoge von Jalfa. Auf dem Boden von Santa María del Camí, auf Mallorca, wird auf sechs Tafeln eine Szene im Paradies beschrieben: ein Löwe und einige Hirsche, Adam und Eva, und Josef, der von seinen Brüdern verkauft wird. Der Einfluss der jüdischen Kunst in Hispanien betrifft die Jahre zwischen 540 und 500.

Die Mosaiken des Orients hatten grossen Einfluss auf die hispanischen Mosaiken, wie aus dem Studium hervorgeht.

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Etude de la dégradation des mosaïques romaines de Volubilis (Maroc)

Abdelilah Dekayir*

Roman mosaics in Volubilis are opus tessellatum *type. They show different deterioration features represented by the lacunae formation (lack of tesserae) and break down of mosaic pavements by fracturing. The deterioration of the* tessellatum *and the formation of cracks are related to the swelling of soil supporting these mosaics. Furthermore, the* tessellatum *is also damaged by chemical dissolution of the fine grained-mortar between (lime and quartz fine grain) and under tesserae, giving an important porosity and making the* tessellatum *very easy to collapse. A part from limestone tesserae, which show formation of vesicles by chemical dissolution, other ones such as marble and glass tesserae appear to be resistant to the weathering action.*

Volublis'deki Roma mozaikleri opus tessellatum *tipindedir. Bu mozaikler, Lacunae düzeninde (tesserae eksikliği) belirtilenden farklı bir bozulma özelliği göstermekte olup mozaik döşemeleri çatlaklarla ve kırılmalarla bozulur.* Tessellatum*'un bozulması ve çatlakların düzeni mozaiği taşıyan topraktaki kabarmalarla ilişkilidir. Ayrıca, döşeme tesserae aralarında ve altında bulunan ve onlara önemli derecede gözeneklilik veren ve* tessellatum*un kolayca çökmesine sebep olan ince taneli harçtaki (ince taneli kireç ve kuvars) kimyasal bozulmalar nedeniyle de zarar görebilir. Kimyasal çözünmeden dolayı kabarcık oluşumu gösteren kireçtaşı tesseranın dışında, mermer ve cam tesseralar kötü havadan aşınmalara karşı direnç göstermektedir.*

Keywords : Volubilis / Roman mosaics / Degradation / Mineralogy / Tesserae / Soil

1. Introduction

Au Maroc, le site archéologique de Volubilis est classé patrimoine mondial de l'UNESCO depuis 1997. Ce site est connu pour ses belles mosaïques qui datent de l'époque romaine (fig.1).

Les mosaïques romaines du pourtour méditerranéen montrent souvent des figures d'altération dues à l'action d'agents météoriques (eau, gel-dégel, thermoclastie) ; de végétaux, d'interventions antérieures et du comportement mécanique du sol (Boschetti *et al*. 2005). A Volubilis, malgré l'exposition très prolongée de ces mosaïques aux différents agents d'altération, quelques unes demeurent bien conservées (Capedri *et al*. 2001 : 7-22, Panetier 2002). Par contre, d'autres mosaïques montrent des figures d'altération représentées par des arrachements localisés de tesselles (mosaïque du Cavalier) ou généralisés, comme dans le cas de la mosaïque de Flavius Germanus. En plus de ces figures d'altération, certaines mosaïques sont traversées par des fractures, les débitant en blocs décimétriques à métriques, difficiles à restaurer et touchant au design artistique de ces mosaïques (ex. mosaïque de la Citerne). Dans les parties humides et non exposées, certaines mosaïques sont colonisées par des lichens.

Le but de ce travail est d'étudier les mécanismes qui sont à l'origine de l'altération de ces mosaïques. Cette étude servira de base pour les travaux de restauration futurs.

2. Matériel & méthodes

Le site archéologique de Volubilis est situé prés de la ville sainte de Moulay Idriss Zerhoun (30 km au NW de Meknès). Cette région est caractérisée par un climat continental ave une précipitation de 650 mm/an comportant des fluctuations importantes à l'échelle saisonnier et annuel. D'un point de vue géologique, Volubilis est construite sur des dépôts de graviers Plio-Villafranchien et de marnes Miocènes.

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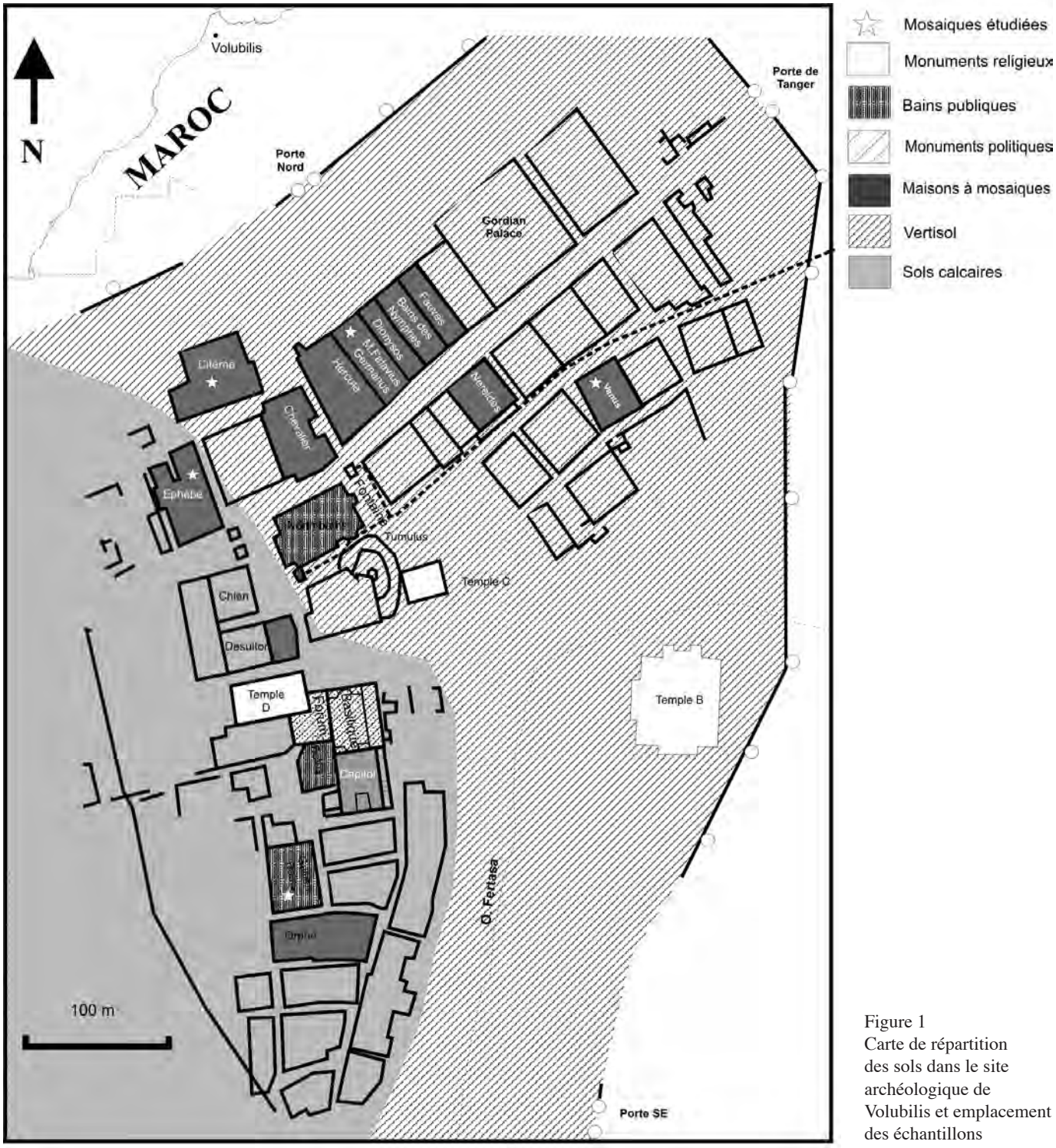

Figure 1
Carte de répartition des sols dans le site archéologique de Volubilis et emplacement des échantillons

Les mosaïques romaines de Volubilis sont de type opus tessellatum. Elles sont formées de petits cubes, taillés dans des roches (2 cm^3) ou à base de verre (mm^3) de différentes couleurs connus sous le nom de tesselles. Elles montrent des couleurs : noir, marron, rose, rouge brique. Les autres couleurs telles que le bleu, le vert et le jaune sont assurées par des pâtes de verres artificielles (Dekayir A. & Nadiri 2005, Dekayir *et al*. 2004 :1061-1070 , Limane *et al*. 2001, Dominguez-Bella et al. 2005).

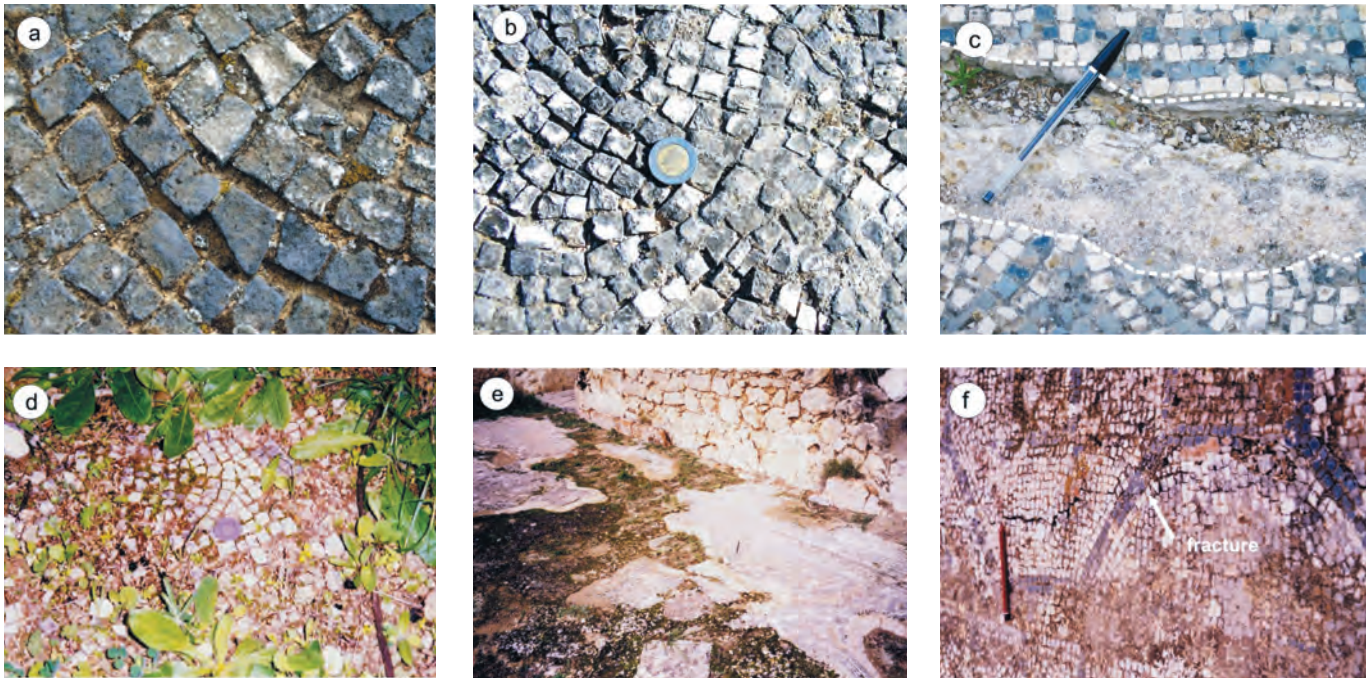

Figure 2
Exemple de figures de dégradation des mosaïques romaines à Volubilis :
a-b) dissolution du bain de pose entre tesselles ;
c) formation de lacune avec détérioration du bain de pose;
d) action de végétaux ;
e) disparition du tessellatum et exposition du nucleus ;
f) fissuration

Diagnostic des mosaïques: les surfaces de nombreuses mosaïques ont été analysées dans le but d'évaluer l'action de l'altération. Les mosaïques étudiées (Ephèbe, Orphée et thermes de Gallien) (fig. 1) sont construites sur des sols calcaires et ont été détachées et redéposées. En revanche, les mosaïques de Flavius Germanus (FG), la Citerne et Vénus sont construites sur vertisol (sol gonflant) (fig.1). Les figures d'altération relevées sur les mosaïques romaines sont attribuées à l'action de l'eau et à la nature du matériau (exfoliation, érosion, fracturation, décoloration des tesselles, détachement de tesselles, détérioration des mortiers de restauration etc.) (fig. 2).

Au laboratoire, les tesselles ont été préparées et montées sur lames minces et observées au microscope optique. Les fragments de *tessellatum* (pavement et tesselles) ont été observés au microscope électronique à balayage, équipé d'un spectromètre EDX. La caractérisation minéralogique des différents composants des mosaïques a été réalisée par diffraction de rayons X (Philips PW 1729).

3. Résultats

3.1. Détérioration du tessellatum *par dissolution chimique*

Le *tessellatum* est composé de tesselles de différentes couleurs (blanc, marron, rose), taillées dans des roches calcaires ainsi que des marbres de couleur blanche et noire. Les autres couleurs ont été apportées par des pâtes de verre artificiel. Observées au MEB, les tesselles à base de calcaire montrent des vides de dissolution. Par contre, celles à base de marbre montrent une bonne résistance aux agents d'altération. Quant aux tesselles à base de verre artificiel, elles montrent une perte de coloration.

Entre les tesselles : les tesselles sont cimentées par un mortier à base de chaux et de sable, de granulométrie très fine (Dominguez-Bella *et al*. 2005, Dekayir & Nadiri 2005). Les joints entre tesselles représentent des chemins préférentiels aux solutions d'altération chimique. Localement, ce mortier montre des vides de

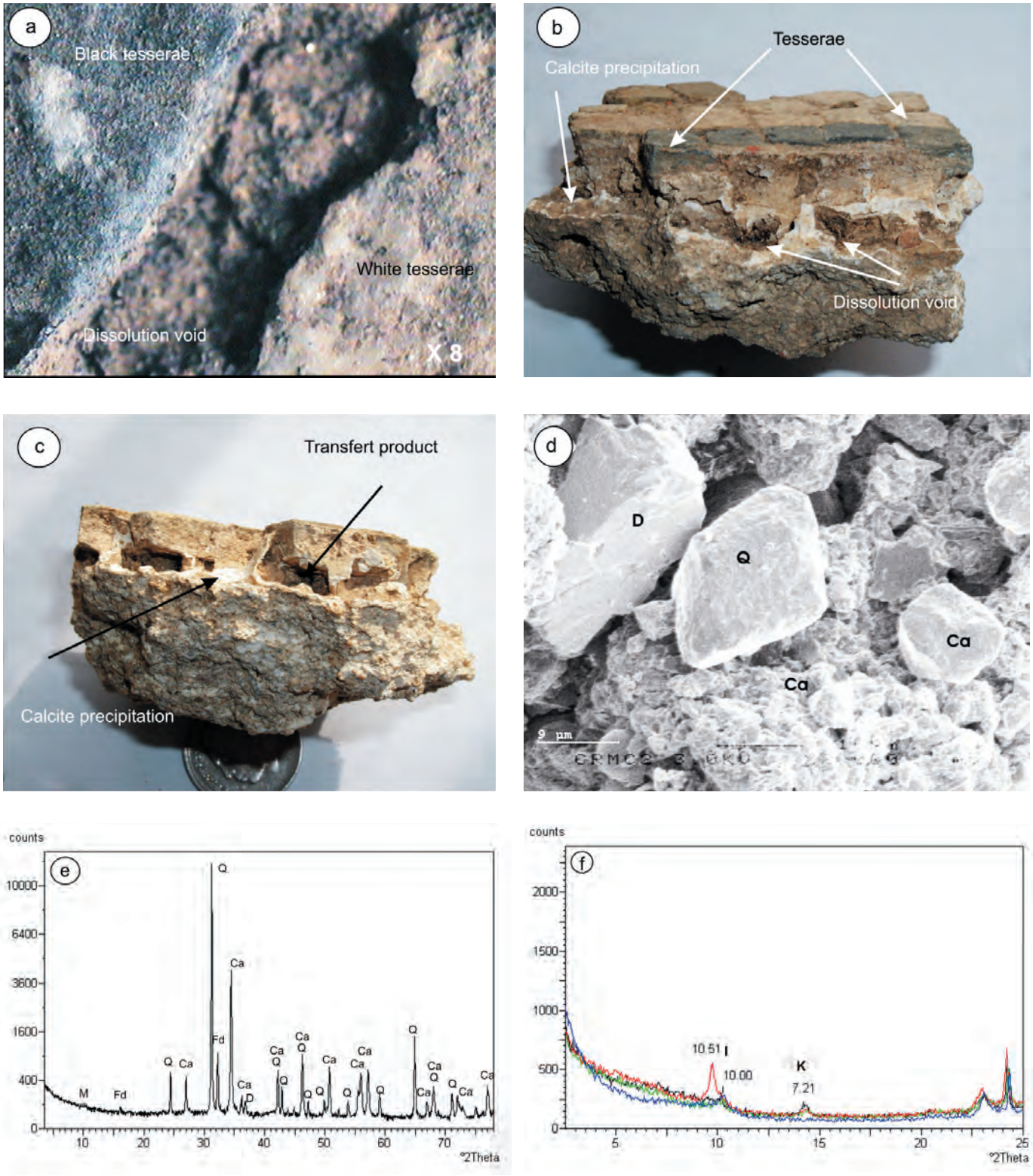

Figure 3
Détérioration du tessellatum de la mosaïque de Flavius Germanus :
a) figures de dissolution du liant fin entre les tesselles ;
b) figures de dissolution du liant fin sous les tesselles et formation des pores (cm) à remplissage argileux ;
c) détails de la couche calcitique ;
d-f) observation MEB et analyses XRD du produit de remplissage des pores
(I-M : illite, K : kaolinite, Q : quartz, Fd : feldspath, D : dolomie, Ca : calcite)

dissolution de différentes tailles, qui fragilisent la structure du mortier et facilite le détachement des tesselles et la formation de lacunes (fig. 2a).

Sous les tesselles : une grande porosité s'ouvre, représentée par des pores de quelques millimètres à 1 centimètre, remplis de produits argileux (fig. 3b, d). Les analyses XRD et les observations réalisées sur ce produit au MEB montrent qu'il est constitué de grains de quartz, de calcite et de dolomite de quelques microns. Les analyses XRD des minéraux argileux montrent la présence de kaolinite et d'illite (fig. 3e, f).

4. Discussion et conclusion

Les mosaïques romaines de Volubilis sont de type *opus tessellatum*. Elles sont formées de la base vers le sommet par i) le *rudus*, ii) le *nucleus* et iii) le *tessellatum* (Dominguez-Bella *et al*. 2005, Dekayir & Nadiri 2005). Généralement, ces mosaïques sont décorées par des tesselles de couleur rose, marron et blanche à base de calcaire oolitique, par des tesselles rouge brique à base de terre cuite et de grès calcaire et à base de marbre noir et onyx. Les tesselles à base de verre ont une couleur bleue, verte et jaune. En effet, la mosaïque romaine représente un système pétrographique très complexe. Les tesselles à base de roches ont été taillées dans des formations calcaires avoisinantes d'âges Aalénien et Bajocien (Capedri et al. 2001 : 7-22, Faugères 1978).

Après diagnostic de plusieurs mosaïques, l'action des phénomènes d'altération est traduite par une destruction par dissolution chimique du bain de pose à la base et entre les tesselles, aboutissant à la formation de pores remplis de produit argileux. Ce processus est contrôlé par des réactions chimiques de type dissolution précipitation (Stumm & Morgan 2005). Les solutions d'altération qui s'infiltrent le long des pores existants, provoquent une dissolution et un élargissement de ces pores, comme en témoigne la présence de produits de transfert formé de dolomie, quartz et calcite

$$CaCO_3\,(s) + CO_2 + H_2O = Ca^{2} + + 2HCO_3^{-}$$

En conclusion, les mosaïques romaines de Volubilis sont construites en partie sur des sols calcaires qui jouissent d'une bonne stabilité mécanique. En revanche, celles qui sont construites sur des vertisols (sols gonflants) montrent plus de dégradation (par ex. la mosaïque de Vénus). A l'échelle de la mosaïque, les tesselles résistent mieux à l'altération en fonction de leurs caractéristiques pétrographiques. En revanche, la composition très calcitique du bain de pose le rend très fragile et très exposé à la dissolution chimique aboutissant à la formation de pores et à la destruction du *tessellatum*.

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The Port Illustration on the floor mosaic of the Yakto Villa

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The most important materials that can shed light on the historical atmosphere of Antiocheia on Orontes are mosaic panels. The floor mosaic obtained from the Daphne Yakto villa provides valuable information by showing the topography, the architecture and the daily life of Daphne and Antiocheia on Orontes. While a part of the academic research labelled the U-shaped, colonnaded structure filled with water as a reservoir, certain details of the depiction give us clues to the possibility that this could actually be a port. Records provided by antique writers on the city and comparisons made with architecturally similar material seem to yield data that support the idea that this structure functioned as a commercial port.

Günümüzde Antiocheia on Orontes antik kentinin tarihsel dokusuna ışık tutan en önemli malzeme mozaik panolarıdır. Daphne Yakto villasından ele geçen taban mozaiği, Daphne ve Antiocheia on Orontes kentlerinin antik dönem topografyası, yapıları ve günlük yaşamına ait tasvirler içermesi açısından önemli bir buluntu grubunu oluşturmaktadır. Mozaik tasvirinde gözlenen U planlı, kolonadlı ve ortası suyla dolu olan yapı, araştırmacılar tarafından su rezervuarı olarak tanımlanırken, tasvirde gözlenen detaylar liman yapısı olabileceği yönünde ipuçları vermektedir. Kentle ilgili antik yazarların kayıtları ve mimari yönden benzer malzeme ile yapılan karşılaştırmalar, yapının bir liman yapısı işlevinde olabileceği şeklindeki değerlendirmemizi destekleyen veriler sunmaktadır.

Keywords: Antiocheia on Orontes, border mosaic, water reservoir, port.

The floor mosaic that was revealed by the excavations carried out in the Daphne Yakto villa in 1932 provides a lively depiction of the topography, architecture and daily life of Daphne and Antiocheia (Fig.1). The villa, which was a countryside residence for Daphne, is also known as the Ardaburius villa. He was magister milutum of Antiocheia during 450-457 A.D., thus dating the mosaic to the mid-5th century (Campbell 1934: 202).

The buildings illustrated on the border that frames the central panel of the floor mosaic have no spatial relationship with each other. Generally being frontally depicted, they are identified by inscriptions or by scenes pointing to their function. Among them, there is an interesting U-shaped structure with a roof supported by a colonnade (Fig. 2). Its middle is filled with water and there is an illustration reminiscent of a boat. Making use of records of antique writers and comparisons made with architecturally similar materials, our interpretation of the function of this building is presented below.

There are certain suggestions that have been put forward by previous scholars on the nature and function of this structure. To quote from Malalas (Jeffreys 1963:147), after building an aqueduct extending from Daphne to Antiocheia, Emperor Hadrianus erected a spectacular reservoir to store and control water flowing from Daphne's Saramanna source and named it as "theatre of source of Daphne". Based on that, R. Chowen and D. Levi suggested that this building could be the reservoir mentioned by Malalas (Chowen 1956: 275-277; Levi 1947: 326). However, if one compares it to architecturally similar formations, one gets the impression that this structure was meant to be a port. The aim of this article is to demonstrate this by reference to some similar architectural material. The fact is that in his piece "Antioch Mosaic Pavements", while Levi declares the building is a water reservoir, he also asserts that there is a boat-like depiction on the water-filled area of the illustration, which appears to support our hypothesis (Levi 1947: 329).

On the other hand, Chowen believed that this building presented a public scene for those who sat on the theatron and watched the water go by (Chowen 1956: 275). He then backs his assertion by stating that on his visit to Africa in 128 A.D., Emperor Hadrianus had built an aqueduct extending from Carthage to Zaghouan Mountain, after which

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Figure 1
Levi, 1947, Fig. LXXIX/a
The mosaic of Yakto villa, topographical border

he also ordered a reservoir to be constructed by the water source on the mountain (Chowen 1956: 277). As mentioned above, Levi suggested that the building on the depiction could be a storage area from where the water coming from Daphne's Kastalia and Pallas sources was to be distributed (Levi 1947: 326). However, to the right of the U-shaped structure, there is another formation illustrated in the mosaic that might be a water reservoir. Furthermore, water flowing into this second structure is clearly indicated with two separate white lines which symbolize the Pallas and Kastalia sources whose names are inscribed in the upper part of the mosaic border (Fig. 3). Within this context, the reservoir which Malalas referred to as storing water coming from sources of Daphne must be this second building located to the right of the U-shaped structure on the mosaic.

On the basis of Libanios's remarks about a dock by the River Orontes for ships to manage their loads (Downey 1959: 652), the same U-shaped structure can be thought of as a port building. The following comparisons with architecturally similar material present information that confirms this assertion.

The building on the mosaic includes a colonnaded area consisting of columns designed in Ionian style. This colonnaded part, behind which stairs are placed in a U-shape, encircles the water in the middle. While there is the image of a boat in this water-area, a sort of platform to which the boat approaches is observed to be attached to a stair that is placed in front of the colonnaded area (See Fig. 2).

The city of Antiocheia was situated in a very important and fertile area by virtue of its being founded at an intersection point between the roads to the east and west. The River Orontes, and the canals joining it, facilitated the transfer of goods to Seleucia Pieria, Antiocheia's port settlement through the river. From there, they could further be sent to the Mediterranean (Downey 1962:27). A similar design was realized during the reign of Emperor Claudius who connected Rome, first to the port of Ostia through the canals he built on the River Tiber, and then to the sea (Sear 1982:123; Savile 1941:231). By virtue of the remaining ruins, it is widely known that in the antiquity there were many docks that ships could resort to across the River Tiber (Blackman 1982:187 Fig. 2). Libanios, from the 4th century A.D., offers us the most comprehensive information on Antiocheia. While describing the town, he wrote that ships carrying wheat approached the city and discharged their load to a stone-made dock, from where their goods were taken to the agora by the river. (Downey 1959: 652, Downey 1959: 652)[1]. This statement also supports the observation that the description on the mosaic shows a boat on the water-filled area of the U-shaped structure approaching a sort of a platform. The goods that were unloaded on this platform

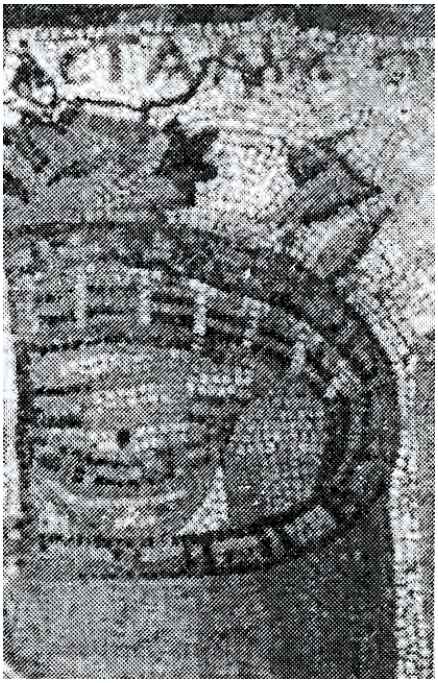

Figure 2
Campbell, 1934, Fig. XXII/A
The mosaic of the Yakto villa, topographical border, U-shaped structure

1 For one of the oldest examples of the complex allowing ships to approach cities through rivers, please see Lothal dock and its canals from the Harapan region, India (J. W. Shaw., Greek and Roman Harbourworks, A History of Seafaring Based on Underwater Archaeology (ed. G. F. Bass), 1972, 88-89), please see a harbour settlement possibly situated on the Nile, Egypt in 3rd millenium B.C. (N. M. Flamming., Cities in the Sea, London, 1972, 40).

Figure 3
Levi, 1947, Fig. LXXIX/a
The mosaic of the Yakto villa, topographical border, U-shaped structure and water reservoir

were first taken to the frontal staired area of the colonnade that was painted in black in the mosaic. From there, they were carried to the agora by the river. Farther on, a man is seen walking to the left of the U-shaped building, carrying a basket in his outstretched right hand and a package under his left arm. Even though it is not really possible to make a precise point, the presence of this man can be evaluated as if he is carrying goods unloaded from the port. This colonnaded part and the black stairs behind it must have been designed to offer the public a recreation area where they could relax and enjoy the breeze[2].

Moreover, architectural similarities between the U-shaped structure and the harbour descriptions on a Pompeiopolis city coin (Fig. 4) and on the Kelenderis mosaic (Fig. 5) further present evidence in line with the idea that this structure was a port rather than a water reservoir.

Excavations that were carried out in Kelenderis revealed a floor mosaic in which a city scene presenting the harbour and some surrounding buildings was described (Zoroğlu 1994: 31, fig. 15) (See Fig. 5). What is interesting in this depiction is a U-shaped structure, with a tiled roof supported by a colonnaded part consisting of arched-columns extending throughout the harbour (Zoroğlu 1995: 265). The depiction of the city-port in the mosaic is highly important since it provides valuable information on the location and plan of the Kelenderis harbour. On the water-filled area of the structure, there are again portrayed a sailboat and a simple boat. Zoroğlu believed this building to function as an entreport or shops for the harbour. (Zoroğlu 1993: 195, fig. 13; Zoroğlu 1994: 32, fig. 15). The structure next to it, with its high windows and dome, looks similar to the port baths whose remains we find today and whose current location coincides with the plan suggested in the mosaic (Zoroğlu 1995: 265). Because the stylistic characteristics of both the geometric adornments and the lotus buds placed in the border framing the mosaic are dated to either the second half of the 5th century or the beginning of the 6th century A.D, the mosaic itself should be traced back to the same dates (Zoroğlu 1993:196; Zoroğlu 1999:519).

Figure 4
Boyce, 1958, Fig. 10/1
Harbour Illustration on a coin from the Antoninus Pius period of Pompeiopolis

In Soli Pompeiopolis, a coin dated to the reign of Emperor Antoninus Pius was found (See Fig. 4). The harbour depiction on that coin displays similarities with the architectural features of the structure shown in the mosaic (Boyce 1958:68 Fig. 10) since the U-shaped structure with a roof supported by a colonnade is also present on that coin. In the water-filled part, there is an illustration of a water-god. According to the information provided by Beaufort in his piece Karamania, the Pompeiopolis harbour looks like a basin surrounded by semi-circular walls or breakwaters (Beaufort 1818: 249, 259). The structure depicted on the Pompeiopolis coin and the research conducted by Vann's team which validated the presence of breakwaters (Vann 1994:530-534), confirmed Beaufort's descriptions and his city plan (Beaufort 1818: 249, 259). The closest example to the form and location of the water-god in the middle of the water-filled area of the building is a figure of a god that was placed at the entrance of the Ostia port that was depicted on a sestertius from the reign of Emperor Nero (Boyce 1958: Fig. 10/2). Several suggestions have been put forward as regards the identification of this port god shown on the coin (Boyce 1958: 71; van Buren 1911: 194, footnote 2.). The similarity observed in both illustrations led to a conclusion that the god depiction in Pompeiopolis, which is a province, must have been adopted by the capital Rome (Boyce 1958:77). Port structures with similar plans have already been observed in depictions placed on coins from the Imperial period at Ostia (Savile 1941: 231, Fig. 9), Corinth and Mothone (Boyce 1958: Fig. 13) (Fig. 6).

2 For portico examples encircling the harbour in the ancient Anatolian cities of Miletos and Elaiussa Sebaste, please see Akurgal, 1988, 451, Schneider, 2008, 101-102.

Figure 5
Zoroğlu, 1999, Fig. 2
Harbour illustration on Kelenderis mosaic

As the capital of the Seleucian Kingdom, Antiocheia was the administrative centre of the Syrian province during the Roman period. Situated between the River Orontes and the Silpius Hill on a crossroads for trade routes extending from east to west, the city was strategically very important. With its fertile lowlands and abundant water resources, Antiocheia produced grain, oil and wine. Its agricultural appeal and strategic significance made the city a very important trade centre across the eastern and Greco-Roman world. The River Orontes and its canals into the city provided a route for the Persian, Indian and Chinese goods to be first transported to Seleucia Pieria from Antiocheia and then to the Mediterranean ports (Downey 1962: 11).

The mosaics displaying scenes from the city life shed light on the settlement from the antique period and its structural features. Currently exhibited in the Museum of Archaeology of Hatay, the floor mosaics of the Yakto villa are particularly remarkable since they provide indispensible information on the city life and the architecture of Antiocheia, whose structural characteristics were heavily damaged by earthquakes. The fact that the River Orontes was appropriate for small ships to sail along and that Antiocheia's canals offered an easy route into the port of Seleucia Pieria and thus to the Mediterranean enable us to imagine the idea of a port, connected to the city, into which ships would approach to load and unload.

In his piece "Antioch Mosaic Pavements", Levi's theory that the U-shaped building constituted a water reservoir is refuted by his remarks about a boat-like illustration placed in the middle of the water-filled area of the same building (Levi 1947: 329), while this testifies to the point made in this article. There is no evidence accommodating a setting in water reservoirs of the antique period that

Figure 6
Boyce, 1958, Fig. 13/ 4, 13/5
13/4- Harbour Illustration on a coin from the Antoninus Pius period of Corinth
13/5- Harbour Illustration on a coin from the Emperor Caralla period of Mothone

allowed ships or boats to enter. However, Libanios's remarks on ships unloading wheat by the river in Antiocheia (Downey 1959: 652), confirms the existence of a port by the River Orontes. The fact that in the mosaic, the boat was depicted as approaching a platform-like area[3] reminds us of the presence of a setting where ships could use as a dock to unload their trade goods. Furthermore, it is also plausible to deduce that, since the city agora was situated by the river, trade goods were first unloaded in this port from where they were then taken to the agora. Because the U-shaped structure on the mosaic is colonnaded, it also recalls Vitrivius's statements that porticos and shipyards that accessed the commercial centre of cities were constructed at ports that enjoyed a natural curve or U-shape (Vitruvius. V. XII.1). Architectural similarities between our U-shaped structure and the ports of Pompeiopolis and Kelenderis[4] remain as further evidence for the hypothesis that this was a port. Because the mosaic illustrations of Yakto and Kelenderis are dated to the mid-5th century A.D, they also chronologically overlap with each other. Although the Pompeiopolis coin is an earlier example, ports with similar plan were built in the capital and in provinces during the entire Roman Imperial period (Boyce 1958: Fig. 13).

3 For boats that were used for transportation on the river, please refer to Lionel Casson, "Harbour and River Boats of Ancient Rome", JRS 55 I/2, 1965, 31-39

4 For an illustration of a port with similar plan, please see the portico of the Kenchreai port of Corinth, dated to the end of 4th centuty A.D., in L. İbrahim et. al. Kenchreai. Eastern Port of Corinth, Leiden, 1976, Fig. 94; for the circular port observed on late-period coins of Side, please see A. M. Mansel, Side. 1947-1966 Yılları Kazıları ve Araştırmalarının Sonuçları, Ankara, 1978, Fig. 76.

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JMR 1-2, 2008 45-54

The Ship Depicted in a Mosaic from Migdal, ISRAEL*

Zaraza FREIDMAN**

Iconography of ships in mosaics comprises two fields: ancient ships and shipping, along with mosaic art and techniques. This theme is very complex and however it has been paid insufficient attention in the past. Due to this durable art form, the ships depicted in mosaics may be referred as actual images of vessels concurrent to the period when such surfaces were made. The research started with my MA dissertation (1999, unpublished), which encompassed the eastern Mediterranean, Israel and Jordan. Throughout my PhD dissertation (2003, unpublished), this theme dealt with the entire Mediterranean world. It relates to shipbuilding materials, types of ships, sailing environments, as well with the propulsion and steering rig. The following paper describes one of the earliest mosaics with ship depiction that was found in Israel, at Migdal, located on the western shore of the Sea of Galilee (in Hebrew: Yam Kinneret) (fig. 1). Although some reddish-brown tesserae were used for some distinct parts in the objects depicted in the mosaic, it follows the black-and-white technique (rare example in the eastern Mediterranean). The mosaic reflects tight art connections with the early Roman Empire of the 1st centuries BCE – CE. The Migdal mosaic is no longer found at it original location. Today it is mounted into a metal frame and placed among other artifacts in the courtyard of the "Church of the Multiple Loaves and Fish", at Capernaum (Tabgha).

Mozaiklerdeki gemi ikonografisi mozaik sanatı ve tekniğinin, yanında antik gemiler ve gemicilik alanlarını da kapsamaktadır. Bu konu oldukça kompleks olmasına rağmen geçmişte yeterince ilgi görmemiştir. Mozaiklerin kalıcı sanat formu olması sayesinde, betimlenen gemiler yapıldığı periodla eşzamanlı gerçek görüntülerine kaynak olarak gösterilebilir. Araştırma, Doğu Akdeniz'i, İsrail'i ve Ürdün'ü kapsayan yüksek lisans tezimle (1999-basılmamıştır) başlamıştır. Doktora tezim boyunca (2003-basılmamıştır), bu konunun kapsamı tüm Akdeniz Bölgesini içine alır. Tez, gemi yapı malzemeleri, gemi çeşitleri, deniz yolculuğu şartları ve gemilerin yürütücü güç ve dümen aksamları ile ilgilidir. Bu makale, bulunmuş olan en erken gemi betimli mozaiklerden biri olan İsrail, Migdal'daki Galilee Denizi'nin (İbranice: Yam Kinneret) (fig. 1) batı kıyılarında bulunan mozaiktir. Mozaiğin bazı farklı bölümlerinde kızıl-kahverengi tesseraların kullanılmış olmasına rağmen, genel olarak siyah-beyaz teknik uygulanmıştır (Akdeniz'deki nadir bulunan örneklerden). Mozaik, M.Ö. ve M.S. ki 1. yüzyılların erken Roma İmparatorluk Dönemi ile sıkı sanatsal bağlar yansıtır. Migdal mozaiği artık orjinal konumunda bulunmamaktadır. Günümüzde, metal bir çerçeceye monte edilmiş halde Capernaum'daki (Tabgha) Katmerli Somun ve Balık Klisesi'nin (Church of the Multiple Loaves and Fish) avlusundaki diğer eserlerin yanında yeralmaktadır.

Location of Migdal

Migdal (Israel map ref. 1988.2488), is situated on the western coast of the Sea of Galilee, about 5-km north of Tiberias (fig. 1). The town was established in the Hellenistic period (300 BCE), and was known as Migdal Nunaya/ Nunia (in Aramaic) – "*Tower of Fish*"[1]. The town is also known as Magdala (in the Christian world), as being the hometown of Mary Magdalena[2]. According to the writings of Josephus, Migdal/Taricheae had many ships, shipyard workers and wood supply.[3] He also wrote that Taricheae had a population of forty thousand inhabitants.[4] Josephus gives a detailed account on the nautical activities at Migdal and on the Sea of Galilee, during the time when he was

* *This paper is an extension and updated data of the Migdal mosaic chapter from the writer's MA dissertation, 1999, unpublished. I would like to dedicate this paper to the memory to Prof. Michele Piccirillo, my advisor for both MA and PhD Dissertations, a close and a very good friend, who just passed away before his time, 26.10.2008, and left all of us with an enormous sorrow and emptiness.*

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1 Raban, 1988, p. 323.

2 he Synoptic Gospels describes Mary of Magdala as one of the women from the Galilee who gave financial help and domestic service to Jesus and his disciples. The Fourth Gospel gives Mary of Magdala the pride of being the first witness of the resurrection and the risen Christ; Comay and Brownrigg, 1980, pp. 299-301. Luke: 8.2, informs that a certain women which had been healed by evil spirits was called Mary Magdalena.

3 Nun, 1992, p. 34.

4 Josephus, Wars, II.21.4.

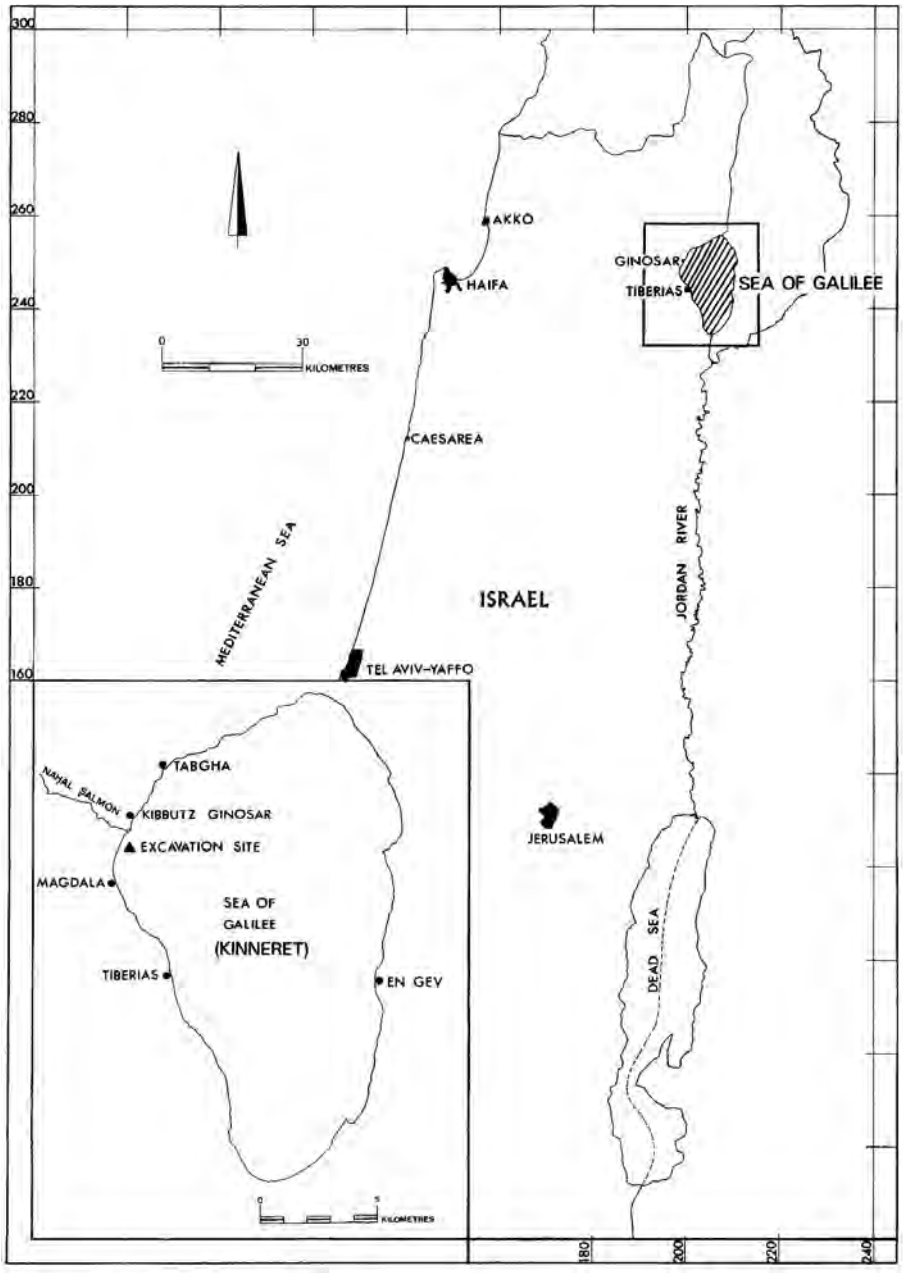

Figure 1
Location Map (after: Wachsmann, 1990, p. 2)

appointed as military governor.[5] He also mentions that many Jews from Tiberias sought refugee at Migdal/Taricheae at the outbreak of the Jewish Revolt in 67 CE.[6] During the Revolt, the combat that took place on the Sea of Galilee (Kinnerer) and its shores was a very cruel one. The Romans attacked Migdal and massacred a large part of its population. Though that many Jews sought to escape by boats were caught by the Romans and slaughtered.[7]

5 Life 12; 18; 32; 59; 73; Wars II.21.4; III.10.1; III.10.9.

6 In order to show his authority, Josephus sailed in 230 bots from Migdal to Tiberias as an act against opposition of the inhabitants; Wars, II.21.8.

7 Wars, III.10.9.

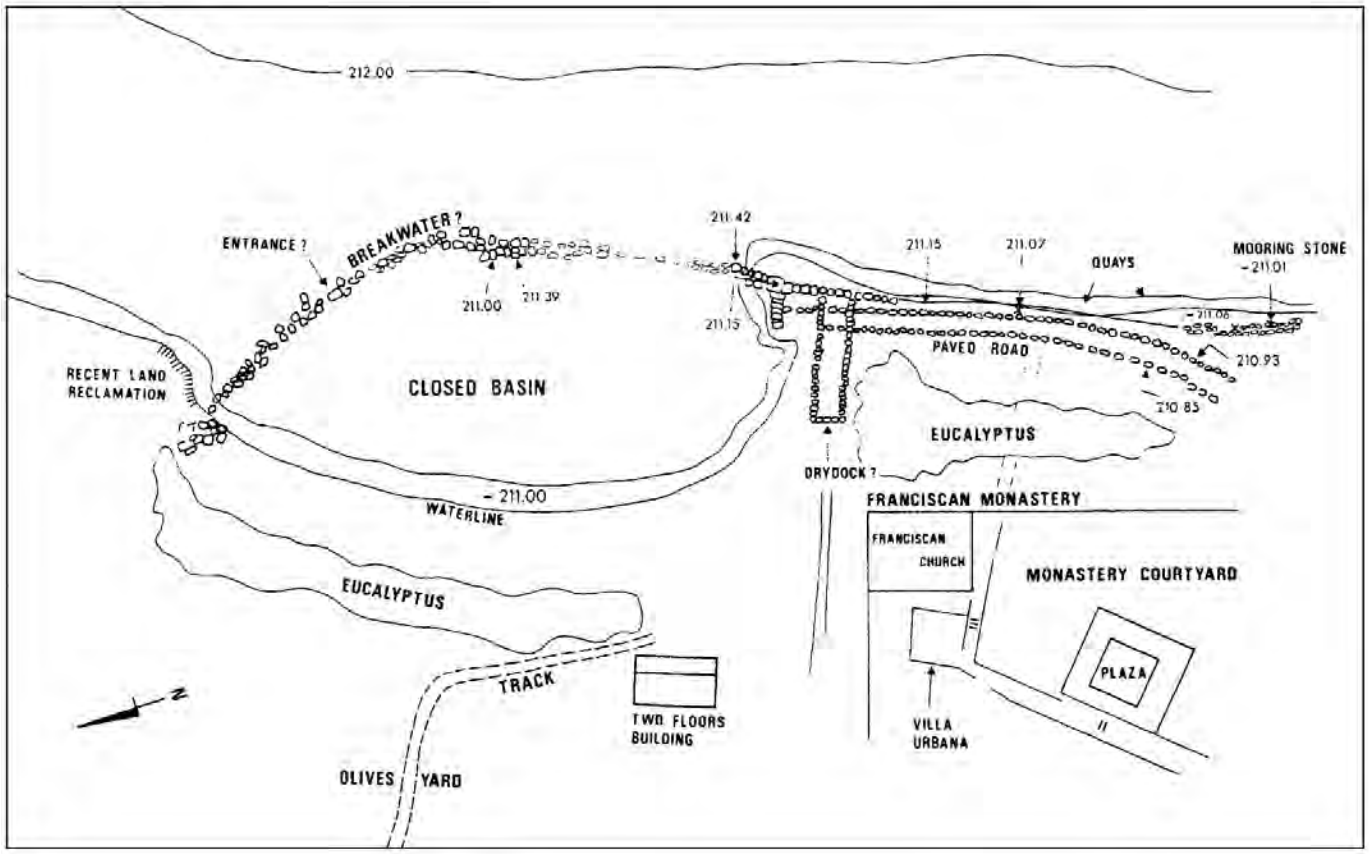

Figure 2
Migdal Harbor (after: Raban, 1988, p. 53, Fig. 4)

Archaeological Context of the Mosaic

Taricheae or Migdal Nunia (the ancient name of Migdal) attests for its maritime character. Strabo mentions that "*…at the place called Taricheae the lake supplies excellent fish for pickling*".[8] During the survey carried out in 1970, by Prof. Avner Raban, from the Institute of Maritime Studies, University of Haifa, remains of a harbor were found in the vicinity of the courtyard belonging to the Franciscan church (fig. 2). The harbor basin was formed within the natural bay that was enclosed by a breakwater to the north-east; its area extended for one hundred acre.[9] A wharf built with basalt stones, ran parallel to the shore at a length of *c*.100 m. At its eastern end protruded a mooring stone where the mooring lines of ships were tight in antiquity.[10] Vessels of medium size could be moored along the quay.

The excavations carried out at Migdal, from 1971 to 1977, and conducted by Dr. Virgilio Corbo from the Franciscan Institute, in Jerusalem, revealed the Town Square, some streets, various buildings and the water system (fig. 3). During the excavations carried out in 1977 at the villa, to the northeast of the "Water Tower" (Area C), the work mostly concentrated on the mosaic pavements.[11] The mosaic floor of Room C6 (figs. 3, 4), the purpose of this paper, belonged to the original phase of the villa. The room led to a patio that in its center a plastered pool was built.

8 Starbo, *Geo*. XVI.2.45. Probably Strabo referred to Migdal fish industry, where was produced of *oxygarum* a very prized condiment for the Roman culinary. The main production center was in North Africa. The finished product was exported to Greece, Italy and Gaul; Avi-Yonah, 1976, p. 24.

9 Nun, p. 35.

10 Raban, 1988, p. 53, Pl. VII.5.

11 Corbo, 1978, p. 236.

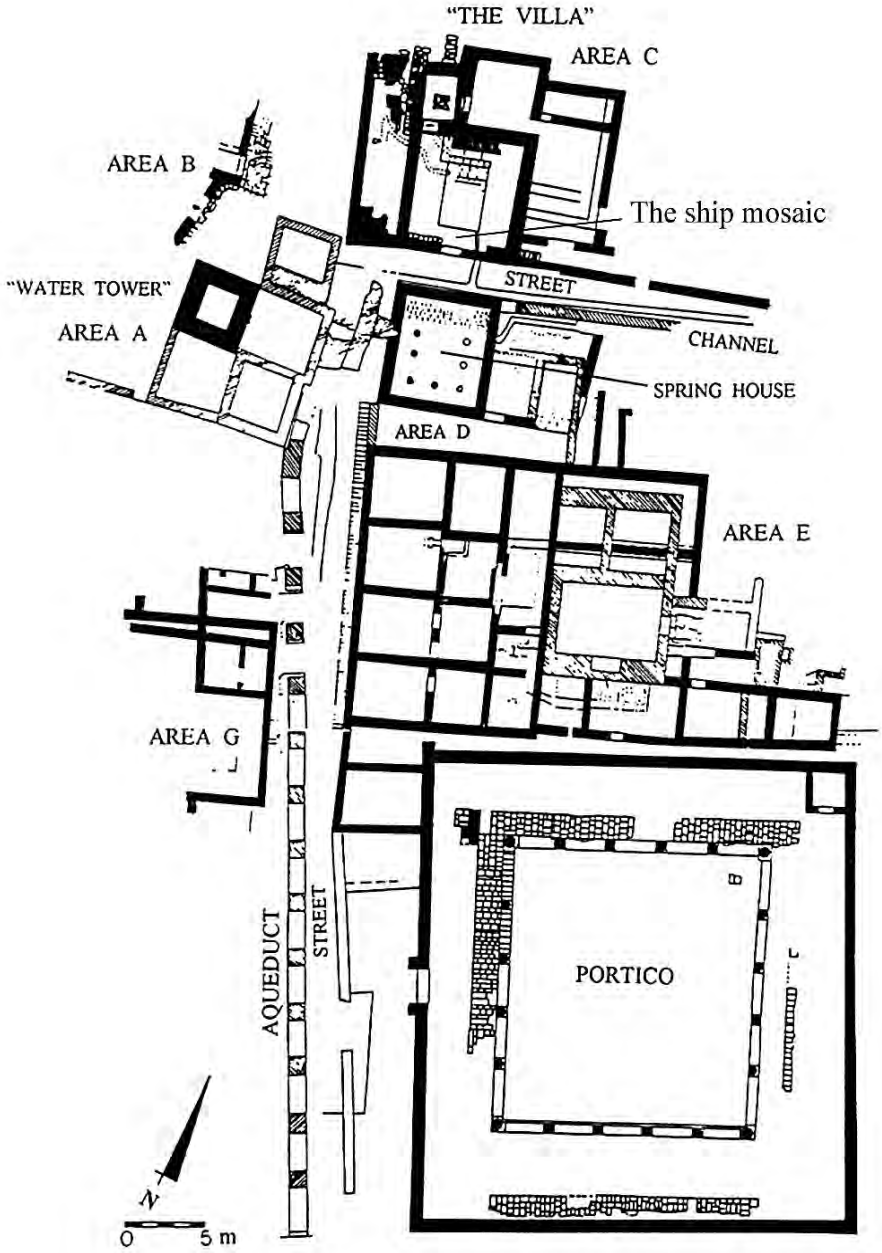

Figure 3
Plan of the excavations
(after: Corbo, 1978, p. 72)

The Mosaic Floor in Room C6

Room C6 was virtually the most central part of the villa (fig. 3). It almost formed a square of 2.80 x 2.60 m, and its floor was entirely paved with mosaics. The southern wall of this room is adjacent to the *Cardo*. The mosaic mostly made with black-and-white tesserae and depicting the maritime scene was found underneath a later mosaic that had been removed in order to allow the excavators a better study of this pavement. The style of the mosaic work and the shreds found with this context indicates that the complex was built during the 1st century CE.[12] The mosaic pavement consists of two parts:

1. A short Greek inscription found on the southern doorstep reads "*KAI CY*" (you too). It was made with black tesserae and set on white background.[13] The length

12 Corbo, p. 237; Two such inscriptions found in villas at Antioch were dated to the 1st century CE.

13 This inscription was removed from its original location. It also was mounted into a metal frame and today it is found in the closed yard at Capernaum Church.

Figure 4
Migdal Mosaic (photo: Z. Friedman)

of the inscription is 33 cm, while the width is 7.5 cm. Such inscriptions had not been found in Palestine before, but are mostly known from private houses in Antioch.[14] They are associated with invocations against the "evil-eye".

2. The main part of the floor consists of a large mosaic rectangle (1.10 x 1.12 m), which formed the pavement of this room (fig. 4). A double black frame borders the maritime scene.[15] The outer black frame (5 cm wide) is made of three rows of tesserae. The black stones are basaltic, originating in the area of the Kinneret, the Galilee or the Golan Heights. The wide space between the black borders is made of five rows of white tesserae, while the second border is made of two rows of black stone cubes. The inner field comprising the figurative decorations measures 0.78 x 0.81 m. The background is white and the objects depicted within this field are made with black, while some details are made with brownish-red tesserae. The mosaic depicts a sailing ship, a ring with *strigili* and *aryballos*, two grounding-mills?, one *cantharus* with two handles, and a partly preserved fish.[16]

The Ship

The ship is depicted from its port side and occupies about 1/4 of the entire field.[17] It had been placed close to the lower left corner of the mosaic. The prow almost touches the frame. The hull, mast and rigging lines are depicted with black tesserae, while the oars and the sail are depicted with brownish-red stones (fig. 5a). The Migdal Ship has an elongated hull with a broad pointed stem and narrowing raised stern. This depiction may have resulted from the mosaicist's lack of nautical knowledge and therefore not understanding the shape of the hull, or he intended to give some perspective view to the ship. What appears to be a pointed stem probably indicates a pointed cutwater or ram, which in a proper depiction should end at the water-level.[18] The shape of the stem resembles the head of the fish depicted to the right of the ship, below the stern (fig. 4). The gunwale is almost horizontal, or it may indicate the top edge of the protective screen, whereas the heads of the rowers project above (figs. 5a, b). The left-hand end extends forward, and appears to be supported by an angled spar. This element may indicate the sprit-bow, used to tight around the fore-lines of the sail. The horizontal white strip that extends at about 2/3 of the ship's length may represent the wale above the water-level. It reinforced the outer hull and also protected the ship when it was moored long-side (parallel) the quay or pier. In the middle of the port stem is depicted a single brownish-red tesserae, probably indicating the *oculus*. We assume that the same decoration was true on the starboard stem. The stern is raised and ends in an inverted sternpost above the deck. At the point where the stern curves is depicted a single brownish-red tesserae (fig. 5a). This cube doesn't have a specific function. The artist who produced the mosaic may have inserted it by mistake, or the stone was assumed to indicate the ship's trade mark, or other decoration.

Figure 5a
The Ship (photo: Z. Friedman)

14 Corbo, p. 237.

15 The writer took the measurements of the mosaic in May 1996, at Capernaum. Prof. Michele Piccirillo from the Franciscan Institute in Jerusalem granted me the permit to take the measurements of the displayed mosaic in the fenced yard of the church.

16 For a detailed description of the patterns depicted in the mosaic: Corbo, 1978, p. 237-8; Raban, 1988, p. 313. Reich identified all the objects depicted in the mosaic: 1991, pp. 455-458, Pls. 53-54.

17 Overall length of the ship 32 cm; height at amidships 9 cm; mast height (from the tip of the masthead to the gunwale) 26 cm; length of the yard 27 cm; length of row-oars 15 - 17 cm; steering oar (with the blade) 20 cm; Friedman, 1999, Table 2.I.1, p. 12.

18 Vessels of the Greco – Roman periods are depicted with pointed cutwater or ram; Basch, 1987, figs. 329, 334, 351, 353, 363 A, 677-78, 739, 804/14, 804/28, 1055, 1057-59, 1073, 1076, 1106, 1108.

The ship is depicted with both means of propulsion: sailing rig and row-oars (figs. 5a, b). The mast is represented by a vertical spar made with one row of black tesserae. It is stepped 1/3 fore amidships and secured by the forestay, which extends between the joint of the yard with the masthead and the fore tip of the sprit-bow. The yard (depicted with one row of black tesserae) is set perpendicular to the masthead. The furled sail beneath the yard is depicted with one strip of brownish-red tesserae; it is slightly shorter than the yard. The vertical hanging line attached to the tip of the right-yardarm indicates the right-hand brace. It worked the yard and sail to be adjusted to the optimal wind direction (figs. 5a, b). The row-oars indicated by two shafts (depicted with brownish-red tesserae) are mounted on the port gunwale with backward slanting. The missing blades probably are submerged in the water. The steering oar is depicted with a short rectangular blade with rounded shoulders. The same oars arrangement was true on the starboard side. We may suggest that the mosaicist intended to distinct the row-oars from the steering-oars and therefore he depicted the blade on the aft oar. Four protrusions above the gunwale are the heads of the rowers seated on lower thwarts, or behind the protection screen set above the gunwale (figs. 5a, b). The crew also comprised the helmsman and the captain. The helmsman may have been seated beneath the arching sternpost to work the steering oars. The coloring of the sail and the oars were made intentionally, thus to distinguish these elements from other gear of the ship. The hull does not show any flotation or draft line, nor is a water-line indicated. We may assume that the ship leaves the harbor, whereas the oarsmen rowed the ship to open waters and only then the sail was unfurled and adjusted to the optimal winds, thus to set the sailing course. The ship may symbolize a patrolling vessel along the shores of the Sea of Galilee or a merchantman.

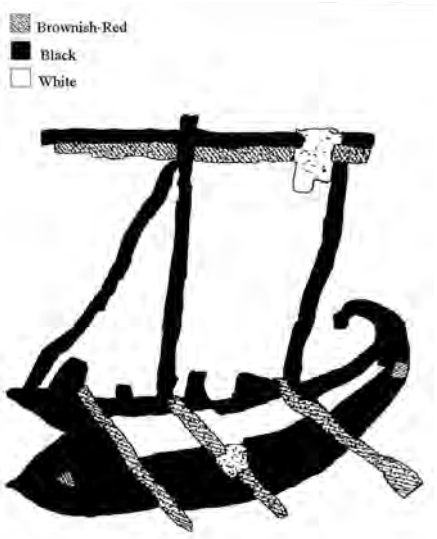

Figure 5b
Drawing of the Ship (drawing: Z. Friedman)

Discussion

Although, the ship in the Migdal mosaic is depicted schematically it provides us with valuable information that may help us to associate it to a specific type. Fishing vessels depicted in mosaic floors were quite a common subject in the sea or lakeside villas of the Roman Empire during the 1st - 4th centuries CE.[19] Most of these sites were located in North African provinces, and Italy. The Migdal mosaic decoration may be a symbolic depiction of scenes or activities specific on the Kinneret seaside. The ship appears to be shown in a 3/4 view and not in a full side view as the picture may suggest. The highly raised and narrowing stern indicates an attempt of fore-shortening (figs. 5 a, b), thus emphasizing a perspective view of the ship. Inner-volute sternposts appeared in ship iconography since the 7th century BCE.[20] This feature became a distinct element on merchant vessels from the 1st – 4th centuries CE.[21] It also appeared on some warships.[22] The inverted volute-like sternpost of the Migdal ship indicates a preserved tradition of this element that became a distinct feature of the Roman merchantmen.

Figure 6a
Kinneret Boat (photo: Z. Friedman)

The pointed stem of the Migdal Ship (figs. 5 a, b) probably resulted from the mosaicist's misinterpretation, lacking nautical knowledge and therefore not understanding properly the ship's hull. Pointed ram appeared for the first time on Phoenician ships since the 9th – 8th century BCE, as evidenced by the vessels

19 Dunbabin, 1978, figs. 16, 119, 123, 125, 150, 154; Aurigemma, 1960; Pls. 67, 69, 87, 89, 94, 95, 110.

20 Ivory fragment from Chiusi, end of the 7th century BCE; Basch, 1987, fig. 871.

21 Basch, figs. 919, 921, 1081, 1089; Casson, 1971, fig. 177.

22 Basch, figs. 971-B, 973-A.

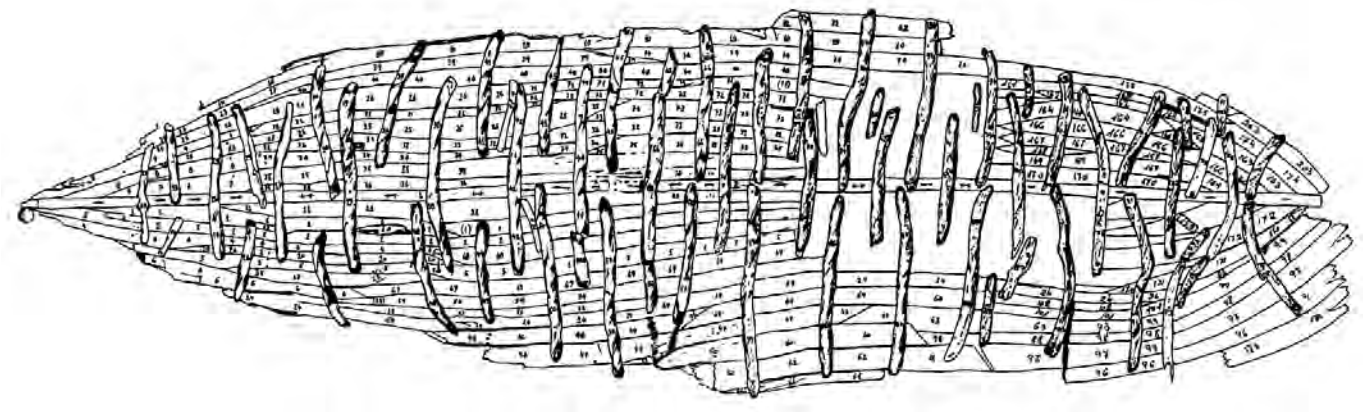

Figure 6b
Plan of the Kinneret Boat
(after: Wachsmann, Folder 1)

Figure 7
Odysseus Ship (after: Basch, 1987, fig. 882)

depicted on the wall-reliefs from Khorsabad,[23] or on Greek ships dated to the Geometric period[24]. The Hellenistic and Roman ships were fitted with two or three pronged ram. A single pointed ram on Roman warships makes its appearance shortly after the middle of the 1st century CE.[25] An earlier example of pointed broad stem similar to the Migdal ship is evidenced by a sailing ship (associated with the story of Odysseus), depicted on an amphora dated to *c*.330 BCE (fig. 7)[26]. On the port stem of the Odysseus ship is depicted an *oculus* with eye-lashes. The brownish-red tesserae placed on the port stem of Migdal Ship, also indicates an *oculus* (figs. 5 a, b). Odysseus' ship has a crew of four rowers, one helmsman and Odysseus tight to the mast. On the port hull are mounted two row-oars. Besides the time-span difference (370 – 400 years) between the Odysseus and Migdal ships, we may presume that such type of ships continued to be built in the eastern Mediterranean at least till the end of the 1st century CE. Evidently, ideas may be transferred from place to place, not only by passengers and crews, but also by the vessels themselves[27]. Boatbuilding and their handling were seen and copied everywhere since these vessels reached places through trade and/or sea combats.[28] Similarities of ship types and decorations strongly indicate that such influences could be seen on ships sailing in the Mediterranean in antiquity.[29] The closest parallel to the entire appearance of the Migdal Ship is evidenced by a ship graffito from Delos, at Maison aux Stucs (fig. 8), dated to the 1st century BCE. The sprit-bow of the Delos ship is supported by the raised stempost (at one end) and by two short spars, set on the bow (at the other end). The forestay is tight to the aft part of sprit–bow (fig. 8). The forestay of the Migdal Ship is tight to the fore part of the sprit-bow (figs. 5 a, b). The Delos ship is depicted with partly open square sail that is in raising or lowering process, as deduced from the lowered right-yardarm on the stern. Close to the edge of the right-yardarm are depicted four brails that worked the bunt. The brace is attached to the tip of the yardarm (it worked the yard and the sail to be adjusted to the optimal wind direction). The angled left-hand line, stretching between the left-yardarm and the aft end of the sprit-bow, may indicate the left brace or the leech of the lowered

23 Casson, figs. 76, 78.

24 Casson, figs. 30, 62, 64-66, 68, 72-74.

25 Casson, p. 146 and n. 22.

26 When using comparable evidence in any art form, we have to relate to examples that come from earlier periods than the subject in discussion and not later; e.g. the Migdal mosaic dates to the 1st century CE, and therefore we can't make comparison to later mosaics with similar scenes and dated to the 2nd – 4th centuries CE.

27 Lucian, *The Ship* 1-4; Athenaeus, v.204-209.

28 Friedman, 2006, p. 141.

29 Friedman, 2006, p. 141.

sail. The main propulsion of the Delos ship is provided by twenty-eight row-oars (fourteen oars are mounted on each side of the hull). The blades are missing, or probably are submerged in the water. We may conclude that the crew comprised twenty-eight rowers, one helmsman and the captain. The Delos ship missies its steering-oar (fig. 8) or it is not as distinct as in the Migdal Ship (figs. 5 a, b). The crew of the Migdal Ship is suggested symbolically by the four protruding heads above the gunwale. We may assume that the Migdal ship may have had a larger crew, comprising at least twenty-eight rowers, the helmsman and the captain, similar to the Delos ship (a total of thirty crew men). The slanting shafts of the row-oars may indicate that the rowers in the Migdal ship are facing the stern, and their backs are turned to the stem. Apparently, this depiction shows that each rower works one oar in *one/sit/pull* technique.[30] The helmsman seating beneath the inverted volute sternpost and facing the stem worked the steering oar (figs. 5 a, b); he also may have supervised and instructed the rowers, thus serving also as *keleutes*. The ship probably leaves the harbor and therefore the crew rowed the ship while the sail is still furled. When the ship reached open waters only then the sail was opened and adjusted to the proper wind direction. Both Migdal (figs. 5 a, b) and the Odysseus ships (fig. 7), indicate small to medium size vessels (5 – 120 tons, load capacity), mainly propelled by a square sail, whereas the row-oars appear to be auxiliary equipment used only when the winds failed or entering/leaving harbors. The Delos ship appears to represent a small size warship, probably a type of *liburna*, patrolling along the eastern Mediterranean shores, or transporting supplies and warriors for the navy. The sail was used when the vessel had not been engaged in sea combat or in faster movement. We may assume that the Migdal Ship had dual function, being an auxiliary in the navy stationed along the shores on the Sea of Galilee, or trading goods on the Sea of Galilee, or engaged in fishing. The writer may suggest that the Migdal Ship probably represents a more specific class known as *myoparone*. In ancient literature is mentioned that such vessels were fighting ships of no size and were used throughout the Mediterranean in the 1st century BCE.[31] One of the earliest pictographic evidence of a *myoparo* type appears in the Althiburus mosaic, Tunisia and dated to the 3rd century CE[32]. From the writings of Josephus, we may conclude that Migdal *myoparo* type may have been engaged in the Jewish Revolt sea combat in 67 – 70 CE.

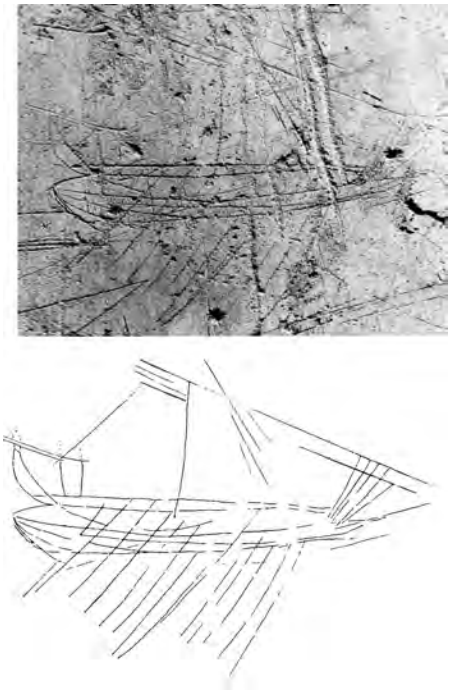

Figure 8
Delos Ship (after: Basch, 1987, fig. 804/41 Maison aux Stucs)

The load capacity of Migdal Ship may be deduced from the results of anthropological studies on skeletons dated to Josephus' period. These studies showed that the average weight of men was 62-67 kg[33]; e.g. only the crew of fifteen men weighted about one ton. Such vessels when fully loaded with warriors (at least fifteen *hoplites* or *epibatai*) and their full gears had a draft of over five tons. An additional source of information for the size of the Migdal Ships may be related to the unique, yet, wooden Kinneret Boat that was excavated in 1986.[34] It was

30 McGrail and Farrel, 1979, Table 1, p. 157, fig. 6, p. 160.

31 Torr, 1964, p. 119; *myoparone* ships apparently were hybrids of long ships (warships) and rounded vessels (merchantman).

32 The mosaic floor with the *Catalog of Ships*, at Althiburus, Tunisia (a mountain site about 200 km, inland from the northern coast), belonged to a shipper's association, or a bath-floor, or the villa of a very wealthy ship owner. The catalogue comprises twenty-seven vessels of different types and sizes, the majority are followed by Greek or Latin names; Gauckler, 1905, p. 132; Dumbabin, 1978, p. 128.

33 Zias, 1990, p. 125; Wachsmann, 1988, p. 32.

34 Wachsmann, 1988, pp.18-33; Steffy, 1990, pp. 29-47. The discovery of the boat was possible due to the "dry" periods of greatly reduces rainfall in the area (1985 – 1987). During this period the water level receded drastically to -211m (bellow the Mediterranean sea-level).The preserved hull was 8.2 m long, a breath of 2.3 m, and 1.2 m deep at the stern. The boat was built in the Mediterranean "shell-first" tradition. C-14 analysis of wooden samples were dated to 40 BCE±80; Carni, 1990, p. 128.

a fishing boat, whereas the Migdal Ship may represents a small to medium size auxiliary vessel or warship (*myoparo*), patrolling along the shores of the Sea of Galilee, or a merchantman (*navis oneraria*) to transport cargo and/or passengers along Lake Kinneret shores. The vessel in the mosaic and the Kinneret Boat belong to the same period, the 1st centuries BCE - CE. We may conclude that the Migdal Ship was built in the "shell-first" Mediterranean tradition as augmented by the excavated Kinneret Boat.

The Migdal mosaic (2.8 x 2.6 m) indicates that it was made in the *direct technique*, at its original location. We may suggest that all the objects depicted in the same orientation, were made intentionally by the mosaicist, therefore referring to a stationary viewer (fig. 4). Each object may be viewed individually, but together they all create a whole picture. Depiction of strigili, aryballos, and cantharus, are bath-floor themes. The ship, two grounding-mills?, and the fish indicate themes of trade and commerce nature. This mosaic is an allusion to the occupation of the villa's owner, or it hints to the function of the room as the office of a trader or shipper trading in the Sea of Galilee and in the eastern Mediterranean. The Greek inscription "*kai su*" on the doorstep was intended as an *apotropae* for the household and the business. The mosaic work indicates that the artist was a local artisan trained by a Roman expert craftsman, or probably he followed Roman traditions of mosaic making, or he had used patterns from circulating pattern books.

Conclusion

The archaeological context of the Migdal mosaic with the ship depiction was dated to the 1st century CE. The ship is a symbolic representation of a small to medium size vessel with dual function. It was propelled by wind on its voyages, while the oars were auxiliary gear use only when entering/leaving harbor or when the winds failed. The Migdal Ship may have been used as an auxiliary vessel in the navy stationed on the shores of the Sea of Galilee (patrolling or transporting of supplies and warriors). This ship also could be engaged in maritime trade on the Sea of Galilee or even fishing. It was built in the Mediterranean "shell-first" tradition as evidenced by the Kinneret Boat. We may suggest that the ship may represent a more specific type known as *myoparo*.

The mosaic technique apparently following the black-and-white style may suggest that the owner of the villa was familiar with this art, especially known in Italy (1st – 3rd centuries CE). The mosaic also may indicate that for economic reasons the villa's owner used local available materials: black from basalt stones, originating in the area of the Kinneret, Galilee or the Golan Heights, while the white and the brownish-red were provided by the local limestone. The ship associated with the other objects in the mosaic (strigili, aryballos, cantharus), emphasis theme of bath-floors. Both grounding-mills?, the fish and the ship may symbolize the owner's profession, who probably traded in fish, as it may be deduced from the ancient name of Migdal Nunia or Taricheae. Apparently the artist who made the mosaic had first-hand information from the vessels sailing on the Kinneret or he may have used a pattern book depicting vessels in the Mediterranean style. The state of the mosaic's preservations indicates that the villa was abandoned before the iconoclasm (in the 8th century CE).

Although the Kinneret is a small body of water, it had an active maritime life, as indicated by the writings of Josephus, the ship depicted in the Migdal mosaic and the Kinneret Boat.

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Islamic Re-use of Antique Mosaic Tesserae

Michael Greenhalgh*

Such large quantities of antique mosaics survive around the Mediterranean that an obvious question is whether they had any influence on decorative art in the Middle Ages, in style or material. This question has sometimes been studied for the West and Byzantium; but by the Millennium, it was Islam rather than Byzantium or any of the states in the West that occupied the largest number of mosaic-rich sites of the Roman world. What might Islamic re-use of antique mosaic tesserae tell us about the further development of this medium?

This paper surveys the evidence for the re-use of antique tesserae, examining some of the ways in which the medium was used, on the outside and inside of buildings, and on both floors and walls. It discusses the various possible sources of the tesserae, the evidence for mosaic trading far and wide, and tesserae collection as war booty. It concludes with an overview of the specifically Islamic speciality of jigsawed cut-stone mosaic portals and façades, which were still being constructed in 16th-century Cairo - a cleverer and more sophisticated form of mosaic than any to be seen in Christendom, and surely using ancient marble offcuts.

Akdeniz çevresinde bu denli çok antik mozaik kalıntısı bulunması; bunların Orta Çağ betim sanatına stil ya da malzeme bakımından etkisinin olup olmadığı sorusunu ortaya koymaktadır. Bu soru Batı bölgeleri ve Bizans İmparatorluğunu kapsayan coğrafyada araştırılmıştır, ancak İ. S. 1000 yılından itibaren, Roma dünyasının mozaikler konusunda zengin olan şehirlerinde ikamet eden Bizans ya da diğer batı uygarlıkları değil İslam dünyası olmuştur. Buradaki soru; acaba, bu antik mozaik tesseraların İslam kültüründeki tekrar kullanımı bize mozaiklerin daha ilerki gelişmeleri ile ilgili neler anlatabilir?

Bu makalede öncelikle Antik dönem mozaik teseralarının tekrar kullanım belgeleri araştırılmaktadır ve hangi parçaların binanın dışında ya da içinde, zeminde ya da duvarlarda kullanıldığı incelenmiştir. Ayrıca, tesseraların çeşitli olası kaynakları tartışılarak, mozaik ticareti konusundaki belgeleri ve tesserae kolleksiyonlarının savaş ganimeti olarak ele geçirilmesi olasılıklarını sorgulamaktadır. Makale, 16. yüzyıl Kahire'sinde kullanımına devam edilen belirli bir biçimde İslami dünyaya özgü oyma testeresi ile kesilmiş taşlardan oluşan mozaik revakları ve ön cephelerin –Hristiyanlıkta görülen mozaiklerden ve çok daha zarif ve gelişmiş bir mozaik üslubu- özet bir anlatımı ile bitmektedir.

Keywords: marble; re-use; mosaics; Jerusalem; Damascus; Cairo

Introduction

Of the thousands of studies devoted to mosaics, few deal in any detail with those designed by mediaeval Islam. This is surprising even on the simplest grounds (survival, documentation and quantity), for Islam is predominant in large areas of the erstwhile Roman Empire, with more survivals in standing monuments than anywhere in Christendom (Byzantium included), and a better documentation, partly bolstered by Moslem attachment to large inscriptions, which generally offer dates. And although many Islamic complexes have disappeared (the original Al-Aqsa (707ff), the 8th-century palaces in Damascus, Jerusalem (730s) and Samarra (mid-9thC)), yet many have survived, from the Umayyad Mosque in Damascus (706ff) and the Dome of the Rock in Jerusalem (687ff) to the Mezquita in Córdoba (785ff). There is of course no doubt that church (and perhaps less frequently palace) walls were extensivly covered with mosaics in Christendom, but nothing survives in quantity to match the dates of the Islamic monuments listed above, although spectacular floors survive at Madaba and Umm Al-Rasas.

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Figure 1
Haghia Sophia church, Iznik, mid-6thC: interior: intact mosaic floor in a city large portions of which were spoliated – So may we assume spoliators were not interested in this type of floor?

Four general arguments may be applied to the use of tesserae in the Islamic world, and to their likely re-use. The first is that, given the recycling of other precious materials including coinage,[1] glass,[2] and marble (Greenhalgh 2008), it would be strange if tesserae were not re-used, not only for original works, but for later restorations.[3] Certainly, Roman tesserae were reused in Byzantine enamels (Freestone 2007), were stockpiled for re-use in Palestine,[4] and were scavenged for Damascus, and some of them then used yet again (Flood 1997, 70; Flood 2001a, 24). At Haghia Sophia in Istanbul, there is evidence of earlier tesserae re-used in the 10thC mosaics (Ozil 2000); and elsewhere late compositions dis-

1 Gondonneau 2002, 588: "until about ad 750 all of the Islamic world recycled the previous coins: Byzantine and Sassanian coins in the Orient, Byzantine coins in North Africa and Visigoth coins in Spain. During the transition period between the end of the Ummayad dynasty and the arrival of the Abbasids (around ad 750), we have observed a change in the silver and gold supplies all over the Arab Empire."

2 Schibille 2008, 638: "potentially indicating the recycling of Roman glass or even the reuse of whole window-panes as spolia. The use of spolia is well attested in Petra … and the reuse specifically of window glass seems to be very likely."

3 cf. Flood 2006, 516: "Mamluk interest in this archaic art can be directly linked to the impact of the Umayyad monuments of Syria, which were repeatedly restored and renovated during this period. Glass mosaics were among a range of features that were integrated into Bahri Mamluk monuments with the intention of appropriating some of the kudos of the early Islamic structures for their mediaeval successors."

4 cf. Shugar 2000, 383: ca.95 litres of tesserae were uncovered in a tunnel at Beat Shean: "The tunnel is interpreted as being a storage facility for tesserae reclaimed for recycling and supporting evidence is provided. This should alert future investigators to the possibility that tesserae collected from a single mosaic can derive from either a single batch or from multiple sources if they were stored and reused." Cf general discussion in Henderson, Julian, The Science and Archaeology of Materials, London 2001, 67ff.

Figure 2
Umayyad Mosque, Damascus, 709-15: The "treasury" in the courtyard. All the marble elements are in re-use, so may we assume the same about the mosaics" damascus_umayyad_treasury.JPG – AD 709-15

play more re-use than earlier ones.[5] A similar argument applies to their import, given the long distances over which – for example – lead[6] and ceramics[7] were imported, and the likelihood that in any case mosaic-workers were probably (like marble workers and masons generally) by nature itinerant.[8] Thirdly, it is now considered likely that Islam in Syria, far from killing mosaic production and the churches they decorated, stimulated what Balty calls a "renaissance,"[9] and sometimes shared churches for worship, as perhaps at Tamra (Lower Galilee), where it is surmised that a Greek mosaic inscription was laid to cover a mosaic with birds (Di Segni 2004). In this (and in their taste for spoliated marble) they followed in the footsteps of the Persians before them (Foss 2003, 157, 159, 162). And finally, it is clear that mosaic floors (whether iconic or aniconic, and

5 Vandini 2006, 591: results from a wide variety of sites confirm "the lack of homogeneity of the late Byzantine tesserae … this can be explained by the re-use of tesserae from previous decorations and/or by supposing partial remelting of more ancient glass."

6 Wolf 2003 Synopsis: "most probably obtained from distant ore sources in Iran or Tunisia, Sardinia, Spain and the Taurus Mountains … at no time did the Fustat potters use the potentially more accessible Egyptian ore sources."

7 Bobin 2003, Synopsis: "*probably came from Mesopotamia, from a major production centre, possibly Baghdad, Samarra or Basra*." See 570: Saladin & Marçais established via texts that the monochromatic tiles were made in Kairouan by a craftsman from Baghdad, and the polychrome ones in Baghdad, Basra or Samarra – so their sources turned out to be trustworthy.

8 Alföldi-Rosenbaum 1980, 5 suggests that the mosaicists had worked in Greece before they went to Cyrenaica.

9 Balty 1977, 10: "Loin de porter un coup fatal à l'art de la mosaïque, la conquête arabe semble au contraire avoir donné aux derniers mosaïstes byzantins et à leur héritiers l'occasion de développer sous la dynastie omeyyade une ultime "renaissance." d'un singulier éclat ... Dans les schemas seculaires du repertoire classique, les Omeyyades ont en effet trouve les moyens d'expression de leur vision intime: en se les appropriant, ils leur ont insufflé une vie nouvelle."

irrespective of any iconoclasm) went in and out of fashion, for there are several instances where such (Christian) floors were covered over with marble slabs, as in the Atrium Church at Apamea (Foss 1997, 211-14). [10]

While for artworks true documentation is as lacking in Islam as it is in Christendom, some narrative accounts have survived of how tesserae were obtained, allowing some sensible guesses about availability and re-use. This paper surveys the various sources of tesserae (abandoned villas, churches, diplomacy, booty), and then the evidence for the mechanics of how the cubes got onto the walls, floors and domes of Islamic buildings. It then offers a brief outline of the florescence of marquetry mosaic especially in Aleppo and Damascus, as an indication of an invention which distances Islam from any Graeco-Roman tradition, although probably using mostly old marble. The conclusion is that Islam did indeed re-use ancient tesserae, occasionally but not always in designs imitated from Byzantium or Rome.

Sources of mosaic tesserae

The first recourse for hunters of tesserae and marble would have been abandoned Roman villas or cities, which were common in many now-Islamic lands. The longevity of Roman ways of life in some parts of Africa provided exempla for Moslems. In Tunisia, for example, floors and walls were often of mosaic tesserae, and some very splendid complexes survive, such as the House of Lucius Verus at Thysdrus. Some villas were apparently refurbished at the beginning of the 7th century, such as the Casa dei due Caccie at Clipea (today Kelibia, conveniently by the sea), and some villas at Carthage were certainly still in use (Bullo 2003, 285-7, 80-3) – models, perhaps, of splendid living to inspire Moslem palace-builders. Further west, on the coast of Morocco, the Roman remains have disappeared, and we might suspect that they went into mosques and palaces. One such is Sala (the lair of the "Sally Pirates"), of which Al-Idrisi (1173-1251) writes that the city "is today in ruins. Remains are to be found there, still standing, of monuments and imposing temples." Ibn Abd Al-Mun'im notes it was on the edge of the sea, with "numerous antiquities, chateaux, vaults, etc" while at Tandia "much marble and large cut stones were [note past tense] to be found" (Siraj 1995, 109, 117).

Scavenging abandoned antique sites was the main method of acquiring tesserae and other marble materials, and there is narrative evidence of the process, but with no specifics about the sites thus treated. At Damascus, for example, the Umayyad Mosque was to be roofed in lead, and prospectors went out to look for re-usable material, particularly in sarcophagi, for lead was not natively available in Syria, and hence supplies of this essential material had to be sought from spoliation.[11] At one site (unnamed) they found a stone vessel with a lead coffin inside – but when the corpse started bleeding from the mouth they ran away in terror (Sauvaire 1896, 196). This is surely a fanciful tale, yet it is likely that lead was indeed obtained from Christian cemeteries, even if Umm-Al-Rasas is not to be translated as "mother of lead" (Piccirillo 1994, 26). Lead would also be used

Figure 3
Madrasa Al-Firdaws, Aleppo, 1235-41: Mihrab

Figure 4
Madrasa Al-Firdaws, Aleppo, 1235-41: Mihrab, detail

10 Presumably the practice was widespread, for the tombaroli at Umm Al-Rasas removed such slabs to get at tombs beneath the earlier mosaic floor: cf. http://198.62.75.1/www1/ofm/fai/rasas99.html.

11 The lead for Damascus must have been scavenged if we are to believe Yakut, writing in 1225 notes (Le Strange 1890, 262) that "Al Walid ordered that it should he roofed with lead. And they brought lead from all lands to accomplish this, but at the last a piece (of the roofing) remained, for which they could find no lead, except some that belonged to a certain woman, and she refused to sell it except for its weight in gold. And the Khalif commanded them to buy it of her, even though it were (at the price of) double the weight in gold. And they did so."

Figure 5
Madrasa Al-Firdaws, Aleppo, 1235-41: Mihrab, detail

for fixing veneer (already seen at the Dome of the Rock[12]), as well as for fixing bases to columns and capitals to columns.

There are some instances where new buildings went up using the materials from those knocked down to make way for them. Such reconstructions follow from a desire to use monolithic columns as supports because, lacking special arrangements, they cannot be moved without destroying what they support. In most cases, however, it is not known where the material went. Qasr Al-Hayr West, for example, is now a shell with some stucco and fresco-as-marble-panel fragments; its antique decorated marble doorway lintel and jambs survives, but the marble and mosaic have been robbed out.[13] In one case, however, we do know: Yaqut writes of Al-Hayr, a palace at Samarra, on which Al-Mutawakkil spent 4m dirhams. "Then Al-Musta'in gave the materials from its demolition to his wazir Ahmad b. Al-Khasib" (Northedge 2005, 304). Just as in the mediaeval West, as far as we know there are no instances of ancient mosaic floors being transported and relaid intact, although at several sites pagan or Christian floors were left intact and the Moslems simply moved in and used them, as we have seen.

Ibn Batuta, writing nearly seven centuries later, states that the builder of the Umayyad Mosque at Damascus, Al-Walid I (705-15) "applied to the Roman Emperor at Constantinople, ordering him to send craftsmen to him, and the Emperor sent him twelve thousand of them" (Ibn Battuta 1958, I., 46). In another

12 Wilson 1865, 22: "The slabs are fastened to the stone by metal cramps, run in with lead , a good even bed of mortar having been prepared to receive them."

13 The site is being excavated: cf. http://www.slsa.ch/Projekte/QasrAl-HayrAl-SharqiE.htm.

Figure 6
Zahiriyya Madrasa and Mausoleum of Sultan al-Zahir Baybars, 1277-81: interior with various types of mosaic in costly marbles and mother-of-pearl

account, Mas'udi (writing 943) points to the Church of Mary at Antioch as the source for some of the antique marble for Damascus: "a round church, and one of the wonders of the world for the beauty of its construction and its height. The Khalif Al Walid, son of Abd al Malik carried off from this church a number of marble and alabaster columns, of wondrous size, to place in the Mosque at Damascus. They were transported by water down to the coast near to Damascus. The greater number of the columns, however, still remain in the Church at Antioch, as may be seen at the present day" (Le Strange 1890, 368). In yet another variation, Al-Muqaddasi relays that Al-Walid, "in order to construct these mosaics, brought skilled workmen from Persia, India, Western Africa, and Byzantium … And this does not include what the Emperor of Byzantium and the Amirs of the Muslims gave to him in the matter of precious stones and other materials for the mosaics" (Le Strange 1890, 228). So if the marble architectural elements supporting the "Treasury" in the courtyard (Figure 2) are in re-use, may we assume the same about the mosaic tesserae?

The nature of the mosaics, which might equally be found in a church or a Byzantine palace,[14] supports this story. He paid large sums "for the purchase of spectacular marbles, paving the courtyard with marble and the walls with da-

14 Grabar 1992, 190:"il n'y a rien d'islamique dans ces mosaïques, rien qui n'aurait pu être fait pour une église chrétienne ou un palais byzantin." The same might be said of the mosaics uncovered in 2000 at Qastal (Bisheh 2000) or indeed of Qasr Al-Hallabat, although the elements are although put together in unusual conjunctions. Indeed, the author (Bisheh 1993, 55) writes of Qasr Al-Hallabat: "Had it not been for the archaeological evidence, one would be inclined to attribute them to different periods" – so is it conceivable that some elements of these floors are indeed relaid from earlier buildings?

Figure 7
Zahiriyya Madrasa and Mausoleum of Sultan al-Zahir Baybars, 1277-81: interior with gold mosaics and opus sectile marble panelling

does of variegated marbles" (Ibn Hawqal 1965, I.172), a large part of which probably went on transport. Like his father, Abd Al-Malik, who supposedly used the revenues of Egypt for seven years to pay for the Dome of the Rock, Al-Walid also assigned to the construction seven years of the tax revenues of Syria. Whatever their source and the home of their craftsmen, the classical nature of the mosaics' vocabulary meant that "there is little that could not have been found in the architecture of the eastern Mediterranean in the preceding two centuries, if not four centuries earlier in Constantinian Rome" (Flood 2001a, 200). Indeed, there were churches in Syria ornamented with mosaics on the exterior. Ibn Butlan writes (1051) that "The palace called Kasr Rusafah is a fortress only second to the abode of the Khalifate at Baghdad. It is constructed of stone. Within it is a mighty church, the exterior of which is ornamented with gold mosaics, begun by order of Constantine, the son of Helena" (Le Strange 1890 522). The mosaics of the Dome were probably intended to recall Byzantium, and certainly did so for Al-Harawi (d.1215), who said he had seen work similar to that in the central cupola in the lands of Rum, although no mosque equalled this one (Al-Harawi 1957, 38f). Writers in this later, Mamluk period were alert to mosaic decoration because it saw a revival of Umayyad forms – as for example, in the Mausoleum of Baybars I (d.1277; monument 1281). This monument is rich in gold and marble mosaics, with not only an extravagant portal (Figure 10), but also a rich interior, with mosaic mihrab (Figure 8) echoed by hoods over the door (Figure 9). The structure is a fitting decoration for the structure of a man who paid for the restoration both of the Umayyad Mosque in Damascus (almost adjacent) and the mosaics of the Dome of the Rock in

Figure 8
Zahiriyya Madrasa and Mausoleum of Sultan al-Zahir Baybars, 1277-81: interior hood of mihrab

Jerusalem.[15] The surviving fragmentary mosaics in Baybars' Mausoleum (Figures 6 & 7) give some idea of the building's initial splendour – not necessarily an attraction for pious Muslims. Thus Caliph Umar (717-20), frugal and public-spirited as well as pious, supposedly pondered selling the mosaics if he were sure he could recoup the outlay for the public treasury (Mas'udi 1965, II 262ff). If this did happen, then we may deduce both that there must have been an active market in mosaic tesserae (to beautify probably Muslim buildings of which we know nothing), and that even in its initial form old materials were added to beautify the mosque. The Byzantine flavour of the mosaics suggests that Byzantine craftsmen really did work there, perhaps for motives of snobbery and/or triumphalism (Grabar 1964, 82f); and early 8th-century papyri from Aphrodito in Upper Egypt detail the responsibility of the governor there to send men to Damascus (as well as to Jerusalem) and to pay for them (Elad 1995, 37ff).[16] Hillenbrand points out (Hillenbrand 1999, 134) that this corvée system was a channel for the introduction of foreign forms and motifs to Syria, and we might add that it was not unusual for emirs to be called on to provide materials and workmen for construction projects, as with Alaeddin Keykubad's construction of the city walls of Konya, which in this case certainly included antiquities (Huart 1897, 174f). In the case

15 Flood 1997, 60: "it is likely that the art of glass mosaic was revived following the restoration of the Dome of the Rock (beginning in 1261) and the Great Mosque of Damascus (in 1269);" and then 66: "Such programs of work on the mosaics of both buildings may be convincingly corre- lated to the use of the same medium in the decoration of contemporary Mamluk buildings" – although it is likely that Saladin was collecting tesserae fromm the Christians of Jerusalem over a generation earlier. But NB Flood is dealing only with glass tesserae.

16 Grabar 1996, 211 note 34 points out that the Aphrodito papyri do not state that the "palace" was in Jerusalem - and, in any case, the word used should be translated as "aula" or "hall."

Figure 9
Zahiriyya Madrasa and Mausoleum of Sultan al-Zahir Baybars, 1277-81: interior hood over door, with wall mosaics

of Syria, the antique marble would have had to be imported, apart from the quantities that could be scavenged from the decoration of local Roman and Byzantine structures. Al Walid also embellished the Prophet's Mosque at Medina, in its 707-10 rebuilding, when again he supposedly received materials from the Byzantine Emperor, and also green, red and white marble from Syria (Flood 2001a, 197f). Al-Baladhuri writes (1916, I, 20) that after Uthman's rebuilding of the mosque ("making its columns of stone") Al-Walid wrote to the governor there and told him "to destroy the mosque and reconstruct it. Meanwhile, he forwarded to him money, mosaic, marble, and eighty Greek and Coptic artisans from Syria and Egypt."[17] According to Al-Tabani, the earlier structure was pulled down in 707, and "Al-Walid had sent to inform the lord of the Romans that he had ordered the demolition of the mosque of the prophet, and that he should aid him in this work. The latter sent 100,000 mithqals of gold, and sent also 100 workmen, and sent him 40 loads of mosaic cubes; he gave orders to search for mosaic cubes in ruined cities and sent them to Al-Walid." Al-Maqdisi noted (repeating Al-Muqaddasi's comment, hence suggesting a common source) that at Medina "the walls of the porticoes are covered on the outside with mosaics. Craftsmen from Syria and Egypt were brought there for the purpose and their names are still to be seen there" (Bisheh 1979, 158, 162, 202f., 206). This follows Christian practice, for churches in Syria/Palestine had wall mosaics, and glass tesserae have been excavated at Apamea, Bosra, Bethany, Pella and Petra (McKenzie 2007, 359). At least some of the marble imported from Byzantium might have been veneer,

17 Al-Baladhuri 1916, I, 21 also notes that "In the year 246, caliph Ja'far al-Mutawakkil ordered that the mosque of al-Madinah be repaired. Much mosaic was subsequently carried to it; and the year 247 marked the completion of the work."

Figure 10
Zahiriyya Madrasa and Mausoleum of Sultan al-Zahir Baybars, 1277-81: exterior portal with marquetry marble decoration matching the intricacy of the limestone muqarnas

and used for the Prophet's tomb as well as the mosque, for Ibn Jubayr praised the veneers there which were similar to those he had seen at Mecca (Ibn Jubayr 1952, 86ff, 199); but just how accurate is Sauvaget's very Roman-looking opus sectile reconstruction of the prayerhall walls is impossible to determine.

In many areas Moslems lived day by day with Christians, the large implantation of whose churches could often provide useful materials, as well as inspiration.[18] There are plenty of examples of the takeover of marble-rich churches, even late ones such as the Panaghia in Antalya, and of the reworking as well as re-use of antiquities (Grassi 1990, 93-107, 111f). At several sites, evidence suggests re-use from Christian structures, probably close-by – such as the relief crosses on some of the pillars at Khirbat Al-Mafjar, the chancel-screen balustrades on the second storey of the same building, or the fragmentary Greek inscription on the jambs of the entrance door at Qasr El-Kharanah. Such re-use is far from unusual – witness the several examples of Crusader sculpture (including figured ones) in various of the monuments of the Haram in Jerusalem (Jacoby 1982, passim). At Khilda-Amman (Jordan), a new church was constructed atop an older one, and "the walls of the new rooms were built directly on the top of the mosaic pavement … Later on, the mosaic pavement was almost completely removed and only those parts of it that were under the walls or covered by a thin layer of plaster were preserved … In the south apse the mosaic floor was completely

18 Mouton 2006, 50 for the church on the site of the Burning Bush: "elle est très vaste, la charpente est supportée par des colonnes de granit dur, et l'autel est constitué d'une dalle de marbre reposant sur un support semblable. Et, en-dessous, se trouve le buisson ardent, qui est l'emplacement du buisson où Dieu parla au prophète Moïse. Le sol est pavé de marbre blanc et les murs sont revêtus de marbre polychrome, jusqu'au sommet."

Figure 11
Maristan Arghun, Aleppo, 1354-5: courtyard with marquetry marble

removed." What is more, "The whole floor of the atrium was most probably also paved with plain mosaic. In its northern part the mosaic floor was completely removed except for a small segment that was under the threshold of a door to one of the Mamluk rooms. In this area not only the mosaic floor, but also the bedding was dug out down to the bedrock which was leveled and used as floor for one of the Mamluk rooms. All these activities took place during the Mamluk period" (Najjar 1994, 549f, 554). Mosaics were also used in Moslem buildings there: Al-Muqaddasi recording (Le Strange 1890, 391) that at Amman "In the city near the market-place stands a fine mosque, the court of which is ornamented with mosaic." At Tiberias, new houses built after the 749 earthquake included one with "a plain but attractive coloured mosaic floor, with a central medallion featuring intertwining bands" (Walmsley 2007, 78f). In the Church of the Lions at Umm Al-Rasas, the western section of the floor and large parts of the nave tesserae were completely removed, probably during the site's occupation as housing (Piccirillo 1992, 203, 211). Such removals suggest that the tesserae were targeted for re-use, especially if the removers had an eye for quality, since the Umm Al-Rasas floor was "per finezza di esecuzione resta uno dei capolavori dei mosaicisti operanti nella regione di Madaba nella seconda metà del VI secolo." Against this should be set floors which were left strictly alone, as with the Justinianic opus sectile floor in Haghia Sophia in Iznik (Figure 1) – and this in a city which was extensively spoliated.

In occasionally appropriating Christian buildings, Islam simply followed Christian practice in appropriating pagan buildings, sometimes with refurbishments, sometimes not. The "East Cathedral" at Apamea (where the whole of the two-kilometre-long main street appears to have been mosaiced) has its small marble paving stones laid directly on top of the beautiful mosaics of what is believed to be the famous school of philosophy in which it is built; so was this done in order to erase its very memory? Or is it just part of the common practice of laying new floors on top of older ones?[19] On the other hand, the five-aisle church in the courtyard of Basilica III "of Servus" at Sbeitla (Tunisia, with many surviving monuments) takes over part of the colonnade, with the cella of the temple

19 Balty 1977, #40: geometrical floor in the museum at Apamea, from the pagan building under the cathedral; # 8: geometrical floor, Apamea, house in insula V.10, 2nd half 3rdC – both of which would also have been perfectly suitable for any Moslem building. The same applies to other sites: cf. Germain 1969 for Timgad.

becoming the baptistery; the same thing happens at Thuburbo Maius, where the church uses the south colonnade of the temple courtyard for its own.

Many of the settlements the Muslims founded were located in or near ruined antique cities or Christian sites, and appropriation was a common practice,[20] including living in abandoned churches.[21] Especially in Andalucía, there are more "continuing" towns than new Islamic ones,[22] and this was perhaps part convenience, part emulation, since markers for the prestige of an antique site were large or enormous cut stones, Latin and Greek inscriptions, and Roman walls (Siraj 1991, 929ff). Islam generally left functioning churches alone, but appropriation (with payment) was sometimes practised, and disused churches and those of rebellious subjects were considered fair game for plundering. Minarets attached to erstwhile churches are one sign of takeover.[23] It is conceivable, but not provable, that the Dome of the Rock's mosaics did indeed come from stripping local churches, thereby providing overtones of triumph to echo the great old columns. Certainly, churches in the vicinity did have mosaics, as at Bait Lahm between Jerusalem & Bethlehem, where Ali of Heart writes that "There is also a church most wonderfully built with marble, and gold mosaics, and columns" (Le Strange 1890, 299). At Fa'lul, in Syria, the apse windows of the church had lintels of yellow marble in Butler's day, and he believes this was the source of the column-shafts of yellow marble and the white marble Corinthian capitals in the building to its south, when it was converted into a mosque (Flood 2001a, 200). At Jerash, of the remains of some thirteen churches, "Most of the inner walls of these churches were cased in marble, coloured limestone slabs, painted plaster and sometimes glass mosaics; little but the holes into which the slabs were pegged now remain…" (Harding 1967, 100). And Ibn Jubair writes in his diary that "Bait Lahiyyah, or Libya, lies east of Damascus … In ancient times there was a church here, which is now a mosque. It was of old the temple where the father of Abraham made his idols and kept them. But Abraham came and broke them to pieces. The temple is now the mosque of the inhabitants, and its roof is beautifully ornamented with mosaic of coloured marbles" (Le Strange 1890, 413).

At Damascus, the fitting-out of the mosque was carried out employing old columns, sheet veneers, and mosaic tesserae, and was very expensive. We might imagine that some materials came from the adjacent Byzantine palace.[24] The conversion was to the presumed displeasure of the Christians whose church had occupied part of the site and whose expulsion after years of worshipping amicably together had the flavour of a pre-emptive strike. For supposedly when Umar became caliph, he wrote to Damascus "to his 'amir ordering him to return to the Christians that part which he had added to the mosque from their church. The people of Damascus disliked the idea saying, "Shall we destroy our mosque after we have called to prayer and held service in it?" (Al-Baladhuri 1916, 192).

Figure 12
Al-Atrush Mosque, Aleppo, 1393ff: exterior window with ablaq masonry and marquetry marble

20 Examples from the Maghreb in Wheatley 2001, 300-1. At Dumayr (Jordan), sarcophagi (?from a nearby church) are used as pillars: cf. Genequand 2001.

21 As with the late Umayyad-Abbasid houses at Umm al-Rasas: cf. http://198.62.75.1/www1/ofm/fai/rasas99.html and http://198.62.75.1/www1/ofm/fai/2005.html. The mosaics at Madaba came to light when the town was reoccupied by Christian families in 1880: http://198.62.75.1/www1/ofm/fai/FAImadab.html.

22 Pavón Maldonado 1992 for listings - 17+ new as against 59+ built on earler towns.

23 King 1983, 133ff for the minarets; 125f some mosaic cubes found in the apse of SS Sergius & Bacchus (at Umm Al-Surab), with tesserae of white and pink marbles, and glass in blue-green, green and yellow-green - the rest surely robbed out.

24 Flood 2001a, 149 writes of the Byzantine palace adjacent the mosque, the rich decoration of which included "simple polychrome floor mosaics, opus sectile pavements, and stained glass, gives some idea of how the Khadra might have been embellished" - viz. the Umayyad Palace.

The objection indicates the extent of the refurbishment, and an element of triumphalism, for competition with Christianity could be engaged by building mosques more splendid than churches, in many cases probably using materials from churches. With old capitals (Wilkinson 1987, passim), columns, mosaic tesserae and marble floors,[25] the Dome of the Rock was certainly intended to outshine the Church of the Holy Sepulchre below, and to attract the attention of Christians.[26] The Fatimid Gate of David also displayed polychrome mosaics including an inscription (Kaplony 2002, 610ff) to echo those of the Dome. The Dome's exterior shows it to be an early exhibitor of monumental inscriptions (context in Blair 1998, 29ff), later echoed by the prayer hall at Damascus, its inscription now lost (Golvin 1970, I, 135). Christian mosaic inscriptions were generally small-scale, but some exceptions might have provided inspiration: at S. Simeon, for example, the great pilgrimage church near Aleppo converted into a fortress by the Moslems, the marble floor of the central nave has a mosaic inscription 7.84m broad (Obermann 1946, passim). So the erection in the 12th century of a dome on the Holy Sepulchre (a rebuild and heightening of an earlier one) was precisely a response to the Islamic monuments on the Temple Mount. Again, the multi-column Byzantine Imbomon on the Mount of Olives (Küchler 2007, 876-97) is a likely part-inspiration. The Dome of the Rock itself used some of the (already old) capitals from the Al-Aqsa, and was perhaps a response to Christian buildings set within open courts, which were very popular in the Holy Land (Curcic 1996, 57). Competition between Christians and Muslims worked both ways not just when the Dome was constructed, but during the Crusades. So not only were capitals from the Al-Aqsa used to repair the Holy Sepulchre (Wilkinson 1987, 27ff) but, if Strzygowski is correct, marble from the tombs of the Latin kings was used prominently on the Haram to adorn mihrabs, perhaps as another expression of triumphalism (Strzygowski 1936). And according to Al-Muqaddasi (Le Strange 1890, 99, 102), the colonnades around the Haram in Jerusalem had mosaics in their ceilings, just as the Al-Aqsa had gold mosaics in the portico, which were left undamaged by the Franks. Again, mihrabs and qibla walls were to be a favourite focus for mosaics, some of glass.[27] Certainly, the Christians covered the rock in the Dome with a cupola on marble columns and marble bas-reliefs: Saladin had all this torn down, although he left their wrought-iron balustrade (Al-Isfahani 1972, 55).

Diplomacy was also a channel whereby useful gifts could travel across the Mediterranean and further afield, Charlemagne's elephant being perhaps the bulkiest, closely followed by his bronze candelabrum, both from Harun Al-Rashid We are well-informed on the lighter, more precious gifts brought by embassies (Schreiner 2004). And we shall see below that sending to the Byzantine emperor for columns or mosaic tesserae is something of a leitmotif – so was marble ever a part of ambassadorial gifts? Certainly on one occasion it was part of diplomatic "fixing," for example, Syrian marble and mosaics were sent to the court of the 6thC Sasanian ruler, Chosroes I Anushirvan, as part of a peace deal. Pharaonic stone objects were sent to the Umayyad Caliph in Damascus, and Umar (ruled 717-20) apparently delighted in showing them to visitors (El Daly 2005, 41f).

25 Wilson 1865, 36: inside, "The pavement of the mosque between the external wall and screen is a confused mass of old material , amongst which there are many portions of sculptured slabs like those seen outside , one of which , a little to the north of the western gate is nearly perfect."

26 William of Tyre 1872, I.2 col 215: … alique vetusti operis exstantia vestigia demonstrantes, ubi sumptibus qui sufficere possent ad impensam designatis et covocatis artificibus, subjecta pro votis materia tam ex marmorum diversitate quam ex lignorum differentia multiplici, templum aedificari praecepit ... Exstant porro in eodem templi aedificio, intus et extra, ex opere Musaico, Arabici idiomatis litterarum vetustissima monumenta, quae illius temporis esse creduntur."

27 Williams 1994 for various 13thC & 14thC examples from Damascus, Cairo and Tripoli (Syria).

Just as in the West (Desiderius of Montecassino, for example), Moslem patrons supposedly sent to Byzantium for materials and craftsmen. We can assume Abd Al-Malik's architects for the Umayyad Mosque in Damascus knew what was needed, for he simultaneously refused the entreaties of the Byzantine emperor to purchase similar antique architectural elements from buildings under Muslim control (Flood 2001a, 202). This is surely some indication of a dearth of suitable antique marble in Byzantium. Abd Al-Malik (685-705) spent "40 chests of gold for the mosaics, excluding the marble and the ancient materials." There are various accounts of where these came from: Sa'id says that Al-Malik had the Byzantine Emperor provide materials as a condition of their peace treaty.[28] At Madinat Al-Zahra (near Córdoba), according to Al-Makkari, 40 columns supposedly came from the Byzantine Emperor as a personal gift; some from Rome, and 19 from the land of the Franks (probably Narbonne). Large quantities in mostly green and red marble arrived from Carthage, Sfax and other African locations – 1,013, writes Ibn Idhari in the *Al-Bayan* (Ruggles 2000, 60).

But as well as using diplomacy, Muslims also bought marble and tesserae so as not to stain a holy structure by theft (a common theme in accounts of Islamic building, hence perhaps a common practice). Thus Ibn Sasra, in what might be a very late pietistic gloss, tells that when Al-Walid built the Great Mosque at Damascus, "he collected marble, pillars and stone but took nothing from anyone without payment" (Ibn Sasra 1963, 160). In this way also, Christian marbles could be integrated in Islamic contexts (Flood 2001b, notes 2, 56). Ownership could be communal. Troops were used to scavenging, perhaps to supplement their pay, with Muawiya (d.680) supposedly sending figurines collected by his troops for sale in India (El Daly 2005, 10). One story has Umar b. Abd Al-Aziz dissuaded from selling off both marble veneers and mosaics from the Umayyad Mosque in Damascus because the troops had already collected them on campaign. As one of them protested, each of them was enjoined to bring back from the land of Rum a measure of mosaic cubes and a sheet of veined marble. Gold-backed glass tesserae (to represent Heaven) would have been especially popular.[29] Hence ownership was collective – and "so Umar fell silent" (Ibn Sasra 1963, 64). Was this a way tesserae and small sheets of veneer were often gathered – while on campaign, and brought back in the baggage train? If so, then some of the extensive mosaics in the Umayyad Mosque at Damascus may perhaps be seen as "gifts" from the Byzantine Emperor to complement the craftsmen he was supposedly asked to send, and others as a specific and collective exultation of triumph over destroyed Byzantium, or at least over some of her buildings. Then again, the point of the story about Umar is that the mosaics and veneer actually belonged to the plurality of the community (for civilians had also collected lead for its roofs), and therefore were not in fact his to dispose of. Such scavenging by soldiers might have been a long-lived tradition, if we accept Ibn Al-Atyr's account of the sack of Antioch.[30]

Along with silk (which appears sometimes to have functioned as a currency), marble provided another way of paying the soldiers, tesserae (presumably of glass and perhaps gold) being favoured because they could be collected "as of

28 Mas'udi 1965, II, 496; and he might have threatened to strip Christian churches, as he did to exact materials for Mecca: cf. Flood 2001a, 201.

29 In the Paleologan Apostoleion at Thessaloniki the figures have survived, but the gold backgrounds have gone.

30 Ibn Al-Atyr 1872, III, 720: "c'était une ville vaste, riche en édifi ces bien bâtis et de belles proportions . . . partout des demeures en pierres de taille, des portiques de marbre aux arcades solides"—which the emirs took to Syria. And outside the city was "une grande église, belle et ancienne, revêtue de porphyres, incrustée de marbres de différentes couleurs . . . Quand nos soldats envahirent la ville, ils enlevèrent ses marbres, dégradèrent ses beaux édifi ces."

right" from the buildings of conquered enemies. In the 14th century, a poem tells of the Turkish looting of what might have been of an Orthodox monastery, because there were gold-background mosaics, which the Turks took off and carried off in sacks in their ships. The editor believes this might have been near Mount Tragovouni (Greece), where there were ruins to be seen in the 20th century, with white marble column drums, capitals with the cross, and a scatter of mosaic tesserae, all very close to the sea (Lemerle 1957, 126 for verse 1140). No hint has survived of Turks themselves employing such materials at this date (the monuments of Bursa being faced in tile, not mosaic), so surely these tesserae were sold on to Christians, perhaps in Byzantium – or even for S. Marco, Venice.

The juxtaposition of competing monuments may be interpreted as triumphalist in Christian as well as Muslim settings, as when at Tipasa a large church was sited directly opposite temples and capitol.[31] And if the tesserae for the Dome of the Rock in Jerusalem were indeed obtained from Byzantium, or even from looting by soldiers, then this underlines a politico-religious dimension to the monument's dominance over the (externally drab?) Holy Sepulchre down below. Similarly Saladin's exaction of marble from the defeated Christians of Jerusalem for the further embellishment of Islamic monuments may be classified as war booty, as well as triumphalist. Again, the practice is not just Islamic, for in the early 7th century, marble plundered from churches in Palestine was sent to Ctesiphon, the shell of part of which survives (Flood 2001a, 23 & note 39). Ibn Al-Al-Atyr's account of October 1187 notes (Ibn Al-Atyr 1872, III, 705f) that after Friday prayers, Saladin ordered the Al-Aqsa mosque to be repaired "and to take all possible care in ornamenting, paving and decorating it with sculptures. Consequently, he had marble brought the like of which it was impossible to find, and gilded cubes in the Byzantine manner, and other necessary objects, all collected over many years."[32] Perhaps it was the result of his work that Al-Qazwini (1203–83) saw, namely "un gran cupula octagonal sobre columnas de mármol, techadas con plomo, y adornada por dentro y por fuera de mosaico y mármol de colores" (Rubiera Mata 1988, 108f). He also commanded that the mihrabs of Umar should be covered with marble (Al-Maqrizi, 1980, 85), so where did he get the materials, after the Crusader occupation of the city? Part of the answer, hinted at in Ibn Al-Atyr's account, is that the local Christians had hoarded marble as perhaps a bankable equivalent to gold and silver – just as Frankish pilgrims had cut out bits of the Rock and taken them to Constantinople and thence to Sicily – as relics sold for their weight in gold (Al-Isfahani 1972, 56.). They probably decorated their houses with it, as apparently did Jean d'Ibelin (d.1236) his palace at Beirut.[33] When Saladin conquered Jerusalem, an agreement was made for the Christians to evacuate the city. The goods they could not carry they left behind, including "a large quantity of marble beyond compare, consisting of columns, plaques, and little cubes to make mosaics," and pieces of marble and wood "of every kind and in great abundance" (Ibn Al-Atyr 1872, IV, 338). Following the surrender there was an influx of merchants who traded with the Muslim soldiers (Lyons 1984, 274f) – and we might surmise that marble was one of the commodities traded.

31 Balty 1972; 183 & pls LXIII-LXIV for the East Cathedral; 231-3 for Sbeitla and Thuburbo Maius; and 250 for P-A Février's estimation of the opposition at Tipasa.

32 These might have come from Constantinople: cf Golvin 1970, 94.

33 Richard 1996, 139-41, described by Wildbrand of Oldenburg, in 1211: "Il a un pavement de marbre ingénieux … Les murs de la maison sont entièrement revêtus de plaques de marbre qui figurent avec une suprême ingéniosité, des tentures de couleur variée ... Au milieu du palais se trouve une citerne constellée de marbre de diverses couleurs, dont les plaques de teinte différente sont si bien assemblées qu'on ne le sent pas en y passant le pouce; ce marbre montre une variété infinie de fleurs qui s'effeuillent et trompent l'oeuil de ceux qui cherchent à les identifier" - all dismantled by the Mamluks when they occupied the evacuated city in 1291.

How was the past re-used?

In spite of the continuing popularity in the Middle Ages of marble floors in the Christian East and West, and probably in Islam (surviving examples are scarce until the Mamluks), there is little evidence[34] of existing floors being lifted for relaying in the same pattern in a new location. Many floors were aniconic; many splendid opus sectile ones have survived in their original location;[35] and there is possible imitation of the technique in other media.[36] Thus such reuse would have presented no difficulties in Islam; but instead, new mosaic floors were created, with new iconographies. Such neglect surely indicates that Islam was uninterested in the Roman past as such, and sometimes followed decorative traditions from elsewhere (Van Buren 1946 for Tell Uquair and Uruk). The fact is underlined by the widespread (if not perhaps exclusive) use of old marble – indeed, the verso of some tesserae can be identified as such. For the tesserae of wall and vault mosaics certainly were re-used. Islam was supposedly presented with large quantities by the Byzantine Emperor; and these, like the ones the Moslems foraged for themselves, surely came from old Byzantine buildings. Out of these new structures were created, such as the Umayyad Mosque at Damascus. In the West, we know of pilgrims taking marble home as an act of piety; but no references have survived to the same thing happening with the tesserae of mosaic floors, although mosaics were used to imitate other marble decoration (Michaelides 1985, passim).

Lack of lift-and-reuse is all the more striking because of a tendency in mediaeval Islam to treat decoration – from columns and wall veneers to mosaics, doors and portals – as moveable items to be appropriated from old buildings for use in new constructions. In consequence the literature is replete with references to stripping out, and the surviving monuments often reflect the practice by their bare walls and floors. Thus some of Syria's "desert palaces" seem to be hunting lodges, and richly decorated (Qastal was carpeted in floor mosaics in stone and glass, and Qasr Al-Muwaqqar had mosaic pavements in several rooms) but some look like the late-Roman fortresses on which they were modelled, and the materials of which they sometimes re-used (Kennedy 2007, 103). The Qasr Al-Hayr palaces (East and West, 728ff) were sumptuously decorated, but any marble columns and veneers have long since been robbed out, as was Hamman Al-Sarakh, leaving little in place to remind us of what Hillenbrand calls "la dolce vita" (Hillenbrand 1982, passim). If stripping such remote sites is explicable, this also happened in the middle of Cairo, where the remains of the Fatimid palaces were being plundered long after their real life had ended.[37] In Baghdad, some palaces had marble baths and supposedly explicit mosaics,[38] which were

34 Meinecke 1996, 44 for the bath opposite the Great mosque in Bosra: "the sumptuous marble foor, including multicoloured opus sectile, as well as the intricate technical installations, testify to the highest standard of architecture and decoration. This masterpiece of engineering architecture was certainly not achieved by locally available specialists, but by an experienced building atelier from Damascus."

35 For a site inhabited in Vandal and Byzantine times, see Alexander 1973: e.g. Maison de la Cascade and Maison de la Chasse, pl. LXV, and in antiquarium, pl. LIV; plenty of Christian churches are recorded, but nothing survives of Xtian buildings or their mosaics. Dulière 1974, e.g. Boutique IV/V, at fig. 1190.

36 Dodds 1992, 600: at Cordoba in Abd al-Rahma's mosque "though fashioned of brick and stone, the alternating voussoirs were surely meant to evoke, in available materials, the opus sectile decoration of Umayyad buildings of the fertile Crewcent, in particular the Great Mosque of Damascus, and conceivably the Dome of the Rock."

37 Hautecoeur 1932, 140: in 1369, two immense white marble columns were found on the site of the Fatimid palaces, and Sultan Chaban II took them for his madrasa near to the citadel, their transport hymned by the poets.

38 Rubiera Mata 1988, 97ff for Al-Makkari's account: "Habia pilones de mármol de bonita forma

Figure 13
Matbakh Al-Ajami, Aleppo, early 13thC: exterior portal with marquetry of marble and limestone

perhaps stripped by a later and more shockable owner. For sites such as Samarra and the desert palaces, the dismantling was so thorough that the decorative schemes cannot be fully reconstructed, although scraps of fittings have survived from Samarra, and mosaic, glass and other fragments are to be seen in the Turk ve Islam Museum in Istanbul, and in the British Museum. Other schemes include Khirbat Al-Minya (near Lake Tiberias), built by Al-Walid (705-15; as proclaimed on a reused marble inscription) or perhaps his son, where mosaics covered the floors and dadoes and glass mosaic the dome - such mosaic domes having a long ancestry. It is unknown whether an adjacent bathhouse is Roman, Byzantine or Umayyad (Bacharach 1996, 35).[39]

Stockpiling was a constant feature of the Roman marble trade, at quarries, dockssides and building sites, because of the vagaries of sea transport. Because stockpiling is the only sensible way to conduct medium- or large-scale building operations, in Islamic territory we find not only the Christians stockpiling marble at Jerusalem (see below), but (probably) materials for the Mezquita at Córdoba being accumulated over time. This latter was supposedly funded with booty from Narbonne, and yet more arrived from Narbonne after Hisham's assault in 793. One source says that this included "loads of earth out of the demolished walls" (presumably old marble), "and not only was the mosque built of those

... un largo pasillo todo el de mármol purisimo su suelo tenia dibujos ealizados con piedras rojas, amarillas, verdes y doradas, todas ellas de cristal tenido con color rojo y amarillo; el tenido en verde dicen que es un procedimiento que viene de los bizantinos, y el dorado es cristal revestido de oro. El dibujo era bellisimo y formaba diferentes figuras que realizaban el acto sexual..."

39 Marcus Ritter has in preparation *Die Baukdekoration des frühislamisch umayyadischen Palastes Khirbat al-Minya bei Tiberias*.

Figure 14
Mausoleum of Taynabak al-Hassani (or Al-Taynabbiya) 1395, Damascus: exterior portal with marquetry marble and other stones

materials, but a large quantity still remained piled up in front of the royal palace," and the brass knockers were also taken (Al-Makkari 1840, II, 99). Again, columns and mosaic tesserae were supposedly sought from the Byzantine Emperor, although Cutler (2001 254) is sceptical even if Stern is not.[40] This must be a deliberate echo of the building of the Umayyad Mosque in Damascus, several stylistic features of which the Andalucian structure sought to imitate. No doubt many Christian artisans were used for the first construction; and there are masons' marks, some in Latin letters, on the columns of enlargement of Al-Hakam II (961-76) and that of Al-Mansur (976-1002), several of which were probably moved from the first structure.[41] For Pavón Maldonado (1973, passim), many of the decorative patterns used at Córdoba and Madinat are inspired by Roman floor mosaics, while Kubisch (1995) looks east, to motifs at Qasr al Hayr West, Khirbat Al-Mafjar, and Samarra . Mosaics were widely used at Córdoba, and also at Madinat Al-Zahra, where a poetic recitation in 971 hymned the splendour of the Caliph by comparing his glory with the marble and mosaics in the East Salon – "Cubren sus salones mantos de mosaico" (García Gomez 1967, 105ff).

Marble was such a valuable resource, especially in lands where it was not quarried (such as Palestine or Egypt) that Christians and Muslims sometimes seem to have played cat-and-mouse with marble supplies. Thus when Abd Al-Malik built Ramla, with considerable architectural ambitions, he discounted demolishing

40 Stern 1976 38 agrees with Ibn Idhari that the cubes (stone, marble and glass) came from Constantinople; hence 46: the mihrab mosaics are "l'un des rares exemples d'oeuvres monumentales qui portent témoignage d'un art formé au contact du monde byzantin et musulman."

41 Souto 2002, 231: both Qasr Al-Hayr East and Khirbat Al-Mafjar have graffiti in Greek letters, but also in Arabic and Hebrew – so manpower could have been various, and even brought in from afar.

the church at Ludd, and so wrote to the Byzantine Emperor, who sent him an agent "who indicated a place whence he could extract columns of unparalleled dimensions and beauty. They were also able to extract marbles both sawn and unsawn, amply sufficient for the mosque. It was said that this was in a property of Daroum near Gaza, which was called Amuda (Columns)." The Christians were then made to carry the materials to the site of the new mosque (Gaudefroy-Demombynes 1923, 3, 57f). The imported Greek, obviously having done marble- prospecting elsewhere in the Empire (and it could well have involved tunneling for material buried by humans as well as by the sands of time), found the necessary columns from what must have been a stockpile if they had the choice of sawn and non-sawn.[42] Mas'udi's account of building at Ramla leaves out the Greek inspector, and substitutes a direct threat to the Christians, namely that the church at Ludd would be destroyed unless they handed over their hidden stocks of marble (Mas'udi II 1965 184f). Ramla was an excellent place to build marble monuments, for when Nasir i-Khusraw visited in 1047 he came across a veritable marble-cutting industry there: "In the city of Ramlah there is marble in plenty, and most of the buildings and private houses are of this material; and, further, the surface thereof they do most beautifully sculpture and ornament. They cut the marble here with a toothless saw, Avhich is worked with ' Makkah sand.' They saw the marble not in the cross, but in the length — as is the case with wood — to form the columns ; also, they cut it into slabs. The marbles that I saw here were of all colours, some variegated, some green, red, black, and white" (Le Strange 1890, 307).

There has been a certain amount of resistance to the idea that Islam did import mosaic workers, but the action seems defensible for practical reasons, rather than for any notion of triumph over the Christians. Marble also moved around, naturally with the workmen to deal with it. Thus Mecca has had so many alterations and refurbishments, that it is difficult to get a clear picture of the exact use of mosaic there, but it is clear that the complex was at times in competition with the splendours of Jerusalem. Al-Muqaddasi (born c.946) relays that Al-Mahdi had three porticoes of white marble brought from Alexandria to the port of Jeddah,

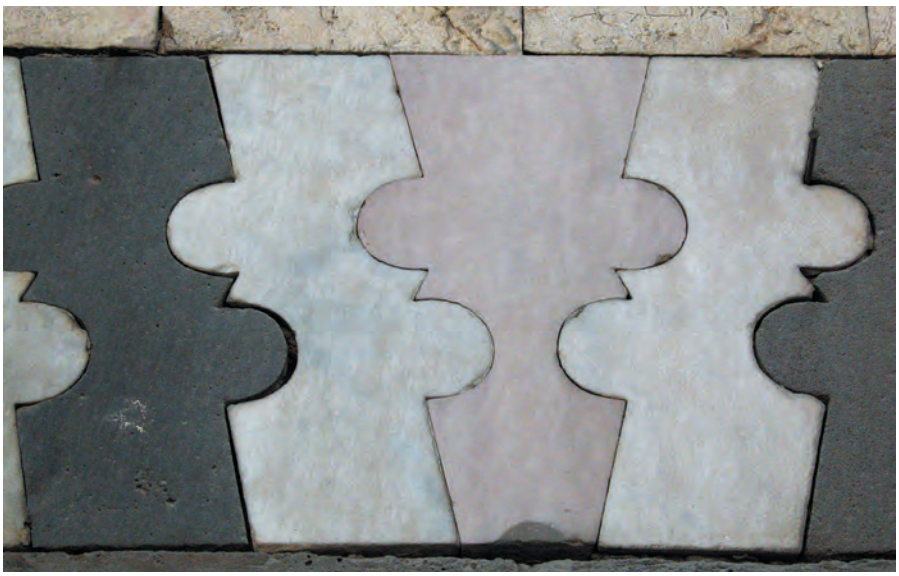

Figure 15
Mausoleum of Taynabak al-Hassani (or Al-Taynabbiya) 1395, Damascus: exterior portal with close-up of marquetry marble

42 Gaudefroy-Demombynes 1923, 58 also refers to al-Muqaddasi's report that al-Malik learned that the Christians had a cache of columns put aside for building a church at Balaxa, and made them hand them over to ornament the mosque at Ramla. Cf. Al-Muqaddasi 2001, 140.

and that "The mosque [in its present form] was founded by him. The porticoes have their walls decorated on the outside in mosaic, artisans from Syria and Egypt being specially imported for the work. The names of these still appear on their work" (Al-Muqaddasi, 2001, 67, 73). But before this, Al-Baladhuri (1916, I., 76) notes that Al-Walid "amplified the Haram-mosque and conveyed to it columns of stone and marble, and mosaic."

This last remark is the kind of attestation or verification often used by Islamic historians, which could be a topos (Grabar 1996, 203 note 68), as indeed could the story of the import of experts – except that it has probably always been common for skilled workers to circulate. Al-Yaq'ubi writes of Al-Mu'tasim's orders for the building of Samarra as follows: "He wrote for the despatch of the workmen, builders and skilled people ... and for the bringing of worked marble, and slabs of marble" (Northedge 2005, 268). Samarra has been comprehensively plundered (although far from comprehensively excavated) and, if the main decoration was stucco, Al-Mutawakkil's palaces were decorated with marble slabs in the Throne Room complex. The fame of the site lived for centuries, so that Shabushti describes a throne room at Al-Burj (which he cannot have seen because he was writing a century and a half after 870): "The walls of the palace were covered inside and outside with mosaic and gilded marble" (Kennedy 2005, 147). As for the Great Mosque, this "used to be considered superior to the mosque at Damascus. Its walls had been coated with enamel, pillars of marble erected within it, and it was paved with marble" (Al-Muqaddasi 2001, 102). This might have looked something like the luxuriant 5th-century marble dadoes at Antioch, fragments of which survive (Allen 1988, 11ff & fig. 30), so that it is possible to view the use of stucco at Samarra as a translation from marble into another medium.

Elaborate church mosaics were still being created in the mid-8th century, as at Madaba (Walmsley 2007, 124f). In other instances, later refurbishments have obscured the earlier decoration. Thus the Muthir Al-Ghiram (written 1351) states that an earthquake (in 747) brought down the earlier Al-Aqsa, and that Al-Mahdi found it in ruins – but whether it was he who decorated it with mosaic is unknown. By the 11th century, however, the mosque had a polychrome marble floor (Kaplony 2002, 775), and Al-Qazwini emphasises the coloured marbles as well as the mosaics, as we have seen. An adjacent loss is the Umayyad Palace complex, for which the Al-Aqsa might well have been the palace chapel, as were contiguous structures at Damascus, Córdoba and Cairo. There also survive several sites where the evident classical inspiration of the motifs suggests probable re-use of individual tesserae (such as the bath area of the 8th palace at Anjar, Lebanon; Khirbat Al-Mafjar, 743/4, Occupied Palestine; and Qasr al-Hallabat, Jordan), and it seems very likely (could it be proved?) that many of the large mosaic complexes also re-used ancient tesserae.

Jigsaw-mosaic in Syria and Egypt

Against the background of diminishing availability of old marble in most centres, this section discusses the contrary tendency of what appears to be the deliberate flaunting of large reused blocks (often of rare marbles) in a three-dimensional version of opus sectile or marquetry, building on the development of multicoloured walls (ablaq) in the provision of sumptuous portals, window embrasures and mihrabs. Since the flat version of such techniques is to be seen centuries before in other media such as woodwork, and since its appearance from the earlier 13th century predominantly in Damascus and Aleppo is not echoed in Cairo (which

Figure 16
Damascus, Muhi al-Din ibn Al-Arabi complex, 1516, Damascus: courtyard mosaic floor, with roundels cut from antique columns

uses two-dimensional mosaic patterns instead), it appears as if Syria is providing a demonstration of skill which outdistances not only the general run of Moslem wall decoration, but perhaps also Christian techniques as well. For nowhere other than in Syria are such skill and lavish reuse of scarce materials to be seen.[43]

Cairo was a new city, albeit with an adjacent older one a few kilometres south at Fustat (Fu'ad 2000, passim), the site of marble-rich churches the materials from at least one of which was sold to pay taxes, in this case to Ibn Tulun (Lombard 1974, 198). Alexandria was a much-shrunken Hellenistic foundation, with a high-living nucleus surrounded by fields of ruins. It contained many marble capitals (Kautzsch 1936, 24ff; unfortunately, the book does not deal with Venice, Kairouan, Tunis, or Mahdiya) and, also like Cairo, private houses retained plenty of marble in the 16th century, including some complete mosaic floors, as Filippo Pigafetta writes in 1576-7: "In the people's dwellings you can see many pieces of marble and stone of different colours, cut in squares, circles, stars and other shapes which, with exceptional skill, the good people of ancient times employed to cover the floors and the walls of their houses; a really wonderful work as much for the shaping and fitting together of those well-cut stones as for their quality and excellence, and the diversity of their colours; there are some houses there in which such construction remains intact..." (Curatola 2004, 196-7) – though of course they might have been in one of the many later reincarnations known to be common with such Lego-like pavements (Guidobaldi 1983, 518ff).

Such "shaping and fitting together" is probably a spinoff from the ever-increasing shortage of prestigious marbles, which Ibn Khaldun builds into his rise-

43 Greenhalgh 2006 60ff for further discussion and illustrations.

and-fall cycle: "which are taken from empty buildings, from fortresses and palaces disused because there towns are depopulated. The very same materials are perpetually re-used, from palace to palace, from house to house, until they are completely gone" (Ibn Khaldun 1967-8, II.10, 745). This can be seen in the enormous portal to the Mosque of Sultan Hassan, where Rogers has found fixing markers for attaching thin marble veneers which – he points out – are a very different matter from the stylistic source, such as the Gok Madrasa, where the marble panels are six inches thick and must have been carved before erection (Rogers 1970/1, 50). So if the use of ever-smaller and more intricate fragments is a style in Cairene and Syrian buildings, it is conceivably one much influenced by circumstance, and perhaps in part by the example of Roman marble floors available in Egypt.[44]

If in Byzantium and the West mosaics usually constitute a thin veneer on wall or floor, and at least in later centuries re-use antique marble, in Islam another type of mosaic developed in early 13th-century Syria, which bears no relation to any earlier practice. This involves "constructional mosaic," in which substantial pieces of marble are ingeniously cut into intricate marquetry patterns which are not simply skin-deep, but part of the construction of doorways, window embrasures, and sometimes mihrabs. To be effective, such constructions must show two faces of the work – there is no point otherwise – so the viewer can appreciate that these jigsaw "puzzles" are not simply cut in depth, but also employ large pieces of often precious marbles. We can often make an extra check on the mason's ingenuity, for the elements of such structures have often moved over the centuries (earthquakes, etc), and the gaps opened up allow us to inspect the joinery in depth.

The finest of all marquetry displays is the mihrab in the Madrasa Al-Firdaws (by 1242: figures 3, 4, 5), in Aleppo. Sibt b. Al-Ajami, writing in 1274-5, notes the "stone, brought from many places," the black and white marble in the courtyard, the yellow marble columns, and the mihrab, "among the wonders of the world" (Allen 1999, ch.8). Other monuments conspicuous for their jigsaw-work include the mihrab of the Madrasa Al-Sultaniyah (1213/16), the Arak and Wali Al-Shaibani, all of which have a stone muqarnas portal; the Arak Mausoleum with reminiscences of the Al-Firdaws mihrab arabesques in blue tile. Secular buildings were probably equally rich in fine stonework, such as the Al-Atrush Mosque, with its ablaq and marquetry windows (Figure 12), or the fragmentary Matbakh Al-Ajami Palace (Figure 13), with a portal nearly as intricate as the Al-Firdaws mihrab. Mosques also delight in intricately-cut stone, such as the Al-Aqsab with black and white limestone and, like the Al-Tawba, with a splendid stone-work minaret; and the the Mausoleum of Taynabak al-Hassani (Figures 14 & 15), with its mix of marble, limestone inscription, and sandstone muqarnas. In Damascus, the Madrasa As-Zahiriya (1262-3) incorporates the Mausoleum of Al-Zahir Baybars, and is especially elegant, with its portal rich in inscriptions, and its interior retaining elaborate marble dadoes and mosaics inspired by those of the nearby Umayyad Mosque. The technique was to have a long life,[45] as indeed did the vogue for mosaic floors – such as that in the courtyard of the Muhi al-Din ibn Al-Arabi complex (1516), cut from antique columns. As in Aleppo,

44 Daszewski 1982, figs 16-17 for opus sectile floors from Kom Truga (W Nile Delta) and Alexandria (Kom el-Dikka).

45 The Madrasas Al-Jaqmqiya, Sabuniye and Sibaiye, built 1418-20, 1459-64 and 1509-15 respectively, demonstrate the continuing fashion for such exuberant decoration – or, as one critic has it (Eliséef, N., in *EI Damascus*) "everything was sacrificed to outward appearance, and the monument was no more than a support for shown ornamentation."

traditions continue, in the Darwish Pasha Mosque (1574) and Sinan Pasha Mosque (1590-4), which has an especially rich interior with marble columns and wall veneers, and superb marble minbar. For none of the above is the source of the marble or mosaic tesserae known, though sufficient monuments with re-used elements survive to be confident that such dazzling decoration did come from re-cut marble. In Aleppo these include the Bimaristan of An-Nouri (1154) with an antique tympanum gracing its entrance, parallel to Aleppo's Dar Al-Hadith (1154/74) which displays a re-used doorframe carved with a classical moulding; and its lintel block bears an elongated but uninscribed tabula ansata. Classical columns are re-used in Damascus when available, such as those in the mihrab of Nur Al-Din's tomb-chamber. In Cairo, all marble and granite were in re-use, together with the few applications of mosaic tesserae such as the mihrab in the Aqbughawiya Madrasa at Al-Azhar (1339), or the mihrab on the qibla wall of the Mosque of Ibn Tulun (14thC).

Conclusion: Islam & the West

Roman and Byzantine materials allowed Islamic mosaics to be sumptuous, but much more study is needed to ascertain the source of the tesserae, for our narrative accounts never list these, and earlier excavators have usually shown little interest in what might have happened to church structures when they fell out of use. This is a pity, for the mediaeval West was much enamoured of Islamic mosaic patterns,[46] and it would be interesting to know more of any connections. Famously, Abbot Desiderius supposedly imported mosaic workers from Constantinople "peritos utique in arte musiaria et quadrataria" (Chron. Cas. 3.27) because the "magistras Latina" had neglected mosaic-making for centuries.[47] This was probably not true – but in any case it is probably the lands of Islam, rather than Byzantium, which were the focus of mosaic expertise in Desiderius' day. Is it possible, indeed, to chart the progeny and group the relationships of the mosaic tesserae of a selection of important monuments, to ascertain both their source and their spread? This is possible, and has been done both for marble (cf. the various conferences of ASMOSIA[48]) and for glass mosaic, as we have seen. If the Roman left us a "marble map" of the Mediterranean, then a "mosaic map" would be just as useful, allowing us to chart relationships not just at design level, but also at that of tesserae as well. Given that scholars today are often alert to re-use, such endeavours should allow us to learn much more about the diffusion and re-use of tesserae around the Mediterranean.

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46 As at Pisa, where the workshop of Rainaldo was producing Islamic-derived mosaic panels, of which sections survive in the Opera del Duomo, together with capitals, including an Islamic one.

47 Maguire 2001, 164-6: the author of the *Vita Basili* refers to floors ringed with "spokes," which to Maguire suggests comparison with the floor at Montecassino, 1071ff; Giuliano 2003 for Desiderius and his commissions, plus Islamic influences. Bloch, for one, once believed that there were indeed suitable craftsmen in Rome by this date (that is, before the Cosmati: Bloch 1982, 617 note 5); but he later wrote that Greek expertise was needed to help Desiderius re-create Early Christian mosaic: Bloch 1986, 92.

48 Association for the Study of Marble and Other Stones in Antiquity: http://www.asmosia.org

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Quelques remarques à propos de l'étude des sols *in situ*

Marie-Patricia RAYNAUD*

This paper proposes a review of the various contributions of an « in situ analysis » upon the study of mosaics and architecture. They are helpfull to understand the story of the building and to distinguish workshops of mosaicists. They result from the association between mosaic specialists, archaeologists and restorers.

Bu makalede, mozaik ve mimari alanda in situ analizlerine yapılan çeşitli katkıların gözden geçirilmesi amaçlanmaktadır. Bu analizler binan tarihinin anlaşılmasında ve mozaik atölyelerinin ayrımında oldukça yararlıdır. Bu analizler, mozaik uzmanları, arkeologlar ve restoratörler arasındaki işbirliğinin sonucudur.

Key words : mosaic, restoration, workshops, in situ, architecture, handcraft.

L'étude de la mosaïque à travers l'iconographie est la méthode classique, issue directement de l'Histoire de l'Art. Après quelques ouvrages décisifs mais isolés[1], ce secteur de la recherche a réellement pris son essor à partir des années soixante pour devenir une discipline à part entière[2]. La majorité des mosaïques connues étaient alors conservées dans des musées hors de tout contexte architectural, ou sur des sites anciennement fouillés et peu mis en valeur. Les panneaux présentés étaient essentiellement des mosaïques prestigieuses à décor figuré, aussi l'attention des chercheurs s'est tout naturellement tournée vers une interprétation très picturale de leurs représentations.

Ces approches iconographiques et stylistiques, ainsi que l'étude des inscriptions, donnent de multiples indications sur la culture, la prospérité et l'ambition du commanditaire, ainsi que sur le but poursuivi par de tels décors ; leur décryptage peut permettre de deviner la fonction de l'espace que ces sols décoraient. Les tapis figurés sont des témoins culturels relativement bien conservés, du fait de leur structure moins fragiles que celle des peintures. Ils peuvent aussi servir de marqueurs historiques grâce au thème représenté. En effet, le succès de certains sujets et l'évolution des modes et goûts esthétiques tout au long de l'Antiquité sont de mieux en mieux connus.

Enfin, dans les cas de concentration de tableaux figurés dans un même site, les comparaisons stylistiques peuvent s'avérer possibles et précieuses, nous citerons par exemples Piazza Armerina, Antioche, Torre de Palma, Zeugma, Nea Paphos, El jem ou Byllis.

Plusieurs facteurs ont radicalement modifié l'approche des spécialistes. Outre l'évolution et le développement de l'archéologie de terrain, la découverte de très nombreux nouveaux pavements et le souci de leur conservation et leur fréquente présentation *in situ* – en liaison avec le développement du tourisme – ont fait évoluer la recherche dans bien des domaines de l'archéologie[3]. Les chercheurs sur la mosaïque interviennent de plus en plus souvent lors des fouilles et des restaurations des pavements ; la floraison de nombreux corpus de mosaïques[4] a incité à compléter

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1 On citera parmi les travaux anciens sur les mosaïques, ceux bien connus d'Arthaud, Espérandieu, Gauckler, Roux-Barré, Levi, Lassus, Blake, Chehab, etc.

2 La création du Centre de Recherche sur la Mosaïque au CNRS par H. Stern au début des années 50 et de l'AIEMA (Association internationale pour l'Etude de la Mosaïque antique) en 1964 a encouragé la création ou le développement de multiples antennes nationales (Italie, Espagne, Amérique du Nord, Tunisie, Grande-Bretagne, Portugal et dernièrement Turquie…), et la tenue régulière de Colloques internationaux (publiés sous l'abréviation *CMGR*, tome I à IX depuis 1963). Le *Bulletin de l'AIEMA*, bulletin bibliographique sur l'étude de la mosaïque, a été créé en 1967. La vingtième livraison est parue en 2007.

3 Certains chercheurs ont rapidement mesuré l'importance de l'approche par le terrain ; nous citerons V. Daszewski, qui a très tôt attiré l'attention sur l'analyse archéologique des pavements, ou d'autres qui ont prôné un travail simultané des chercheurs et des restaurateurs de mosaïques (D. Michaelides, A. Ben Abed).

4 *Recueil des mosaïques de la Gaule* (CNRS), *Mosaici Antichi in Italia*, Corpus des mosaïques de Tunisie, d'Algérie, de Suisse, d'Albanie, d'Allemagne, d'Espagne, et plus récemment du Portugal, d'Angleterre, et enfin le *Corpus of the Mosaics of Turkey* (création de l'AIEMA-Turkiye en 2006, premier volume sur les mosaïques de Xanthos, M.-P. Raynaud, *Xanthos, East Basilica*, vol. 1, in press). Des volumes de synthèse assez

Figure 1
Byllis, basilique E. Joint séparant des phases de travail, à droite de la ligne de postes (ph. M.-P. Raynaud)

l'étude iconographique et stylistique par une observation plus systématique des pavements. Les mosaïques géométriques sont désormais étudiées dans ces catalogues au même titre que les pavements figurés, ainsi que les sols en *opus signinum*, en *opus sectile* et les dallages. C'est le souci de décrire de façon claire et univoque le décor géométrique jusqu'alors souvent négligé qui a rendu nécessaire l'élaboration d'un vocabulaire descriptif[5] des décors géométriques

complets cataloguant les mosaïques sont aussi apparus sur les pavements de Syrie et du Liban, d'Israël, d'Autriche, de Jordanie, de Tunisie, de Macédoine, ainsi que des catalogues de musées célèbres pour leur collection de mosaïques, tels le Musée du Bardo, de Trèves…

5 Il s'agit de deux ouvrages collectifs, réalisés par le Centre de Recherche sur la Mosaïque (CNRS, Paris) créé à l'instigation de H. Stern : *Décor* 1985; L'oeuvre du fondateur fut essentiellement poursuivie sous la direction de J.-P. Darmon avec la publication du second volume : *Décor* 2002.

Figure 2a
Byllis, basilique C, observer les irrégularités de la bordure, surtout en bas à gauche (ph. CNRS-M.-P. Raynaud)

en cinq langues[6]. L'approche technique s'est faite de plus en plus exigeante, au vu des conclusions enrichissantes et variées qu'elle autorise.

Nous envisagerons ici divers apports d'une telle étude réalisée *in situ* parallèlement à l'établissement d'une documentation graphique et photographique complète, en relation étroite avec archéologues et restaurateurs[7]. Ces expériences de terrain seront illustrées d'exemples récoltés par l'auteur lors de sa participation à des missions en France ou à l'étranger.

1. Liens avec l'architecture : sols et murs

L'étude des liaisons des sols avec les murs et les seuils vient en préalable. La façon dont les pavements sont – ou non – liés avec les murs et avec le décor qui les recouvre (peinture, enduit, placage ou mosaïque) peut aider à établir une chronologie relative et élaborer un phasage qui sert à l'étude d'ensemble du bâtiment[8]. Nous évoquerons l'exemple à Lixus (Maroc) des maisons de la

6 Les cinq langues représentées dans ces dictionnaires descriptifs sont le français, l'anglais, l'italien, l'espagnol et l'allemand. Les traductions furent réalisées par des spécialistes de la mosaïque dans leur langue respective. Les volumes sont en cours de traduction en turc pour servir au Corpus de Turquie. Une traduction en portugais a aussi été réalisée et d'autres langues peuvent être envisagées.

7 Cette collaboration tient tout particulièrement à cœur à la nouvelle association turque *AIEMA Turkiye*, qui a tenu d'emblée à réunir ces différents spécialistes lors des tables rondes annuelles depuis 2005. Le *Corpus of the Mosaics of Turkey* se base sur le travail en commun des restaurateurs et des chercheurs et se soucie très sérieusement de l'état et de l'avenir des sols étudiés (établissement d'une base de données). Par ailleurs, les colloques de l'*ICCM* (Comité international pour la Conservation des Mosaïques) se tiennent tous les trois ans et donnent lieu à des actes, de I à VIII à ce jour.

8 Pour un exemple d'étude conjointe des décors de sols et de murs, voir l'article sur Zeugma : Barbet-Monier 2005: 1301-1306.

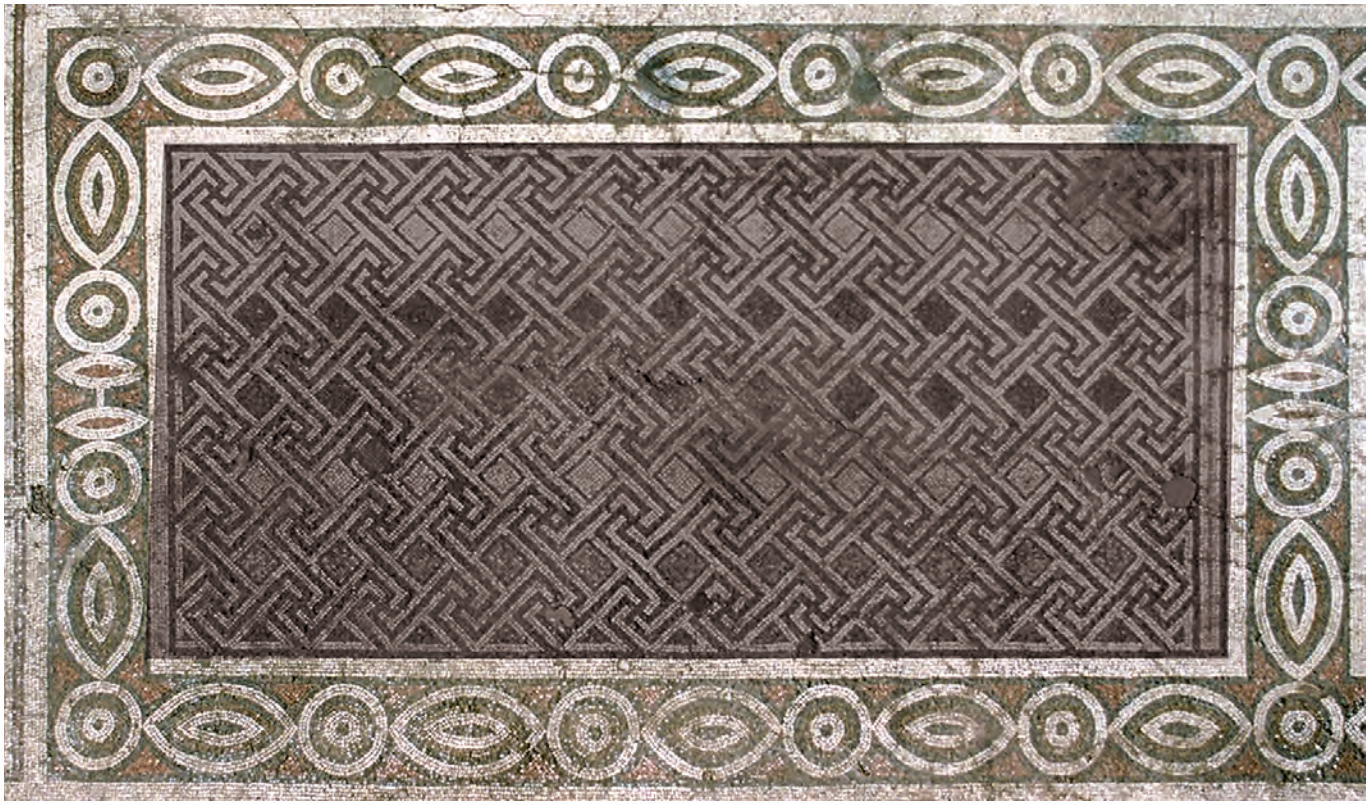

Figure 2b
Xanthos, basilique Est, atrium ; ici la bordure est régulière, planifiée dans le détail (ph. CNRS-M.-P. Raynaud)

ville haute. Les mosaïques avaient été déposées dans les années soixante et sont exposées au musée de Tétouan, avec de vagues indications de provenance. Un relevé précis du plan des maisons et l'étude de l'architecture (dimensions, traces éventuelles) ont permis de repositionner graphiquement les sols dans leurs murs[9].

2. L'observation attentive de la surface des sols (in situ)

avant restauration peut donner de multiples informations sur les avatars subis par l'édifice. Les plissements, effondrements et fissures indiquent des mouvements de terrain, dont l'orientation est utile pour étudier la destruction des structures. Ils révèlent aussi quelquefois la présence de structures sous-jacentes ou une éventuelle instabilité du sous-sol (pente, terrassements, remblaiements ou ruissellements).

Les lacunes permettent des observations sur le processus de destruction du bâtiment, particulièrement importantes lorsque les couches recouvrant les sols ont été antérieurement enlevées du fait d'une réoccupation ultérieure ou de fouilles anciennes. Elles sont l'œuvre de la chute d'éléments lourds, de la détérioration des supports (exposition plus ou moins longue aux éléments) ou témoignent d'une action volontaire de destruction[10]. Les traces de rubéfaction qui ont altéré la surface des mosaïques sont l'indice soit d'incendies, soit d'une réoccupation postérieure (foyers).

L'observation attentive de la surface de la mosaïque, en lumière rasante par exemple, permet dans certains cas de déterminer des « phases de travail ». Le lit de pose n'est versé qu'au moment de l'installation des tesselles, par petites

9 Fouilles franco-marocaines à Lixus, sous la direction de J.-P. Darmon et Z. Qnimba. Ces hypothèses devraient se trouver confirmées par l'étude des archives du premier fouilleur, G. Taradell.

10 Voir plus loin, dans la partie concernant les restaurations anciennes.

zones. La pose des panneaux se fait souvent séparément de celle des bordures. Les limites entre ces différents secteurs, indiscernables au premier abord, peuvent se manifester par un joint d'aspect différent (plus large et continu), ou par certaines irrégularités de niveau entre les deux parties. C'est le cas dans la basilique E de Byllis (Albanie)[11] (fig. 1), où le panneau figuré a nettement été réalisé séparément, à un autre moment que la bordure. Ces différents secteurs pouvaient aussi être le fait du partage du travail entre différents artisans d'un même atelier, entre des ouvriers plus ou moins expérimentés, ou spécialisés dans tel type de représentation ou tel décor géométrique particulièrement complexe.

On peut aussi déduire, dans certaines maladresses du décor ou rattrapage de motif, à quel endroit le travail a commencé et où il s'est achevé : la planification de décors refermés sur eux-mêmes, comme les bordures, renseigne sur le degré de qualification et l'expérience des artisans. On constate que certains commencent leur travail sans le planifier, c'est-à-dire sans tracé préparatoire de détail ; les motifs se bousculent dans les angles, « tournent mal », s'étirent par endroit et s'amaigrissent à d'autres (fig. 2a). Dans d'autres cas, les artisans ont manifestement préparé leur travail soigneusement en divisant mathématiquement l'espace imparti, produisant des motifs parfaitement réguliers (fig. 2b). Il est alors plus difficile de deviner où l'artisan a démarré sa tâche.

La façon dont deux tapis sont juxtaposés, raconte fréquemment quelle mosaïque est venue se coller contre la précédente : la lisière entre deux mortiers qui ont séché à des périodes différentes est toujours vulnérable aux infiltrations. Sa dégradation presque systématique au niveau des tesselles permet souvent d'étudier le raccord entre les deux supports successifs. Il est en effet impossible de juxtaposer deux mosaïques à différentes époques sans que cela soit visible (différents vieillissements et séchages des mortiers, niveaux de surface et techniques de poses variables, cicatrices entre les parties). Ceci aide à établir une chronologie relative des sols.

3. Matériaux

L'identification physique et l'analyse pétrographique (onéreuse, donc plus rarement pratiquée) permettent de savoir si les matériaux constituant les tesselles sont extraits localement, importés ou remployés. Elle nécessite une bonne connaissance géologique de la région et des carrières antiques.

La qualité des matériaux donne une indication sur la prospérité des commanditaires et leur ambition : marbres et matériaux colorés sont généralement réservés à des emplacements privilégiés, destinés à faire l'admiration du plus grand nombre. Ainsi à Xanthos (Turquie), dans la basilique Est[12], les décors les plus soignés, - mosaïques à tableaux figurés, emploi de couleurs plus riches et de matériaux nobles (marbres verts et violets)- se situent sur un axe de circulation conduisant de l'entrée au baptistère ; cette volonté attestée de « marquer » ce cheminement n'est vraisemblablement pas fortuite. Le compartiment central du narthex, devant la triple porte ouvrant sur la nef centrale, occupe aussi une place de choix ; il se distingue par un sol en *opus sectile* soigné, très riche en plaquettes de marbres colorés de toutes provenances et la plupart du temps remployés, avec un soin évident. À Byllis, on a trouvé dans plusieurs églises l'emploi de tesselles

11 Collaboration albano-française pour la publication des fortifications et des églises de Byllis et la reprise de fouilles, sous la direction de S. Muçaj, J.-P Sodini puis P. Chevalier. Premier volume en préparation.

12 Mission française en Turquie, sous la direction actuelle de J. des Courtils. La fouille de la basilique Est a été dirigée par J.-P. Sodini. La publication de ces travaux est en cours.

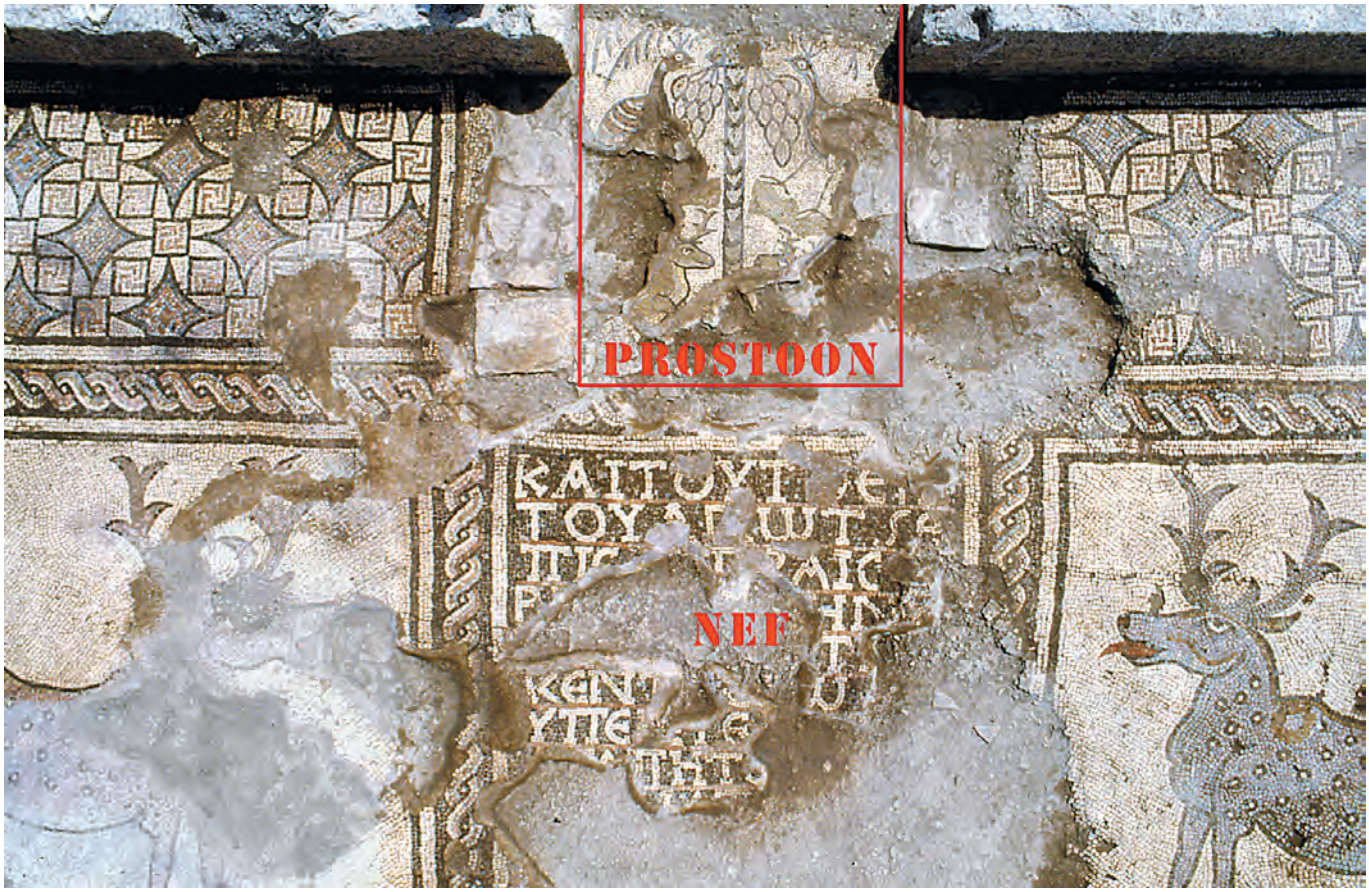

Figure 3
Byllis, basilique D, nef centrale et en haut au centre tapis du *prostoon* ; remarquer la différence de taille des tesselles (ph. CNRS-M.-P. Raynaud)

de verre dans les tapis du sanctuaire (basilique A, B et E), du *prostoon* (basilique D) ou du narthex (basiliques A et D). Les rares tapis conservés représentant des personnages sont réservés au sanctuaire ou à l'exonarthex.

Une hiérarchie tacite, attestée tant durant l'Antiquité qu'à l'époque byzantine, met les dallages en marbre (*opus sectile*) au premier plan. Les mosaïques viennent ensuite, et le choix des matériaux qu'elles mettent en œuvre, marbre, pierre, terre cuite ou verre, est assez représentatif de la richesse de la commande.

Une analyse géologique des tesselles de pierre permet dans certains cas de retrouver les carrières dont elles sont issues et de mieux connaître le réseau de circulation des matériaux dans une région. Ainsi l'identification des tesselles vertes observées dans la production d'un atelier aquitain a orienté les recherches vers les carrières de marbre des Pyrénées, dont l'exploitation était mal connue[13].

Autre exemple à Saranda (Albanie)[14], où deux fragments de mosaïque ont pu être attribués à un même atelier grâce à l'utilisation d'un matériau original et bien caractéristique : une pierre dure, rouge striée de brun, absente partout ailleurs. Cet indice a permis de faire le rapprochement entre ces deux parties de la nef éloignées l'une de l'autre (réparations ponctuelles, mais anciennes), bien que la disparité de leur décor n'ait été d'aucun secours pour témoigner d'une production unitaire.

On trouve également, surtout pendant l'Antiquité tardive et l'époque byzantine, des tesselles ou des plaques *d'opus sectile* retaillées dans des éléments de remplois

13 Ophite verte des Pyrénées, cf. Balmelle 1987: en particulier 170 et 186.

14 Mission albano-israélienne, sous la direction de E. Netzer, G. Foerster, E. Nallbani et K. Lako.

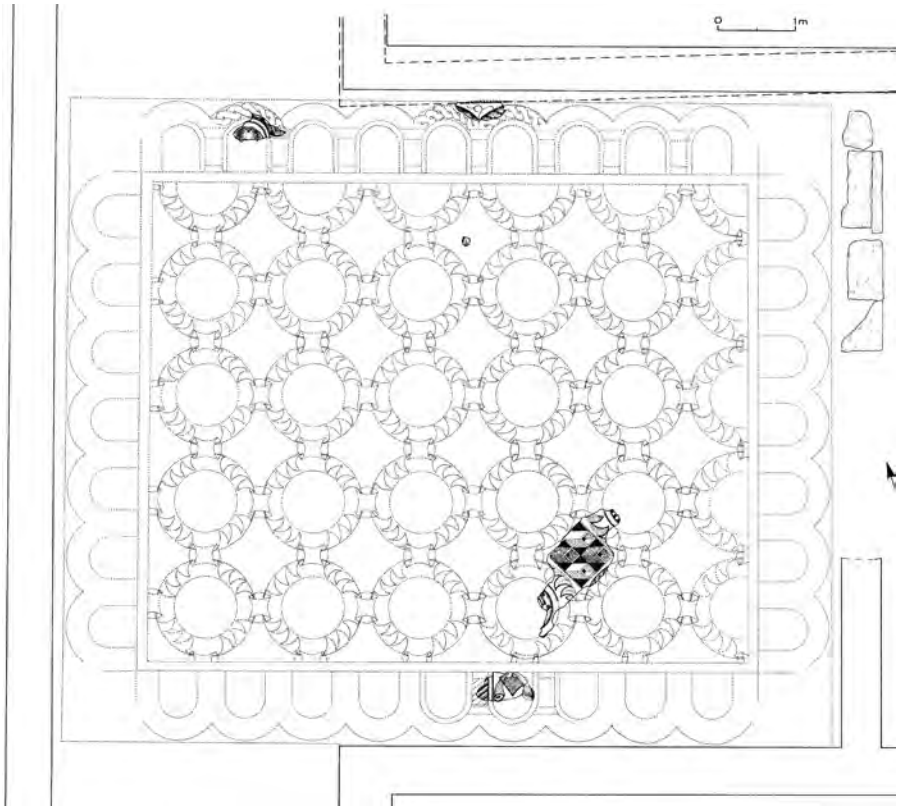

Figure 4
Séviac (Gers), restitution du décor du vestibule de la villa (del. M.-P. Raynaud)

(moulures, placages, plinthes). Le marbre, très prisé à toutes les époques, fut systématiquement remployé à partir de l'époque byzantine où l'exploitation des carrières cessa progressivement[15].

4. Dimensions et méthode de taille des tesselles

La qualité de la taille des tesselles ou des plaquettes d'un *opus sectile* est très variable et révélatrice des compétences des artisans. Son étude permet de déterminer les outils utilisés (pinces, marteline ou scie). Ces précisions sur le soin porté à la fabrication des cubes ou des plaques reflètent dans une modeste part la prospérité du commanditaire, et la qualité de l'atelier choisi. Des analogies concernant la taille des cubes sur un même site peuvent contribuer à l'identification de groupes homogènes. De la même façon, la densité des tesselles au dm^2 peut corroborer tel ou tel rapprochement. Ces mesures aident pour la comparaison de pavements physiquement éloignés les uns des autres.

Il arrive que la dimension des tesselles varie dans un même bâtiment selon l'emplacement des mosaïques[16], sans refléter l'œuvre d'ateliers différents. Ainsi à Byllis, basilique D, il est évident qu'un unique atelier a réalisé la nef centrale et le petit tapis du *prostoon*, comme l'attestent sans doute aucun le répertoire et le dessin des animaux. Cependant la densité moyenne de la première mosaïque (65 tesselles au dm^2) est nettement inférieure à celle de la seconde (120 tesselles au dm^2), dans le souci de soigner tout particulièrement l'emplacement privilégié du *prostoon*, grâce à un dessin plus fin et des matériaux précieux et chatoyants (pâtes de verre colorées) (fig. 3).

15 Sur cette question : Sodini 1994, et Sodini 2002.

16 Tapis de circulation, panneaux figurés ou situés à des emplacements privilégiés.

Figure 5
Xanthos, basilique Est, tracé préparatoire sous la mosaïque du narthex sud (ph. J.-P. Sodini)

5. Mortiers et supports

L'observation des mortiers et de la constitution stratigraphique des supports peut s'avérer très instructive.

-La dimension et l'aspect des joints entre les tesselles ainsi que la finesse du lit de pose peuvent servir de critère de distinction entre plusieurs mosaïques et contribuer à la classification en groupes homogènes.

-Il arrive que lorsque des tesselles ont disparu, totalement ou sur une surface importante, l'empreinte des cubes soit préservée, visible en lumière rasante lorsque le mortier est parfaitement nettoyé. On peut alors, aux heures propices (matin et soir), pratiquer le relevé de ces empreintes et proposer une restitution du décor disparu. Quelques maigres traces bien placées ont parfois permis de restituer la totalité d'un décor. Citons le cas du vestibule d'entrée de la *villa* gallo-romaine de Séviac (Aquitaine, France), où le décor pourtant peu banal a pu être reconstitué grâce à de petits fragments épars et quelques traces (fig. 4). Dans le cas de la Basilique de Candidus à Haïdra (Tunisie), l'étude systématique des supports des mosaïques, pourtant déposées longtemps auparavant, a permis un relevé des traces et des empreintes. Ce document a ensuite servi à retrouver les divers panneaux de l'église, conservés au Musée du Bardo - sols du musée et réserves –, en dépit d'indications de provenances très vagues et de restaurations plus ou moins abusives. Ainsi le plan presque complet des sols de l'église a pu être reconstitué[17] de façon certaine. Enfin, troisième cas, dans la Maison des Trois Grâces à Lixus, l'observation des supports laissés en place lors des déposes pratiquées dans les années soixante a permis de retrouver l'empreinte d'un des

17 Fouilles de Haïdra, Basilique de Candidus, publication en préparation sous la direction de N. Duval et F. Baratte.

pavements, exposé au Musée de Tétouan sans précision sur son emplacement d'origine[18].

Il est aussi enrichissant d'étudier les supports lors de campagnes de restauration. Plusieurs découvertes peuvent avoir lieu à cette occasion.

- La peu fréquente découverte d'un tracé préparatoire peut survenir lors d'un nettoyage ou d'une dépose soigneuse. Ce tracé est exécuté sur la couche supérieure du support, le *nucleus*. Il est destiné à être recouvert au moment de la mise en place des tesselles par le mince lit de pose dans lequel elles sont insérées. Ce tracé peut être gravé ou dessiné par des pigments ou de la craie. Dans ce dernier cas, il est très rarement préservé après recouvrement par la mosaïque. Le tracé incisé est plus durable et repérable. Deux exemples partiels existent à la basilique Est de Xanthos, l'un dans le compartiment Sud du narthex, préservé dans un angle, qui présente un quadrillage de bandes un peu sinueux correspondant plus ou moins clairement au décor de la rallonge (cercles sécants) et du champ (croix de U) (fig. 5). L'autre, plus dégradé, se trouvait dans la partie ouest de la nef Sud (tracé ferme et rectiligne). Ces tracés ont été repérés respectivement l'un après une dépose soigneuse des tesselles qui a respecté la surface du support, l'autre dans les lacunes. Dans les deux cas, le décor des mosaïques qui les recouvrait était particulièrement complexe, difficile à réaliser sans l'aide du tracé directeur. On citera pour mémoire le remarquable tracé préparatoire incisé d'une mosaïque géométrique de Stabies (Musée de l'Antiquarium de Stabie, Italie)[19].

- Les déposes permettent le démontage éventuel du support par les archéologues, ou la réalisation de sondages ponctuels. Sa structure stratigraphique peut alors être étudiée et des éléments de datation collationnés (monnaies, céramiques…). La fouille sous le sol peut en outre apporter des indices archéologiques de datation sur l'installation du pavement, et enfin sur d'éventuelles structures antérieures au sol. La repose du pavement *in situ* a lieu après le remplacement du support (mise à plat, drainage) et la restauration en atelier de la surface mosaïquée. Une documentation complète est alors effectuée en vue la publication.

- L'étude des supports peut démontrer le souci des mosaïstes de trouver des réponses adéquates aux problèmes sismiques posés localement. Ainsi à Xanthos, dans le compartiment Sud du narthex, après le premier tremblement de terre, on a essayé de donner au nouveau pavement une assise plus stable que le support pratiqué ordinairement (*statumen, rudus, nucleus*). Au-dessus d'une surface de terre nivelée, les artisans ont ici divisé l'unique couche du support en bandes parallèles séparées par des alignements de fragments de tuiles posées de chant. Les intervalles entre ces lignes ont alors été comblés par un remplissage serré de tuiles posées de chant perpendiculairement aux lignes ; l'ensemble a été recouvert par un mortier de surface permettant un bon nivellement. Ce support devait être dans une certaine mesure souple et élastique, et ainsi mieux résister aux contraintes sismiques. Ceci est attesté par l'état relativement bon de la mosaïque malgré l'ultime tremblement de terre qui a détruit l'ensemble de la basilique au 7e siècle. On a pu observer ce type de support souple dans deux exemples en Albanie (dans la basilique E Byllis, et celle de Vrina), où le sol présentait des risques d'instabilité, le premier du fait de la forte pente, le second à cause d'un sous-sol très humide[20].

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18 Il s'agit de la mosaïque du combat de coqs.

19 Une très bonne illustration de ce tracé a été publiée dans le Catalogue Madrid 2001: 103. H. Lavagne à cette occasion donne une bibliographie complète de ce pavement. E. Chantriaux, Ateliers de Restauration du Musée de Saint-Romain-en-Gal, s'est aussi intéressée aux tracés préparatoires : Evelyne Chantriaux, Tracés préparatoires sous la mosaïque de la *domus* du collège Lumière de Besançon. Lettre de l'AFEMA 2006 : 6-7.

20 Raynaud 2008 : fig. 3c.

Figure 6
détail de la restauration d'un fragment trouvé enfoncé dans une lacune
(ph. P. Blanc)

-Une étude physico-chimique du mortier peut apporter des indications précieuses sur les techniques respectives de différents ateliers et contribuer à des rapprochements. On en connaît de nombreuses illustrations lors de prélèvements de mortiers sur l'architecture et les enduits muraux.

- La restauration *in situ* peut réserver des surprises. Les restaurateurs nettoient très soigneusement les lacunes et les lisières avant de procéder à leur comblement en mortier pour renforcer la cohésion du pavement. À cette occasion peuvent apparaître des découvertes :

. La plus fréquente est le dégagement de fragments enfoncés dans le sol (sous le niveau de la mosaïque), soit par la chute d'éléments lourds sur la mosaïque, soit par des mouvements et plissements tectoniques du terrain. Le restaurateur les remet à niveau et le relevé pourra alors être complété (fig. 6).

On peut procéder à l'analyse soigneuse des supports nettoyés, sous le contrôle des restaurateurs qui consolident les lisières au fur et à mesure afin d'empêcher une dégradation supplémentaire. C'est aussi l'occasion d'observer un éventuel tracé préparatoire ou des empreintes de dalles d'un sol antérieur. Ainsi à Xanthos, dans la nef centrale de la basilique Est, la mosaïque du second état était directement posée sur le support d'un dallage du premier état, brutalement détruit : les empreintes des dalles, seules encore visibles, ont pu être relevées dans les lacunes ou à l'occasion de déposes ponctuelles. Ce travail a permis d'établir un plan restitué du premier sol, dont pourtant aucune plaque n'était restée en place (fig. 7).

-Découverte du sous-sol : dans la nef sud de Xanthos nous avions constaté, par l'observation de surface, que deux mosaïques juxtaposées appartenaient à deux phases différentes. Le nettoyage des lisières des deux tapis par les

restaurateurs[21] a apporté des enseignements décisifs pour comprendre la succession des évènements. On a pu établir la chronologie relative suivante : 1-pose de la mosaïque primitive sur toute la surface de la nef ; 2-tremblement de terre et destruction partielle des sols ; 3-récupération des débris de la mosaïque détériorée et nivellement de ces fragments pour servir de semelle à un nouveau sol; 4-installation d'une nouvelle mosaïque dans les parties détruites au-dessus de cette semelle sommaire (fig. 8).

Ceci a donc permis d'établir de façon certaine la chronologie des pavements, mais aussi de comprendre l'état d'esprit qui a présidé à la restauration de l'église en partie détruite : la hâte et l'économie. On a pu ensuite mieux saisir ce qui s'était passé ailleurs dans l'église : dans la nef centrale[22], dans l'architecture[23], dans la sculpture architecturale[24]. Le phasage des éléments et des sols de l'église s'est donc aidé des évènements observés avec les restaurateurs. Ces observations ont été immédiatement parachevées par des fouilles très poussées dans tous les secteurs lacunaires des mosaïques du secteur sud de l'église et ont occasionné de multiples découvertes (fragments ensevelis par le tremblement de terre, tombes ultérieures).

L'histoire du monument commence à apparaître clairement. Ces deux cas, dans le même édifice, de réutilisation de fondations antérieures ou de débris pour constituer un support après le séisme, s'expliquent par la nécessité de remettre très vite en état le bâtiment (cathédrale de la cité) pour le rendre au culte. La réutilisation de gravats dans la nef sud résolvait en partie le problème du déblaiement des ruines, tandis que la réutilisation du support de *l'opus sectile* détruit de la nef permettait d'épargner le temps et la mise de fonds nécessaires à l'installation de fondations traditionnelles d'une mosaïque. Hélas, ces initiatives à première vue astucieuses, mais réalisées à la hâte, ne se sont pas révélées solides à long terme.

Figure 7
Xanthos, basilique Est, nef centrale ; empreintes de dalles de l'*opus sectile* détruit (ph. CNRS-M.-P. Raynaud)

6. Restaurations anciennes des sols

Les restaurations racontent la durée d'utilisation au même titre que les usures, les occupations successives, les transformations et réaménagements des espaces ; elles témoignent de la prospérité respective des différents habitants selon l'époque de réfection et de leur sensibilité esthétique.

- La catégorie la plus sommaire des restaurations consiste en comblements de lacunes, toujours visibles (cicatrices de lisières, niveaux, matériaux, taille des cubes, couleurs ou décors différents). Ces comblements sont d'une valeur esthétique toute relative. La qualité des pièces est en effet très variable et révélatrice, depuis l'obturation « de fortune » par un mortier de chaux ou une dalle de marbre, l'empiècement en tesselles blanches jusqu'à l'imitation

21 P. Blanc et L. Krougly, Atelier de Restauration du Musée d'Arles Antique, ont pratiqué la consolidation *in situ* et la mise en place de la protection de la majeure partie des mosaïques de la basilique Est de Xanthos, travail qu'ils n'ont pu continuer récemment, faute de financement.

22 Comme on l'a vu plus haut, le dallage primitif en *opus sectile* une fois détruit, on a réutilisé son mortier pour installer une nouvelle mosaïque.

23 On avait à de multiples reprises constaté deux phases de construction proto-byzantines, proches l'une de l'autre, et leur lecture fut confortée par la preuve des manifestations d'un tremblement de terre. Le baptistère, que l'on savait construit dans un second temps très proche du premier en s'appuyant contre l'abside primitive, a pu s'intégrer dans la seconde vague de travaux qui a suivi le désastre. Il semble presque certain désormais que l'édifice a subi cette première secousse alors qu'il n'était pas achevé. La publication des fouilles, en cours sous la direction de J.-P. Sodini, développera ce point.

24 Tables d'autels et ambons successifs, chapiteaux de deux types, etc., étaient attestés.

Figure 8
Xanthos, basilique Est ; à droite, fragments de la mosaïque détruite du premier état, employés en remblai sous la mosaïque du second état (conservée à gauche) (ph. CNRS-M.-P. Raynaud)

soigneuse du décor en continuité, en passant par une disposition dans le désordre des tesselles récupérées, le bouchage au décor simplifié, ou même le décor délibérément différent du décor d'origine (fig. 9), etc. L'aspect plus ou moins harmonieux de ces pièces témoigne de la qualité des restaurateurs, professionnels ou occasionnels, des moyens financiers du commanditaire, des matériaux dont les artisans disposent, ainsi que du respect des uns et des autres vis-à-vis du décor primitif[25].

- La réfection la plus habituelle est le recouvrement d'un sol antérieur par une nouvelle couche de mosaïque : utilisant comme assise (hérisson) le sol précédent, le nouveau sol est légèrement surélevé, mais ne nécessite pas d'importants travaux de fondations. On ne découvre la couche inférieure que dans les lacunes ou par dépose de la couche ultérieure.

- Il existe aussi des mutilations volontaires, destinées à faire disparaître des motifs jugés gênants ou hérétiques, illustrant la notion de *damnatio memoriae*. Ce pourrait être le cas à Saranda, pour certains tapis manifestement remplacés lors de la transformation de la synagogue en église[26]. En Jordanie, le cas est particulier : on constate dans nombre d'exemples d'églises l'ablation exclusive et systématique des motifs figurés (têtes, mains, pieds, pattes) au 8e siècle, tout en préservant le reste de la mosaïque. Les lacunes ainsi formées sont

25 Sur ce sujet, voir les ouvrages de W. Daszewki, entre autres Daszewki 2003: 245-254. Voir aussi la bibliographie donnée par l'auteur.

26 Les tapis antérieurs ayant disparu, ceci est une hypothèse. Cf. Raynaud et al. à paraître.

Figure 9
Xanthos, basilique Est, empiècement dans la nef sud (ph. CNRS-M.-P. Raynaud)

immédiatement et soigneusement rebouchées avec les tesselles récoltées[27], réinsérées dans le désordre, ou en dessinant un motif végétal (fig. 10). On a interprété ces destructions systématiques à une volonté aniconique, longtemps attribuée aux premiers musulmans, mais la découverte de motifs chrétiens comme des croix dans certains comblements privilégie désormais l'hypothèse d'un refus délibéré des images de la part de la communauté chrétienne, qui aurait ordonné elle-même ces destructions. Cette « iconophobie » reflète le souci de cette époque de lutter contre l'idolâtrie, état d'esprit confirmé par l'étude des textes et l'histoire de l'église en Orient et des conciles[28]. On soulignera le fait que ces destructions partielles ont de toute évidence été réalisées par des artisans mosaïstes, comme le prouve la qualité technique des « bouchages ».

- Le changement de destination et de proportions d'un espace occasionne souvent des reprises et des restaurations des sols. Leur lecture facilite la compréhension de l'évolution de l'occupation d'un bâtiment ; de nombreux exemples apparaissent lors des fouilles. On citera parmi d'autres le cas des maisons du quartier de l'Odéon à Carthage[29].

- On observe dans certains cas un respect tout particulier des occupants successifs pour les restes des mosaïques antérieures : l'exemple de l'église de Saranda (Albanie) en est une étonnante illustration. La succession des phases d'aménagement de cet édifice compliqué - synagogue transformée en église - est apparue lisible à travers l'étude des sols. Chacun des occupants a tenu à garder dans la mesure du possible les tapis antérieurs – lorsqu'ils ne choquaient pas – en les restaurant et les incluant dans les nouveaux décors, ou même en imitant dans des empiècements le décor de parties plus anciennes (fig. 11)[30].

27 Cette destruction est si précisément faite qu'il est souvent possible de deviner par la forme de la lacune l'objet ou l'animal représenté à l'origine. Malice de l'artisan chargé de cette opération ?

28 À ce sujet, voir les nombreux ouvrages de M. Piccirillo, entre autres Piccirillo-Alliata 1994: 158-164 et la bibliographie jointe ; Ognibene 2002: part. 95-130.

29 Maison du Cryptoportique, Maison de la Rotonde ; Missions franco-tunisiennes sous la direction de J.-P. Darmon et M. Ennaifer. en cours de publication.

30 On a ainsi pu discerner quatre phases de mosaïques juxtaposées dans un même bâtiment. Raynaud *et al*. à paraître.

Figure 10
Saint-Etienne à Umm al-Rasas (Jordanie), destruction volontaire des motifs figurés (d'ap. Piccirillo 1994, fig. 54)

Les caractéristiques respectives de chaque intervention de restauration ancienne s'avèrent donc bavardes sur l'époque à laquelle elles se rattachent. Elles seront interprétées différemment selon qu'elles sont la production d'un atelier confirmé, témoin d'une volonté de re-décoration ou d'amélioration ambitieuses, ou selon qu'elles reflètent simplement le souci ponctuel de maintenir une mosaïque *in situ*, dans une continuité d'occupation, afin de prolonger la vie du pavement. Ces deux états d'esprit sont forts différents.

7. Recherche de la production d'ateliers

L'ancienne prééminence du « tableau figuré » et l'indifférence vis-à-vis du décor géométrique (considéré souvent en peinture comme en mosaïque comme une catégorie secondaire du décor) avaient anciennement conduit à la perte d'un nombre considérable de témoins souvent laissés sur place sans protection. Or la proportion des décors géométriques sur un site est quantitativement bien plus importante. C'est cette fréquence même qui autorise, par des comparaisons pertinentes, l'identification d'ateliers, éventuellement de mains. On repère dans les décors géométriques, plus répétitifs, des « tics de langage », des maladresses ou des manies d'artisans, autant de petits détails spécifiques à un atelier et inconsciemment répétés. On peut parfois suivre des influences diffuses d'un foyer de production à un autre, sans doute le fruit du déplacement d'ateliers, de travaux communs, du changement d'atelier ou de la mise à leur propre compte de certains artisans.

Figure 11
Saranda, synagogue-église, panneaux ouest de la nef ; le panneau de droite imite grossièrement la bordure de celui de gauche, qui lui est antérieur (ph. CNRS-M.-P. Raynaud)

- Parmi les critères servant à cerner des groupes homogènes, on a déjà cité les critères techniques, tels l'observation de la taille des cubes, leur densité au dm^2, la taille des joints et la qualité du mortier de finition, le choix des matériaux et des couleurs (reflet du choix de chaque atelier), sont autant de détails communs à chaque atelier. On décèle parfois quelques influences extérieures. Citons dans l'atrium de Xanthos (basilique Est), l'emprunt par un des deux ateliers ayant travaillé simultanément d'une tesselle de marbre violet, matériau rare exclusivement utilisé par l'autre atelier. On constate aussi l'influence mutuelle et progressive du répertoire de ces deux ateliers qui cohabitent sur le même chantier.

- On peut ajouter à ces critères distinctifs entre ateliers la façon de poser les tesselles (filets noirs d'abord par exemple, ou les raccords en pose parallèle ou perpendiculaire au mur), ou encore la façon de combler les fonds blancs : en cernant les formes sur plusieurs rangs, en lignes horizontales ou en écailles par exemple.

Ces diverses caractéristiques techniques sont nécessairement similaires dans deux œuvres d'une même main, et souvent dans la production d'un même atelier.

- La conception d'ensemble du décor d'une mosaïque et la façon dont il s'intègre dans les murs, intervient parmi les critères significatifs pour déterminer des groupes homogènes de pavements. En effet, l'organisation d'ensemble d'un

Figure 12a
Rinceaux de lauriers à Loupian (Narbonnaise, ph. H. Lavagne) et Séviac (Aquitaine, ph. CNRS-M.-P. Raynaud)

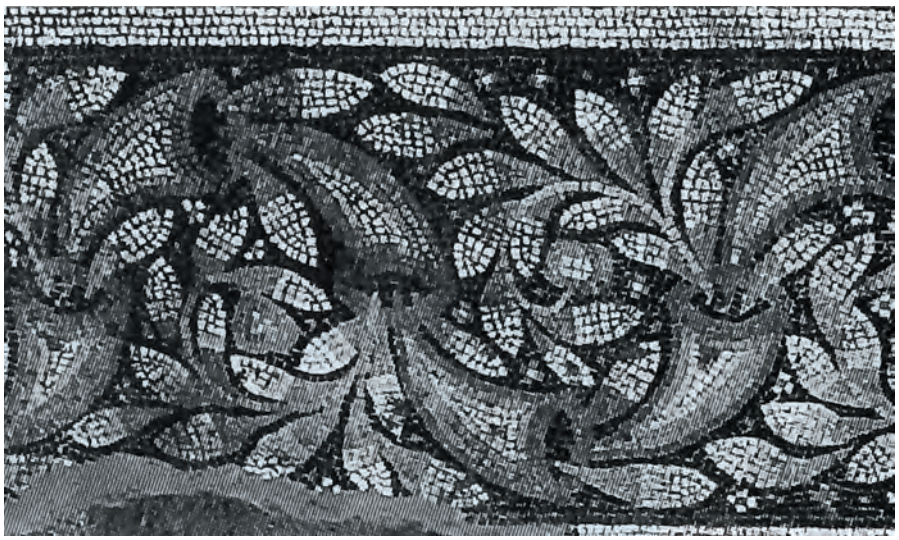

Figure 12b
Rinceaux de lauriers à Loupian (Narbonnaise, ph. H. Lavagne) et Séviac (Aquitaine, ph. CNRS-M.-P. Raynaud)

décor dépend moins du commanditaire que de l'artisan : la façon dont les tapis se juxtaposent, s'adaptent ou non au cadre architectural, la multiplication des bordures, l'organisation d'ensemble de la surface à décorer, ou au contraire le manque de planification, sont importants pour mieux évaluer l'expérience et la qualification des mosaïstes. Dans le cas des églises de Byllis, cette conception globale du décor de certaines parties à permis de clairement identifier un atelier[31]. Plus encore, la mise en comparaison avec d'autres pavements a permis de reconnaître les mêmes caractéristiques dans des pavements contemporains de la région d'Ohrid[32]. L'observation de multiples autres détails similaires (motifs, répertoire, couleurs) a par la suite confirmé cette hypothèse.

- En dernier lieu, le répertoire tient un rôle essentiel dans la classification par ateliers. Les choix du répertoire général d'une mosaïque ne dépendent pas uniquement de l'artisan ; commanditaires et modes entrent en ligne de compte.

31 Muçaj-Raynaud 2005: 383-398.

32 *Ibid*. part. 395-397, fig. 12. Cf. aussi Bitrakova-Grozdanova 2006: fig. 8-10.

Figure 13
Xanthos, basilique Est, nef sud ; tapis du premier état à droite (svastikas dessinés par un double filet blanc) ; à gauche, restauration du second état : les svastikas sont tracés en noir (ph. CNRS-M.-P. Raynaud)

Pourtant le choix de certains motifs secondaires et purement ornementaux reste à la discrétion du mosaïste. Des coïncidences de motifs, d'apparence anodine, permettent dans certains cas d'attribuer deux pavements éloignés à un même atelier de façon assurée. Ces motifs particuliers ou façon de faire spécifiques constituent une signature de l'artisan à son insu ; par exemple l'utilisation en écoinçon d'un calice trifide sur fond rouge, à Byllis et à Studençista (région d'Ohrid), a attiré l'attention sur les similitudes entre ces deux centres[33]. En Aquitaine, des pavements de Valence-sur-Baïse et Séviac, peuvent être attribués au même atelier grâce à un traitement des feuilles de vignes ou des paniers de fruits absolument similaire et original[34] ; enfin dernier exemple, à Séviac (Aquitaine) et Loupian (Narbonnaise), on a observé la même façon de traiter les couronnes d'acanthe ou les rinceaux de lauriers (fig. 12a et b)[35]. Ces détails ou « tics de langage » similaires sont plus facilement repérables dans les décors géométriques et végétaux. Ils présentent l'avantage d'être facilement comparables, contrairement aux détails figurés qui, rarement identiques, en appellent davantage à la formation esthétique de leur observateur.

33 Voir notes 28 et 29.

34 Balmelle-Lapart 1987.

35 Aragon-Launet-Balmelle 1987-88: fig. 6, 7 et 10. Ce rapprochement entre deux ateliers éloignés a été confirmé par plusieurs observations. Parmi elles, la présence dans les deux villas d'une composition d'origine orientale, inconnue ailleurs en Occident, la composition centrée en croix de U, cf. Raynaud 1996: fig. 2-4.

Il arrive que d'autres habitudes, spécifiques à telle ou telle production, aident à l'identification discriminatoire d'ateliers : ainsi à Xanthos, la propension d'un des ateliers à tracer ses compositions en « négatif » ; le dessin n'est pas réalisé par une ligne de tesselles noires mais par un double filet blanc (fig. 13).

Dans la Basilique Est de Xanthos, l'évolution du répertoire graphique de deux ateliers ayant travaillé simultanément a permis, à travers les emprunts mutuels, de déduire par quel secteur le travail avait débuté. Cela a aidé à appréhender la façon dont le chantier de construction de l'église s'est déroulé[36] et à distinguer cinq ateliers de mosaïstes. C'est à Xanthos que l'on a pu mener l'analyse la plus aboutie sur les différents ateliers de mosaïstes[37].

Il apparaît constamment, lors de cette brève approche par le terrain, que la qualité des observations *in situ* dépend d'un nettoyage extrêmement soigneux, d'une collaboration étroite entre archéologues et restaurateurs, et parfois d'une orientation de la fouille décidée conjointement. La présence des spécialistes de la mosaïque sur le terrain doit donc être soutenue et régulière, et non pas ponctuelle comme cela arrive trop souvent. L'ensemble de ces observations et analyses aboutit à l'établissement d'une chronologie relative, qui aide à la compréhension de l'histoire de l'espace et du bâtiment. L'exemple de la basilique Est de Xanthos offre un exemple de ce type de contribution qui, mis en relation avec les études archéologiques, céramologiques, de l'architecture, de la sculpture et du matériel, par convergence des données, aboutit à une meilleure connaissance de l'édifice.

Si l'étude iconographique et stylistique peut s'avérer riche en indications sur les commanditaires et l'espace que la mosaïque décore, une bonne étude technique renseigne davantage sur sa fabrication, sur les ateliers de mosaïstes, sur les vicissitudes subies par le pavement (restaurations, accidents – tremblements de terre, incendies ou reconstruction) et ainsi sur l'histoire du bâtiment et de ses occupants successifs.

36 Raynaud 2008: fig. 1a et 1b.

37 *Ibid.*, et Raynaud, *Xanthos* in press.

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Family, Death and Afterlife According to Mosaics of the Abgar Royal Period in the Region of Osroene

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The region of Osroene is the area including Edessa (Şanluurfa), Carrhae (Harran), and Birtha (Birecik) located east of the Euphrates (Fırat) River. The Abgar Dynasty, the major power in the region, overthrew Seleukos's control and regained independence in the region in132 BCE. Family members depicted together and at ease in mosaics of the royal period symbolize the importance of peace within the family and family unity. Of the figures portrayed next to the genearch, the wife is the most striking individual with her dignified pose. Family mosaics indicate that whole family will be together after death as they were in life. A Phoenix and two Orpheus mosaics found in the region also support the pagan notion of a new life after death.

Osroene bölgesi büyük ölçüde Edessa (Şanluurfa) ile anılan, Karrhae (Harran), Birtha (Birecik), yerleşimlerini içine alan, batısından Euphrates'in (Fırat) aktığı bölgedir. Bölgede önemli bir güç olan Abgar sülalesi M.Ö. 132 yılında Seleukos idaresini sona erdirmiştir. Bu sülalenin oluşturduğu krallık idareyi M.S. 242'ye kadar sürdürmüştür. Krallık Dönemine tarihlenen mozaiklerde bir aileyi oluşturan bireylerin bir arada ve özenli bir şekilde işlenmesi aile huzurunun ve birlikteliğe verilen önemi vurgular. Aile reisi yanında yer alan bireyler içinde kadın, saygın pozisyonu ile dikkat çeker. Aile mozaikleri ölüm sonrasında da gerçek hayatta olduğu gibi bir arada olunacağını göstermektedir. Ölüm sonrası yeni bir hayata inanan bölge paganlarının mezarlarında çıkan bir adet Phoeniks mozaiği ve iki adet Orpheus mozaiği de bunu desteklemektedir.

Key Words: Osroene, Edessa, Abgar, Family, Orpheus, Phoenix

The region of Osroene is the area including Edessa (Şanlıurfa), Carrhae (Harran), and Birtha (Birecik) located east of the Euphrates (Fırat) River. The Abgar Dynasty, the major power in the region, overthrew Seleukos's control and regained independence in the region in 132 BCE. Family members depicted together and at ease in mosaics of the royal period emphasize the importance of peace and unity in the family. Of the figures portrayed next to the genearch, the wife is the most striking individual with her dignified pose. Family mosaics indicate that the whole family will be together after death as they were in life. A mosaic of a Phoenix and two Orpheus mosaics found in the region also support the pagan idea of a new life after death.

The Abgar Kingdom (132 BCE-242 CE) comprises the region between the Euphrates and Khabur Rivers and includes Carrhae, Birtha, Mesudiye and Serrin. Its capital is Edessa. The Kingdom which overthrew Seleukos's control and regained independence in the area attracts attention because of its special identity. In the period of freedom before Parthia and the Romans took control, the kingdom led an independent and traditional existence during the times mentioned and is remembered historically with this same character. The traditional characteristics of art in this region show themselves especially in mosaics[1]. Mosaics have been discovered in Mesudiye, Birtha, Serrin and especially at Edessa. Numerous mosaics were found, and some are now lost and only photos and drawings of them remain today. Others are kept in museums (see: Colledge 1994: 196, fig.114; Healey 2006: 313–327) and private collections overseas (see: Bowersock 2006: fig. 2,4; Parlasca 1984: 231; Desreumaux 2000: 212–215), while additional examples remain undocumented.

Edessa is the city where a major part of the royal period mosaics was discovered. Themes in Edessa mosaics include the family, family solidarity, and death and the afterlife, and they are products of an original local workshop(s) (Salman 2007: 242). Mosaics mentioned above whose provenance is unknown should be attributed to the site of

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1 These traditional characteristics result from Persian and Syrian influence.

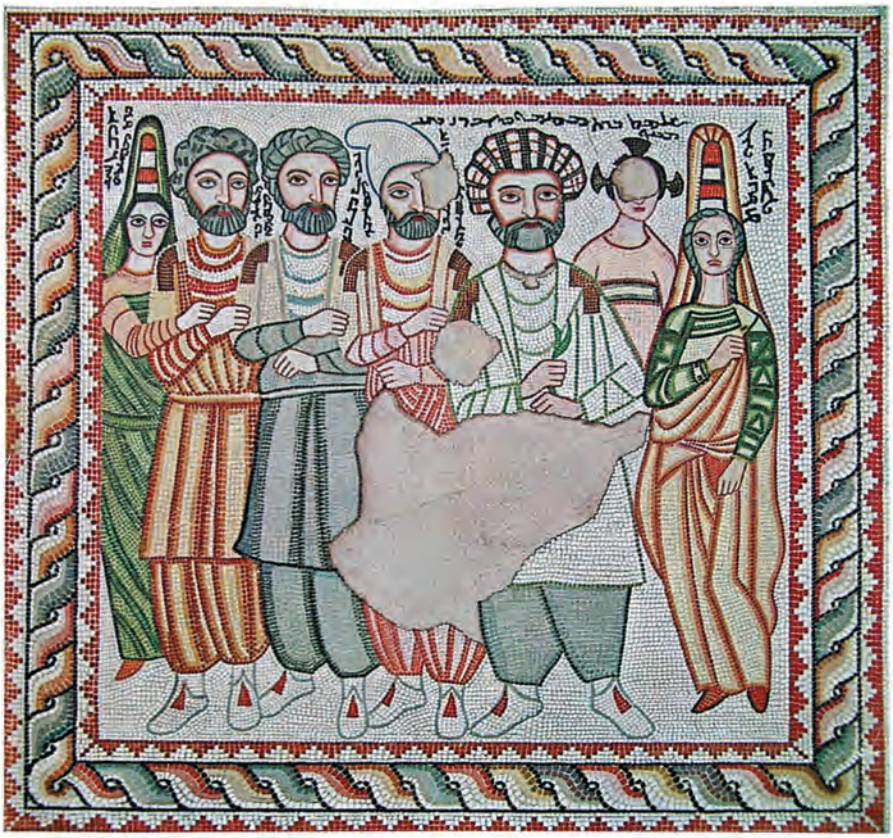

Figure 1
Family Portrait Mosaic, Lost.
(Segal 2002: fig. 1)

Edessa. Edessa, which is the center of the Osroene Kingdom, created an original mosaic school for a brief time. Some of the pavements have dates on them. These mosaics which use the Seleucid calendar were made between the end of the 2nd century and middle of the 3rd century CE. In this period rulers in the kingdom were named Abgar VIII (214-240 CE), Abgar IX (177-212 CE) and Severus Bar Abgar (212-214 CE), Ma'nu Bar Abgar IX (214-240 CE) and the last king, Abgar Frahat Bar Ma'nu X. (240-242 CE) (Hayes 2005: 24–25). The reason for the manufacture of mosaics during these kings' reigns is not the kings' personal initiative but the intense interest in mosaic-making that existed both in Rome and locally. Many mosaics, dating to the 2nd and 3rd centuries CE, were found in Zeugma (Ergeç 1995: 2–10), which is west of Euphrates River, and in Antioch (Campbell 1938: 205–218), which has a similar culture to other North Syrian settlements and the Osroene Region.

Even though mosaics began to be discovered after J.B. Segal's research in the 1950's in Edessa and the neighboring region, some earlier discoveries also have been documented too (Balty 1981: 388, fig. 23; Leroy 1957: 307–315). Mosaics in which members of the family are depicted emphasize the comfort of the family which gathers around the genearch or *paterfamilias*. In some examples, members are depicted standing, while in others they are portrayed as busts in frames. Another iconographic feature also preferred in family mosaics is symposium scenes, in which the genearch lies on a kline and other members are shown serving and honoring him. Similar scenes are present on reliefs (Drijvers 1980: fig.17) in Northern Syrian settlements, and at Edessa and in the neighboring region, especially at Palmyra (Colledge 1976: fig. 61–62). The symposium scenes reflect an important funerary ritual in the region.

Figure 2
A fragment of Tripod Mosaic, Aya Irini,
Istanbul-Turkiye (Photo. B. Salman)

Figure 3
A fragment of Tripod Mosaic, Aya Irini, Istanbul-Turkiye (Photo. B. Salman)

The mosaic J.B. Segal discovered in 1952 at Edessa in the city's south necropolis, in which members of the family are portrayed standing, is lost today (Balty 1995: 15, fig. 5,1; Drijvers and Healey 1999: 170–171, fig. 49; Dunbabin 1999: fig. 182; Ross 2001: fig. 5,7; Segal 1953: 117–118, fig. 12,1; Segal 1954: 29–30; Segal 2002: fig. 1). It is called the Family Portrait Mosaic and it shows a total of seven figures. Four of them are men, two are women, and one is a little girl (Fig. 1). In the Tripod Mosaic, discovered in 1956, whose two fragments are kept in Aya Irini at Istanbul (Figs. 2-3), six figures - two men, two women and two children - are portrayed (Segal 1959: 153–155, fig. 1). An object similar to a tripod, held by the genearch – possibly an incense-burner - represents a religious ritual in the family (Fig. 4). Mosaics in which members are portrayed standing emphasize the family's unity and hierarchical structure.

Similarly, Symposium Mosaics and other pavements, in which members of the family are shown as busts, display the family and its hierarchical structure. A mosaic discovered in 1901 in Edessa and on display in Istanbul today is composed of three friezes. The mosaic, which still preserves its tessera colors, has a total of six figures depicted as busts, two in each frieze (Bossert 1951: 131, fig 415). In the top section are the genearch Aphtuha and his wife Šumu. In the middle section are two young men, and at the bottom are two young women (Fig. 5). The Abgar Mosaic which portrays family members as busts was found in 1979 in Edessa, but later the female figure was stolen and the mosaic was reburied in its original site. Today the area where the mosaic was found functions as a park. Figures are depicted in two friezes. There are a total of four men and one female figure depicted in the mosaic: in the upper register there are three bearded men, and in the lower section one man and one woman. According to the inscription, a man named Abgar stands in the middle of the upper section and has ornate clothing. He is most probably the ruling king, depicted in this mosaic to honor the family[2]. Right next to him is the genearch, who is probably holding a seal and was a high-ranking official (Nuhadra). In contrast to all of these men, most eye-catching figure in the mosaic is the woman. Although she is depicted in the lower register, her head reaches into the upper zone, and the scene is arranged accordingly. With her ornate clothing and headscarf, she is the largest figure in the imageand the closest to the viewer (Fig. 6) (Drijvers 1981: 17–20, fig. 1).

The last group of family-scene mosaics is the Funerary Symposium group. The most famous mosaic in this group is the one discovered by J.B. Segal in 1956. This pavement disappeared after a while, and fragments of it were seen in an antique dealer's shop in Beirut[3]. In the mosaic, the husband, wife and six children

2 There was a discussion between H.J.W. Drijvers and J.B. Segal on the Abgar figure and his identity in the mosaic. The titles "master and patron" used for Abgar in the mosaic may indicate he is a king. Also his different and ornate clothing supports this interpretation. Drijvers dates the mosaic to end of the 2nd century -beginning of the 3rd century CE, because of the border decoration. The mosaic roughly dates roughly to the 3rd century CE. If the Abgar figure in the mosaic is one of the Abgars living in this period then he must be either Abgar VIII (172–212 CE), Abgar IX (212–214 CE) or the last king Abgar X. (240-242 CE). Because from the end of the 2nd century to the collapse of the kingdom there were three kings named Abgar. Drijvers thinks that the Abgar on the mosaic is the Abgar VIII. The name Abgar is a common one in Edessa and similar cultures. On the other hand Segal, according to a coin depicting Abgar VIII, thinks that even if the Abgar in the mosaic is a king, he can not be Abgar VIII, because Abgar is depicted with a crown on the coin. On the crown there are crescent and star motifs, which are important symbols for Edessa. Also the king looks younger here. In the mosaic Abgar wears a common Phrygian cap that men from Edessa use. That is why the figure in the mosaic does not fit the normal Abgar VIII iconography. Segal believes if this man is a king, then he should be Abgar X; see, Drijvers 1982: 167-189; Segal 1983: 107-110.

3 In 6-8 September 1980, on his paper in a mosaic symposium in Ravenna K. Parlasca said he has seen two lost fragments of this mosaic in an antiques dealer in Beirut. These fragments show two little boys to te below of the scene. This paper is printed in 1984. See. Parlasca 1984: fig. 2

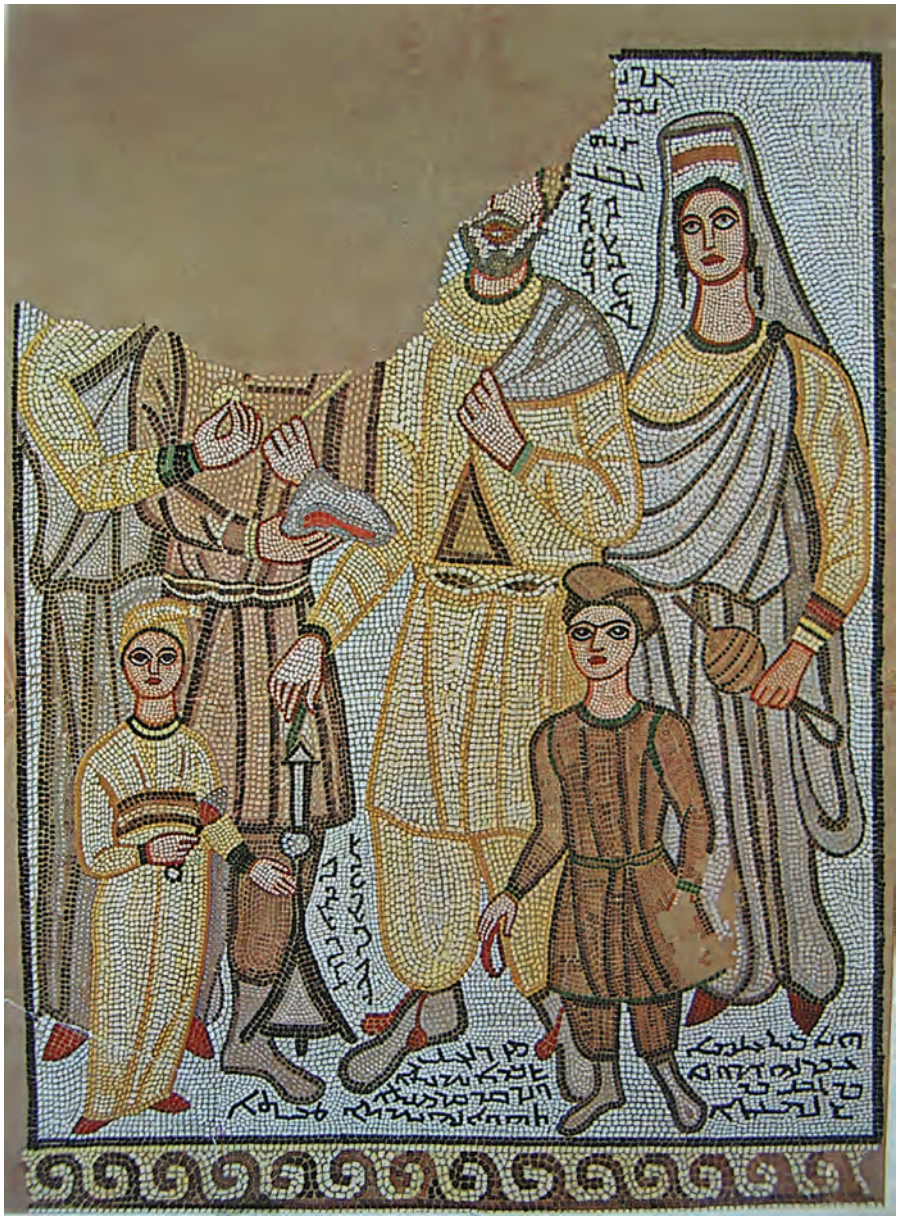

Figure 4
Tripod Mosaic. (Segal 1959: fig. 1)

were depicted. Within the scene, the deceased (named Zaydallat according to the inscription) reclines on his side on a kline or sofa. He is holding a wine glass and resting his arm on a pillow comfortably. At the same time he is leaning his back against a cushion. Right next to him is his wife with her high headscarf shown in a respectful pose. Between him and her wife are a little girl with a headscarf, and on the left three boys serving him and finally two boys portrayed as busts (Fig. 7) (Balty 1981: 388, fig. 23; Balty 1995: 15, fig. 5,2; Colledge 1994: 191–192, fig. Drijvers and Healey 1999: 180–183, fig. 54; Dunbabin 1999: fig. 183; Leroy 1961: 165–169; Parlasca 1984: 227–229, fig. 1–2; Segal 1959: 155–157, fig. 3; Segal 2002: 93, fig. 2).

Other than this lost example, there are some other preserved examples depicting this ritual of the funerary symposium. One work kept in Aya Irini in two pieces and depicting a family of four (Fig. 8) (Drijvers and Healey 1999: 216–217, fig. 69), and another kept in the Şanliurfa Museum, which is badly preserved (Fig. 9) (Salman 2007: 160–162, fig. 70–75), are examples of funerary symposium

Figure 5
Aphtuha Mosaic, Archaeological Museum, Istanbul-Turkey (Photo. B. Salman)

mosaics[4]. Scenes of a funerary symposium in mosaics are always depicted in same way: the genearch lies on a sofa holding a wine cup, and next to him are the wife in a respectful pose and the children serving him. Symposium mosaics iconographically express the funerary ritual of the symposium held after the deceased has passed away, to bid him farewell. But we can be more concrete here and come to this conclusion: on symposium mosaics family members, especially children serving their father and the wife standing or seated next to him, express respect and love for the father. The genearch lying on sofa shows how comfortable and well respected he was in his lifetime and how faithful was his wife to him.

One of the most striking characteristics of the family mosaics of the region is the realistic depiction of the figures. Mosaic artists portrayed figures as realistically as possible and reached a remarkable degree of accuracy. Figures have calm facial features (Segal 2002: 68). Figures looking around with big eyes have their mouths closed and mostly portrayed with a serious look. All men, young and old, are shown with beards. The main figure in the Abgar Mosaic, Abgar himself, is portrayed with a gray-black beard to show that he is past middle age (Drijvers 1981: 18, fig. 1). The figures in the mosaics are depicted with ornate, eastern-style dress (Dunbabin 1999: 173).

4 A mosaic from the Osroene region published by S. Brock recently shows the funerary symposium iconography. This mosaic is in the mosaic style of Edessa and belongs to the royal period. S. Brock in his publication of the inscriptions in the mosaic tells that it belongs to a private collection, but he does not say who owns the work or in which country the mosaic is located. See Brock 2007: 714-721, fig: 1-3; many mosaics from this region share the same fate, and their locations remain unknown. For similar examples see, Bowersock 2001: 411-416; Desreumaux 2000: 212-215.

Figure 6
Abgar Mosaic. (Drijvers 1982: fig.1)

The most important person among family members is the genearch, the man of the house. The royal figure honoring the family and the genearch in the Abgar Mosaic is an exception to this rule. In all mosaics in the region, all men including the genearch are portrayed with beards. Men have elaborate dress. Caps are the distinguishing features of the men. Even though the Phrygian cap is mostly used, sometimes it is possible to see other types of caps. For example, in the Family Portrait Mosaic, the deceased, the one in the center of the scene, wears a form of headgear similar to a turban. This is the only example of a man wearing a turban in this region's mosaics. One of the figures in the mosaic right next to him wears a high Phrygian cap. The presence of this bonnet and his placement on the man's right side could mean that he is the oldest son of the genearch. The other two men are portrayed without headgear and have full wavy hair (Segal 2002: 76). Another man portrayed without headgear also is present in the Abgar Mosaic. Men are portrayed with a knee-long tunic and wide trousers similar to a shalwar. Similarly, boys wear knee-length shirts as well as trousers. The trousers descend below the knee[5]. Trousers sometimes appear loose and sometimes tighter. There are two types of shoes: one with triangular clips and an open back, and another, taller shoe which is still used in the east today.

Despite the men's importance in local mosaics, the most striking figures are the women. Their positions in the mosaics, their ornate clothing and dignified poses show us how much they were esteemed. Their poses in these mosaics also show us their position of authority within the family. This also indicates to us the important status of women in the region. In local mosaics women are portrayed immediately next to the husband, and in funerary mosaics they are portrayed sitting in dignified poses with very fine dress and headscarves. One of the most important details in mosaics is the fact that each woman's face is

5 This type of trousers can be considered a Persian influence, and it was first used by them.

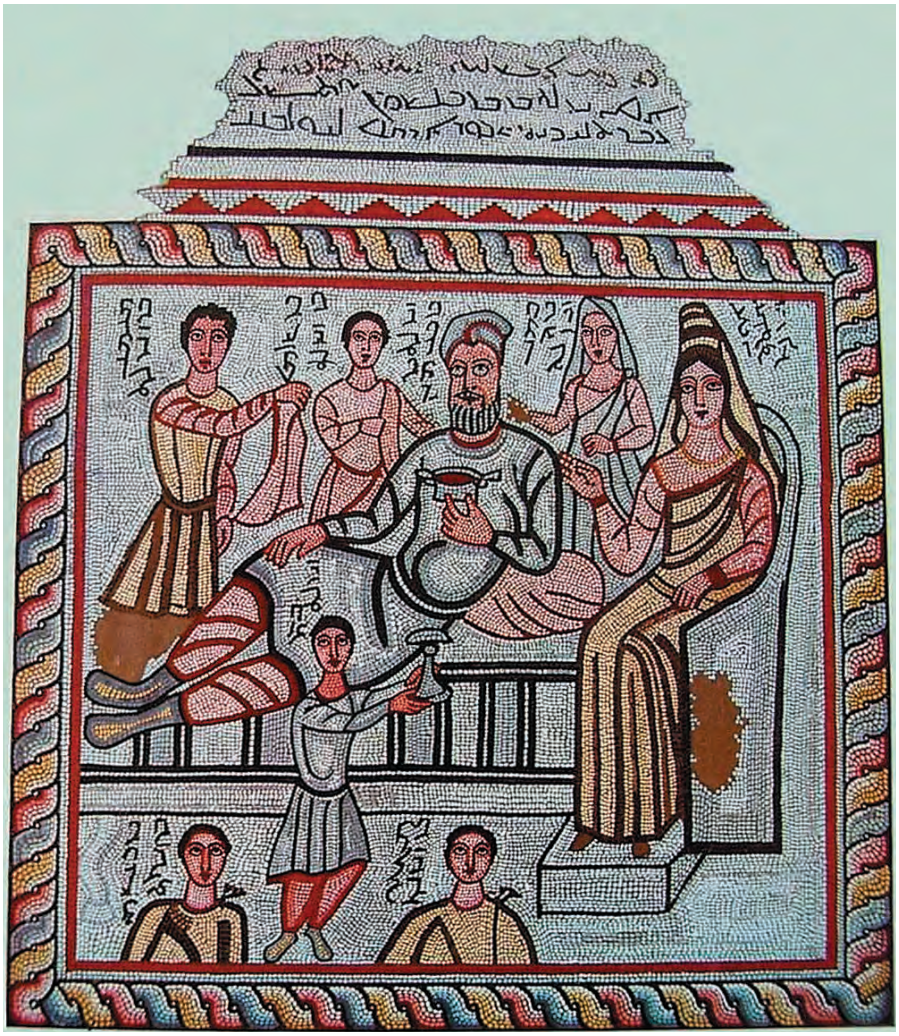

Figure 7
Funerary Couch Mosaic, Lost
(Dunbabin 1999: fig. 183)

always uncovered. Their headscarves hang down but do not cover their faces. Even though the headscarf is thought by some to be a veil (Dunbabin 1999: 173), the open faces do not support this notion. The headgear women use under their headscarf can still be seen today in the region. This headdress is called Köfü and is associated with the family's wealth (Segal 2002: 74). Accordingly, a pointed headdress with many stripes shows that the woman is rich, whereas a flatter and wider headdress with fewer stripes shows that she is from a less affluent family[6]. Women are portrayed with braided hair and long tunics with embroidery. Over their tunics they wear long caftans in different colors attached to the left shoulder with a brooch or a clip similar to a fibula (Segal 2002: 74). Little girls have plainer clothes. They do not wear caftans, and their tunics are fastened with a wide belt (Segal 2002: 74). Little girls who have not reached puberty wear their hair uncovered and fastened with hairpins in three ponytails, as we can see in the mosaics (Ross 2001: figs. 5,7).

Mosaics representing the family show us the period's family structure clearly. In the hierarchy of the family, husband, wife and children all seem attached to each other in life. In the mosaic in which every member of the family is presented, this attitude is conveyed by having each family member's name placed next to

6 This cap is also similar to the cap used in 19th-century tower shaped headgear or the "hennin". See Segal 2002: 74.

Figure 8
Funerary Couch Mosaic, Aya Irini, Istanbul-Turkiye (Photo. B. Salman)

the figure and written in Estrangelo Syriac. This devotion to each other in life can still be seen in the region. Since these mosaics were discovered in graves and bear inscriptions about death and the afterlife, including names other than family members' names, we can observe the local pagans' approach to these subjects. Family mosaics show us that people are attached to each other in death as they are in life. In other words, these scenes should be considered a reflection of the desire for togetherness in life, death and the afterlife. It seems that pagans in the region think of death as a means to bring the family together and to start a new life together after death. So an appropriate death and funerary ritual is developed in the region. From a different perspective, depiction of family members in the mosaics is the result of the solidarity of the members, alive or not. Because the grave is the place where the living and dead come together, the deceased are brought back to life in the mosaics made by their kin. Members of the family, the close kin, will remember the good old days, when they see the deceased represented in the mosaic at the time of visiting the grave.

Inscriptions in the mosaics are written in Estrangelo Syriac, which is a dialect of the Aramaic language special to this region[7]. One of the striking features of the inscriptions is the "House of Eternity" expression in the mosaics[8]. It shows us the importance of the tombs; they provide this name and indicate the importance of the grave cult for pagans. It reads: "*I, Aphtuha, son of Garmu, made for myself this tomb, for myself, for my children and for my heirs to eternity*" (Drijvers and Healey 1999: 163–164) on Aphtuha mosaic. And "*I, Barsimya, son of Ašadu, made for myself this house of eternity, for my children and for my brothers, for the life of Abgar, my lord and benefactor"* (Drijvers and Healey 1999: 185–186)

7 For the inscriptions in mosaics and graves of the region, see Brock 2007: 715–717; Drijvers 1973: 1–14; Drijvers 1993: 147–161; Healey 2006: 313–327; Segal 1954: 2–36; Segal 1957: 513–527.

8 The expression of "house of eternity" can be seen in the Zenadora Mosaic, Aphtuha Mosaic, Balay Mosaic, Tripod Mosaic, Phoenix Mosaic, lost Orpheus Mosaic, and Abgar Mosaic.

Figure 9
Funerary Couch Mosaic, Archaeological Museum, Şanlıurfa-Turkiye (Photo. B. Salman)

appears on the Abgar Mosaic. For the one who had the mosaic and the tomb made, the now deceased, the genearch proclaims the importance of the tomb, made for all of his kin. The inscription on the Tripod Mosaic shows that the local pagans believed in life after death: *"Adona, son of Gabbay son of Šelam'ata made this house of eternity for himself. Whoever removes the sorrow of* (his) *offspring and mourns for* (his) *forefathers will have a happy afterlife*" (Drijvers and Healey 1999: 172–173). This also can be considered an expression of belief in the hereafter (Yaşar 2003: 111-121). The family's wish to spend life after death together causes them to be shown happy, peaceful and calm in the mosaics.

In inscriptions other than those in mosaics, tombs are said to be under the gods' surveillance, and whoever harms them will be punished by the gods. For example, an inscription found in Sumatar (for Sumatar, see Segal 1953: 97–119) gives us information about this and life after death: *"I, Gayyu, daughter of Baršuma, made this grave for myself. Whoever comes here shall not remove my bones. Whoever does it shall not have the other world* (afterlife) *and Maralahe curses him*" (Drijvers and Healey 1999: 78). Another inscription from a tomb in Serrin[9] dated to 73 CE reads: "*..Whoever shall give praise-all gods shall bless him. Whoever comes and damages this tomb shall not have a grave and shall his children be blind"* (Yaşar 2003: 113). An inscription dated to a later period, 6th century A.D. found in Birtha reads; "*...God bless everyone come to this tomb and give praise"*(Yaşar 2003: 113). Life after death and the wish to treat the tomb and the deceased with respect are clearly expressed in the tomb inscriptions.

Besides the inscriptions, other visual evidence expressing life after death occurs in some mosaics found in Edessa. They include two Orpheus mosaics and another pavement representing a Phoenix (Balty 1981: 389; Drijvers and Healey 1999: 176–177, fig. 52; Ross 2001: 111–113, fig. 5.3; Segal 1959: 155; Segal 2002: 93, fig. 67), which is not commonly portrayed in mosaics. The mosaic examples with Orpheus, discovered by Segal in 1956 in the city, are lost today. In one mosaic Orpheus is portrayed leaning against a tree and sitting on a rock

9 Serrin is south of Edessa and northeast of Herapolis (Mabbug).

holding a lyre with horn-shaped tips. Animals are portrayed above each other in a vertical plane; a lion appears at the bottom and three birds occur above each other to Orpheus's left. At the bottom of the scene two draped figures, similar to a little girl and boy, represent the spirit and hold ontoa *tabula ansata*[10]. The inscription on the *tabula ansata* reads: *"I, Aphtuha, son of Barnay, on July of the year 39* (227-228 CE)*[11], made for myself this house of eternity, for my children and for my heirs"* ((Fig. 10) (Drijvers and Healey 1999: 178–179).

Figure 10
Orpheus Mosaic, Lost (Segal 2002: fig. 68)

The other Orpheus mosaic was found recently but then smuggled abroad. Today this mosaic is in the Dallas Art Museum. Orpheus sits in the middle but the chair or rock on which he sits is not visible. His head and upper body are seen from the front, but his lower body is turned to the right. He wears a typical Phrygian cap. Animals are arranged in two groups: an aggressive group consisting of a lion, tiger, leopard and a wild boar can be seen on the right, and a calm group of two birds, two wild goats and a colt or mule is on the left. We are used to seeing only calm animals in Orpheus groups so this example is different. The animals in the aggressive group all have the same pose, running and jumping up as if they were attacking Orpheus. We can see the shallow perspective in the animals being placed one above the other. In the mosaic there is a short inscription next to Orpheus's head: "*Bargased, mosaic-maker, laid the mosaic"* (Healey 2006: 319). This is the only artist's signature in a mosaic found in the region. On the calm animals' side, above the resting wild goat is the tomb inscription in a frame: *In the month of Nisan in the year five hundred five* (M.S. 194) *I, Pāpā, son of Pāpā, made for myself this chamber of repose, for myself and for my children and for my heirs. Blessed be Whoever sees and gives blessing"* (Fig. 11) (Healey 2006: 316–319).

The Phoenix Mosaic was found in the south necropolis by J.B. Segal in 1956 and disappeared a short time later. In the mosaic as the main feature is an *arcosolium* tomb, which is special to the city. In the background, a column – or maybe a stele - can be seen. On the coloumn there is a bird standing. Next to the bird there is a four-letter inscription which reads "Phoenix". This Phoenix represents the regeneration of life. The inscription in one corner of the mosaic reads: *"I, Baršamaš, son of Barga, on the year 547 made this house of eternity for myself and for my children for all times*" (Fig. 12) (Drijvers and Healey 1999: 176–177).

Belief about death is different in each culture. This belief is another aspect of the local religion. Art representing funerary rituals is also connected to this belief (Ross 2001: 96). In Greek and Roman society, the spirit was believed to return to the body[12]. Eastern Mediterranean Jews believe that the deceased goes

10 Even though some believe these figures are Eros and Psyche, that is not possible because the boy is draped, which is uncharacteristic of Eros. These figures resemble angels who will be very important in Christian art later. Angel or Greek Angelos (Αγγελος) is a very controversial term. The biggest problem is to identify which features belong to polytheism and which to monotheism. According to one idea, Angelos, a Greek creation, is associated with the underworld. Another idea says they are from the Near East. What we are sure of is the existence of angels in both polytheistic and monotheistic religions. In polytheistic religions, angels get their revenge from sinners by punishing them in the underworld. Angels with protective features are spirits wandering in trees and groves and in the sky. At this point we can talk about a Persian influence. The sky association and the Persian influence lead us to the conclusion that pagans in the region believed in angels. They represent the spirit and protect the grave. Their existence in local religion confirms belief in life after death in this religion. See Özdemiroğlu 2004: 71-75; Sokolowski 1960: 226; Şahin 2001: 19-20.

11 A. Luther dates the mosaic to 252 CE. See Luther 1999: 137.

12 On white lekhytoi, scenes about Greek funerary rituals can be seen. According to these, the Greeks saw the dead as immortal and as a hero, and they also represent the relatives of the deceased in funerary scenes. See Şahin 1996: 143–144.

Figure 11
Orpheus Mosaic, Art Museum, Dallas-U.S.A
(Healey 2006: fig.1)

to the underworld, which is the last phase of life. But for Christians, death is joyful, for it brings a better life than the previous existence. It brings another way of life after death, eternity and eternal life (Akyürek 1996: 94). This belief of Christians and those of the pagans in the same region overlap each other. The Orpheus mosaics represent this best. Traditional and moral elements of the Orpheus cult, maybe under the influence of Christianity, attracted attention, and pagans respecting this cult practiced the rules of the cult. That is why they refrained from eating animals and other possible contaminants, since pureness of the spirit could only be attained by avoiding contaminants (Segal 2002: 93). In this context, Christianity and the beliefs of pagans in the region complement each other. The happy and pure spirit of the deceased will ascend to heaven in a joyful event; namely, death.

Figure 12
Phoenix Mosaic, Lost (Segal 2002: fig. 67)

The phoenix represents the human spirit, its eternity and immortality. A phoenix standing on a grave stele and the grave in front of it suggest the notion of life after death (Yaşar 2003: 116). So looking at these features from an iconographic point of view, it seems that local pagans believed that, if the funerary rituals were performed properly, the deceased would come back to life, and regeneration.

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Bookreview

Patricia WITTS*

Mustafa Şahin (editor), ***III Uluslararasi Türkiye Mozaik Korpusu Sempozyumu Bildirileri – The Proceeding of III International Symposium of the Mosaic of Turkey***, Uludağ University, Bursa, 2007, 222 pages including 64 pages of plates in colour and black and white. ISBN 978-975-6149-32-4.

Mustafa Şahin (editor), ***IV Uluslararasi Türkiye Mozaik Korpusu Sempozyum Bildirileri, "Geçmişten Günümüze Mozaik Köprüsü" – The Proceedings of IV International Mosaic Corpus of Türkiye, "The Mosaic Bridge from Past to Present"***, Uludağ University, Bursa, 2008, 247 pages including 448 plates in colour and black and white and 57 figures. ISBN 978-975-6149-43-0.

These two books represent the first volumes in the Uludağ University Mosaic Research Center Series 1. They publish the papers given at two symposia held in Turkey but with an international attendance: the first took place at Bursa in June 2006, and the second was held at Gaziantep in June 2007.

These symposia owe their origins to a small gathering of Turkish and international scholars who met in Istanbul in 2004. They came together again the following year at Altinoluk, and later that year the creation of AIEMA Turkey was announced. The formation of a Turkish branch of AIEMA (*l'Association internationale pour l'étude de la mosaïque antique*) is welcome evidence of the commitment to Turkish mosaic studies. The President of AIEMA Turkey is Prof. Dr Mustafa Şahin, the driving force behind the Mosaic Research Center at Uludağ University and the editor of these volumes.

By the time of its 2006 meeting, the Turkish mosaic symposium had attracted 27 archaeologists and conservators from seven countries. The 2007 conference exceeded all expectations, being attended by 178 participants from 12 countries (including Turkey). This level of attendance attests to the great interest in Turkish mosaics and is well served by these publications which have appeared with impressive and commendable speed.

The volume of the 2006 proceedings is of smaller dimensions than its later counterpart, which has an A4-sized format. It contains 104 colour illustrations and 69 illustrations in black and white, while the volume devoted to the 2007 proceedings contains 406 colour illustrations plus 42 illustrations in black and white, supplemented by 57 figures, many of them in colour. For publications appealing to an international, multi-lingual audience, the generous provision of illustrations is exceptionally helpful. Many of the plates in the earlier volume are of small size, and while some of the plates in the later volume are also small it is pleasing to note that many are much larger: this adds considerably to the usefulness and attractiveness of the books.

The volume of the 2006 proceedings contains 18 papers, of which nine are in English, eight in Turkish and one in German. With two exceptions, all the non-Turkish papers have an abstract in Turkish, and with only one exception all the Turkish papers have an English abstract. The volume of the 2007 proceedings, reflecting the increased scale of the symposium, contains 31 papers, of which 13 are in English and 18 in Turkish. Each paper has an abstract in the other language. Both volumes start with an introduction by Prof. Dr. Mustafa Yurtkuran, the Rector of Uludağ University, which appears both in Turkish and English. They also contain a foreword in Turkish by Prof. Dr Mustafa

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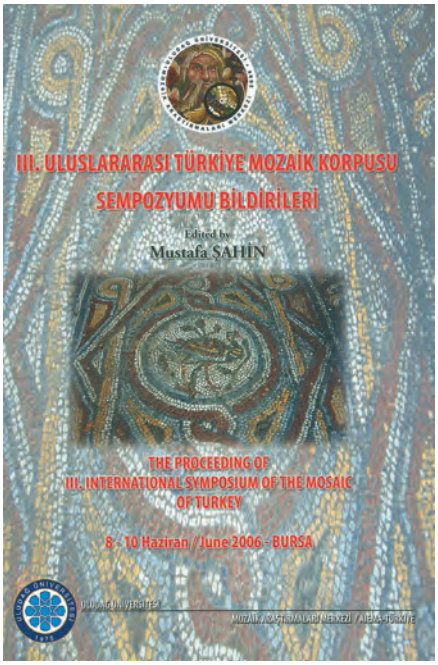
Şahin and Prof. Dr Selçuk Kirli; the later volume contains an English translation of its foreword.



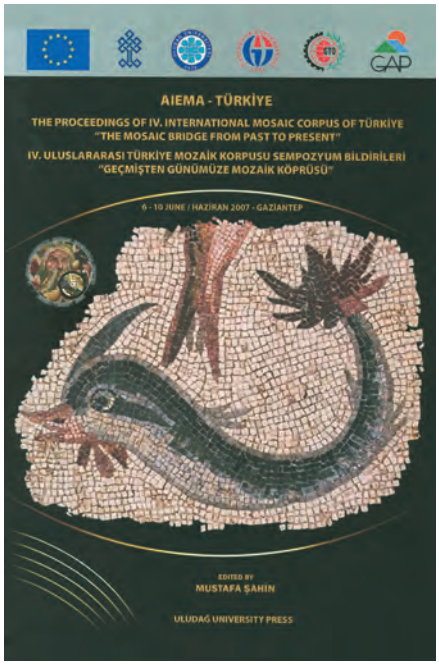
The volume of the 2006 proceedings begins with a text in English of the opening speech of the symposium, given by the Vice-Rector of Uludağ University, Prof. Dr Erdal Emel, in which he stressed the importance of conservation and explained the university's interest in this topic, which has culminated among other measures in the establishment of its Mosaic Research Center. The main papers begin with Mustafa Şahin's review of the history of the foundation of the Center. This is illustrated by photographs of the participants at the previous meetings, showing that the commitment to history extends to recording the history of these symposia – something that should prove fascinating to scholars in years to come. There then follows a summary of the general state of mosaic research in Turkey in 2005 by David Parrish of Purdue University in the USA, one of the distinguished international scholars who have been involved with these symposia from the outset. He explains that new discoveries, especially from Zeugma but also from Çiftlik, Antandros and Metropolis, have led to an acceleration of interest in the mosaics of Turkey. He outlines the project to create a bilingual corpus to further that interest and to disseminate material, and he sets out the detailed form the corpus will take.

There follow papers by Derya Şahin on mosaic terminology, Yusuf Oğuzoğlu on the history of the Bursa region, and Anne-Marie Manière-Lévêque and Marie-Pat Raynaud on the Corpus of the mosaics of Xanthos, which will be the first new publication in the corpus project.

Subsequent papers deal with new discoveries: at a basilica of the late fifth-century at Büyük Orhan in the borough of Bursa by Recep Okçu, and the distinctive mosaics of Edessa (Urfa), many of them from funerary contexts, by Bariş Salman. Emine Tok discusses early Byzantine mosaics at Gara Church near Bodrum, Veronika Scheibelreiter traces stylistic developments in the mosaics of western Asia Minor, and Emel Aksoy addresses stylistic considerations in the Severan mosaics of Antioch. Ayşe F Erol looks at the relationship between the Muses and the technique called *opus musivum*.

There follow a number of papers relating to the protection and conservation of mosaics: Birol Can on an early church at Altintepe/Erzincan, and Mustafa H Sayar and Şehrigül Yeşil on the mosaics of Cilicia. Celal Küçük and N Mine Yar analyse four different lifting methods used for the mosaics of Zeugma and list the advantages/disadvantages and implications of each. They make the point that photographs taken of mosaics before lifting may not be sufficient for the precise demands of conservation even if they are adequate for archaeological research.

Papers concerning national corpora follow. A paper by Maria de Jesus Duran Kremer, Miguel Pessoa and Fátima Abraços on the inventory, risk map and corpus of the Roman mosaics of Portugal urges that conservation and study should be followed by diffusion of information. Sophie Delbarre, Michel Fuchs and Claude-Alain Paratte stress the need for a corpus to be updated regularly, arguing that V von Gonzenbach's 1961 publication of Swiss mosaics (*Die römischen Mosaiken der Schweiz,* Basel) is no longer sufficient. They pose some problems concerning the concept of a corpus, while demonstrating the varied uses to which it can be put, such as comparing patterns within corpora for neighbouring countries and reflecting on figurative mosaics. Hande Kökten explains how the mosaic corpus of Turkey will be distinctive from other corpora in that



the information about each mosaic will include the state of its preservation. Hélène Morlier and Marie-Patricia Raynaud address editorial questions concerning the Turkish corpus and remind us of the many practical issues relating to publication that need to be considered.

The volume of the 2007 proceedings follows the theme of the conference, 'The Mosaic Bridge from Past to Present', and groups the papers under three categories: ancient mosaics (with nine papers in Turkish and 10 in English), restoration (with five papers all in Turkish), and modern mosaics (with four papers in Turkish and three in English).

In the ancient mosaics section, Nurten Aydemir, Seçil Çokoğullu and Nedim Dervişoğlu describe the rescue excavations that took place between late 2006 and early 2007 at Halepli Bahçe in Urfa. Among the discoveries were fragments with charming depictions of ducks, and a spectacular panel showing a number of Amazons on foot and on horseback hunting wild beasts. Christophe Bailly, Hélène Morlier and Michèle Tahri describe plans to make the bibliographies contained in the AIEMA Bulletins available online and discuss the considerations involved in this project. Fatima Bulgan explains how the 1,500 square metres of mosaic found at Zeugma necessitated the construction of a new museum to display these finds. She outlines how the museum in Gaziantep was created, and she evaluates the project from the perspective of museology. Rescue excavations by the Hatay Museum in 2006 at the ancient site of Issos and in the Harbiye district of Antakya are described by Ömer Çelik. At the former, a large mosaic was found in a tepidarium depicting Artemis engaged in a hunt, while at the latter busts of Okeanos and Anosis were uncovered.

Sophie Delbarre, Michel Fuchs and Claude-Alain Paratte adopt a thematic approach, evaluating depictions of Achilles on Skyros in mosaics throughout the Roman empire. They examine the architectural contexts and consider reasons why this subject proved so popular. Rifat Ergeç reflects on the excavation and lifting of mosaics at Zeugma in the period from 1992 to 1999. Zaraza Friedman gives an exposition of ship iconography in mosaics, explaining how the depictions aid our understanding not just of different types of vessel but also of the sailing environment – river, lake, delta, harbour or open sea – and of sea-borne trade.

Werner Jobst outlines the conservation work undertaken during the Istanbul Great Palace Mosaic Project. He has been heavily involved in this project, and he stresses the need for ongoing care and maintenance. Maria de Jesus Duran Kremer highlights the plight of the Roman villa at Abicada in Portugal. Mehmet Önal of Gaziantep Museum describes the excavation in 2000 of the Euphrates House at Zeugma, which produced a number of figured mosaics that are now on display in the museum. He draws attention to ancient repairs, and remarks that some fragments of mosaic had fallen from an upper storey, demonstrating that the use of mosaics was not confined to the ground floor.

David Parrish discusses genre imagery of children's games and of labouring peasants in the Great Palace mosaic at Istanbul. Among the comparative material he cites are two other mosaics from that site that are now stored elsewhere. The focus of Birte Poulsen's paper is a geometric design found in a late-antique house at Halikarnassos which has been called a 'signature pattern' of a mosaic workshop based on the island of Kos.

Miguel Pessoa outlines the considerations being taken into account in the construction of protective covers for the mosaics at the Roman villa of Rabaçal in Portugal. Marie-Patricia Raynaud explains how a study of the mosaics of the East Basilica at Xanthos has provided a better knowledge of the chronology of the Basilica and of the vicissitudes to which it was subjected. Bariş Salman's paper on the Edessa mosaics describes how the funerary mosaics were an early equivalent of a family photograph and also highlights a group of Orpheus mosaics.

Inspired by the discovery of the use of gold-glass tesserae in the crown worn by Dionysos in a mosaic at Ephesus, Veronika Scheibelreiter considers the use of gold tesserae throughout the Roman empire. Derya Şahin reviews the popular figure of Tethys, aiming to eliminate the confusion that often exists between Tethys and Thetis.

The ancient mosaics section ends with Emine Tok's discussion of the mosaics in a church at Çağlayanköy near Manisa and Turgut H. Zeyrek's presentation of the mosaics discovered in 2006 at Besni in the region known as Kommagene.

In the restoration section, the paper by Ali Akin Akyol and Yusuf Kağan Kadioğlu on the mosaics of the Torba Monastery complex near Bodrum emphasises the importance of analysing the materials used in a mosaic in order to find a reliable, long-lasting method of conservation. Stressing the importance of using a common language, Hande Kökten outlines the criteria to be used when creating the database of the condition of Turkish mosaics, dividing them into three main categories: mosaics in situ, exhibited in museums, and those to be lifted and stored. The different methods of exhibiting the Zeugma mosaics in the Gaziantep Museum are explained by Celal Küçük. Y. Selçuk Şener sounds a cautionary note in his review of conserved mosaics from various sites throughout Turkey, emphasising that approaches to conservation that are thought appropriate at the time might later prove to be deleterious. Mine Yar's paper ends the restoration section by discussing the Gaziantep Mosaic School within the context of increasing the region's tourism potential.

The section devoted to modern mosaics opens with a paper by Asker Ali Abiyev, Rifat Ergeç and Münteha Şahan in which mathematical methods are used to analyse geometric designs. This is followed by a description of ethnomathematics by Meltem Ceylan Alibeyoğlu and Yelda Şişman Gökalp. This discipline examines the relation between mathematics and culture. It is being applied to the Zeugma mosaics to help school pupils with their studies and to give them an understanding of their cultural heritage. Gülten Akyan adopts a philosophical approach in a paper entitled 'Being a Patented Country in Mosaic'.

Mosaic artist Elaine M. Goodwin discusses how a profound understanding of the Roman use of materials can inspire contemporary artists. Ayşegül Güvenir compares the work of two modern masters, the Russian artist Boris Anrep who worked in London, and the Turkish artist Bedri Rahmi Eyüboğlu who worked in Istanbul. Luciana Notturni explains how artists who have a deep knowledge of ancient mosaic technique can go on to break the rules and open themselves to fresh artistic expression. Finally, Hakan Pehlivan outlines a project by pupils to create mosaic panels for their school, decorating them with images of wildlife that the pupils had seen in Roman mosaics.

All too often, mosaic studies focus either on scholarly evaluation of the figures and patterns on the pavements or on their conservation. It is particularly admirable that these volumes, as did the original symposia, bring together both

aspects. Indeed, they go further, for they contain thoughtful critiques of how to record and present information in corpora, how best to display mosaics to the public in museums, and how mosaics can be used in tourism and education as well as being a vibrant and enduring medium for modern art.

These two volumes are ambitious in their attempt to communicate with a multilingual audience, and it has been a wise decision to use a large number of illustrations. Even without reading the text, there is much to enjoy in the pictures of new discoveries and to appreciate in the photographs showing the mosaics as they were in situ and as they now are in museums. It is unlikely that many readers will be fluent in both Turkish and English, but the spread of papers between the two languages ensures a good balance. This reviewer is not qualified to comment on the Turkish abstracts of the English-language papers, but the information contained in the English abstracts of the Turkish papers varies greatly in its usefulness, as does the clarity of expression. But the achievement in making little-known or newly-discovered Turkish mosaics available to a wide readership and in bridging many gaps – between ancient and modern mosaics, archaeology and conservation, professionals and enthusiasts – outweighs the difficulties inherent in a project such as this. This new series represents a significant contribution to mosaic studies and deserves to be warmly welcomed.

JMR 1-2, 2008 123-127

Guidelines for Authors

This journal is going to be published two volumes annually, henceforth. The articles going to be sent must be written according to these guidelines. Thank you for your involvement and attention.

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The Editor-in-Chief and the Editorial Board are in charge of the scientific content and other editorial matters relating to the journal. The JMR is intended to be read by archaeologists, classicists, historians, epigraphers, scientists, heritage management specialists, restorers, conservators and others concerned with mosaics found around the world. In addition to analyses of archaeological data from excavations, surveys, and laboratory research, the JMR publishes technical and methodological studies of general significance and reviews articles that appeal to a wide professional readership. The JMR also publishes book reviews, brief articles, etc.

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Six key words must be provided under the line of the abstract. Keywords should be given in both languages (English and Turkish) if the article was not written in English. All papers will be subject to a refereeing process, and may be discussed at meetings of Editorial Board. Detailed comments from referees are normally forwarded to the author, anonymously, by the Editor and if necessary, the authors may be invited to revise their manuscripts.

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The digital text should be in a format that can be processed in Microsoft Word. Figures for review purposes should be provided as tiff files at a resolution sufficient to retain the information in the illustration: 300 dpi for photographs and 600 dpi for line art is usually suitable. The names for the figure files should begin with the authors last name, e.g., Akurgal_01.tiff, Akurgal_02.tiff, Akurgal_03.tiff, etc.

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Use abbreviations for dimensions, distances, weights, and measures but not with general statements such as "a few meters above the floodplain." Examples of abbreviations are "7 m", "0.3 m", "5 cu m", "and 70 m asl , 300 km , 8 sq km , 1 sq m, 500 g". If multiple dimensions are given, write "15 × 30 m." Write "D" for "diameter" in parentheses (D. 24 cm). Do the same for "L", "W" etc.

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A reference within the text takes the form of a parenthetical citation. For example, "(Dunbabin 2002: 181-183)". All quotations must have specific page citations.

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An example of a text reference to a figure or table in another published work is "(Akurgal 1996: fig. 5, table 7)." When referring to figures and tables in the present manuscript, use "Figure" and "Table" in the text and captions; in parentheses use "(Fig. 3)" and "(Table 1)." For figures with separate parts, use lower case letters in the text and upper case letters when the reference is enclosed in parentheses. For example, "Figure 7a" "(Fig. 10A)."

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Article

Barringer, Judith M. 1991 "Europa and the Nereids: Wedding or Funeral?, American Journal of Archaeology 95: 657-667.

Book

Dunbabin, Katherine M.D. 1999 Mosaics of the Greek and Roman World, Cambridge: Cambridge University Press.

Unpublished Dissertation or Thesis

DePuma, Richard 1969 "The Roman Fish Mosaic", unpublished Ph.D. dissertation, Bryn Mawr College, Pennsylvania

Published Dissertation or Thesis

Reitz, Elizabeth J. 1979 Spanish and British Subsistence Strategies at St. Augustine, Florida, and Frederica, Georgia, between 1563--1783. Ph.D. dissertation, University of Florida, Gainesville. Ann Arbor: University Microfilms.

Monograph in a Series

Jobst, Werner 1978 Römische Mosaiken aus Ephesos I, Die Hanghäusern des Embolos. Corpus der antiken Mosaiken in der Türkei I. Forschungen in Ephesos 8, 1, Vienna.

Article in an Edited Book

Abadie-Reynal, Catherina 2006 "Roman Domestic Architecture at Zeugma," in R. Ergeç, ed., International Symposium on Zeugma: From Past to Future. Gaziantep: Gaziantep University Press, 1-6.

Work Accepted for Publication

Deck, Daniel in press "The Restless Grass," Llano Estacado Studies.

Ancient Works

Livy The Early History of Rome. Aubrey de Sélincourt, trans. Harmondsworth, U.K.: Penguin Books 1960.

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2. If a map is necessary, Figure 1 should be a map locating the site or study area within its wider geographical context. The JMR has an international readership that needs to be kept in mind when designing Figure 1. Field reports should include at least one photograph that depicts the terrain and environment of the site or study area.

3. A simple graphic scale, when necessary, should appear in the image area of the figures; do not give scales such as "3×" or "1:50.000" in the captions. Should a figure showing artifacts lack a scale in the photograph, writing "The pot on the left is 21 cm tall" in the caption is fine.

4. The list of captions should be typed in upper and lower case letters, double-spaced, all lines justified left, and the word "Figure" should be the first word in each caption. For example,

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2. Tables are to be numbered separately from the figures. Table captions should be typed double-spaced, flush left, in upper and lower case letters, and appear at the top of the table.

3. All table columns must have headings with the first letter capitalized.

4. Footnotes in tables should avoid the use of numerals or letters as superscript. Instead, use the following sequence: asterisk, dagger, double-dagger, section mark, two asterisks, two daggers, etc.

5. When designing tables, authors should organize the rows and columns in ways that help the reader understand the data.

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Reviews in the JMR should be max. 1500 words and are expected to be critical and analytical in order to place the book under review in context. Book reviews, normally solicited by the Editor, do not require all of the details of manuscript preparation involved for a research report. The manuscript for a book review should be double-spaced throughout. Any references should follow the system given below. Footnotes and illustrations should not be used.

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Mosaics of the Greek and Roman World,

Katherine M.D. Dunbabin, 357 pages, 318 figures, 8 tables, 3 plates, 10 appendices, bibliography, index. Cambridge University Press, 2002. $40.50 paper. ISBN0-521-00230-3.

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Mosaics of Turkey and Parallel Developments in the Rest of the Ancient and Medieval World: Questions of Iconography, Style and Technique, as well as New Discoveries, from the Beginning of Mosaic until the Late Byzantine Era

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Zodiac Mosaic from Tophane - Bursa, Türkiye. The central panel was stolen.

JMR

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EDITED

BY

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AIEMA – Turkey is a research center that aims to study, introduce and constitude a data bank of the mosaics from the ancient times to the Byzantine period. The best presentation of the mosaics of Turkey is the ultimate goal of this center functioning depending on AIEMA. A data bank of Turkey mosaics and a corpus including Turkey mosaics are some of the practices of the center. Additionally, this center also equips a peiodical including the art of ancient mosaics and original studies namely JMR.

The JMR (Journal of Mosaic Research) is an international journal on mosaics, annually published by the Uludag University Mosaic Research Centre. The aim of this journal is to serve as a forum for scientific studies with critical analysis, interpretation and synthesis of mosaics and related subjects. The main matter of the journal covers mosaics of Turkey and other mosaics related to Turkey mosaics. Besides, the journal also accommodates creative and original mosaic researches in general. Furthermore, together with articles about mosaics, the journal also includes book presentations and news about mosaics.

For detailed information please visit website:

http://www20.uludag.edu.tr/~arkeoloji/JMR.htm

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PREFACE

Mosaic Research in Anatolia initially began in the beginning of the 20th century and it gained more interest through the activities of Association internationale pour l'étude de la mosaïque antique (AIEMA) which was established under the French Science Academy. The contributions of scientists in this respect such as Jean Pier Darmon, Werner Fuchs and David Parrish are noteworthy. AIEMA has continued its contributions in the field of mosaics of Turkey, supported the establishment of the Uludağ University Mosaic Research Center and included our center (AIEMA-Turkey) in this large mosaic family as well as Spain (l'AEM), France (l'AFEMA), Italy (l'AISCOM), England (l'ASPROM), Tunisia (CTEMA) and North America and Canada (North American Branch of AIEMA) branches.

Despite the fact that Turkey is one of the richest and most important places in the world in terms of mosaic cultural heritage, the necessary care has not been taken in creating databases in a certain format and in their dissemination. Thus they have remained among our neglected cultural assets. One of the aims of our center is to start a project called Mosaic Corpus of Turkey and collect them within series. This will eventually lead to a corpus in the near future covering all mosaics of our country. The first book of this series, "The Mosaic Corpus of Turkey – Xanthos: The East Basilica", will be published in a short time.

AIEMA played a leading role in mosaic research especially under the administration of J.P. Darmon. "Le Decor Geometrique de la Mosaique Romaine" consisting of two volumes which was prepared under the presidency of Darmon is still the basic source of reference.

One of the most significant encouragements of AIEMA in mosaic research is the colloquium held every four years. The first one was held in Paris in 1963, and then in Wien (1971), Ravenna (1980), Trier (1984), Bath (England) (1987), Palencia-Mérida (Spain) (1990), Tunis (1994), Lausanne (1997), Rome (2001) and Conimbriga (2005). We feel very excited to be the host of the 11th Meeting in 2009.

The index called "*Bulletin de l'Association international pour l'Etude de la Mosaïque antique*" organized by AIEMA is one of the most important works in mosaic research in which all the mosaic related study worldwide every two years are available.

Prof. Dr. Henri Lavagne, member of the editorial board of our journal, is still the president of AIEMA. The previous president was Jean Pier Darmon. Prof. David Parrish (USA) and Prof. Dr. Werner Jobst (Austria) are among the executive board of AIEMA.

Although the mosaic studies have been neglected so far in our country, it can be seen that they have recently gained momentum with the efforts of Mosaic Research Center. Turkish scientists have also made efforts to protect and publicize the mosaic heritage of their country. However, it is noted that they cannot publish their studies in a fast and quality print. We would like to present a new media organ to eliminate this unfavorable condition and provide opportunity to publish them in a quality manner as much as themselves. Our aim with our journal, planned to be published twice a year, is not only to publish studies in Turkey but also all studies qualified by the board of referees. We therefore hope to fill a large void in the field of mosaics. We invite all local and foreign scientists in the field of mosaics to cooperate with our center.

We owe the realization of our new media organ "Journal of Mosaic Research" to the kind favors of AIEMA.

Uludağ University is proud to take part in this international initiative. Mosaic Research Center considers the invaluable mosaic and cultural assets of Anatolia not only its own heritage but that of all humanity. Thus, the articles in our journal will cover not only mosaics from our country but those from other countries, hopefully making it a mixture where the global mosaic heritage is blended just like the history of mankind. We hope to succeed in our initiatives with this respect.

Bursa – 2009

Prof. Dr. Mete Cengiz
Rector

JMR 1-2, 2008 7-31

Der Einfluss der Mosaiken des vorderen Orients auf hispanische Mosaiken am Ende der Antike

José María Blázquez*

Object of this study are the mosaics in Hispania at the end of the Antique that have an influx of oriental mosaics. These mosaics are those of Eros and Psyche in Fraga (Huesca), who have an influx from Antioch and Syria; of Daragoleja (Granada), of Puerta Oscura (Málaga), with an influx from Greece and Syria-Palestine; of Baños de Valdearados (Burgos), with Dionysus; of Dulcitius the hunter, el Ramalete (Navarra). The abundance of mosaics decorated with geometric themes and representations of abstract ideas have an oriental influx. A Syrian mosaist from the later Antoninian period made the cosmogonic mosaic of Augusta Emerita, that is full of abstract personifications and that reminds of one in Gaza and of the mosaic with the birth of Venus in Italica, also of Syrian origin. The Augusta Emerita mosaic with the poets from the 2nd century is the work of Selecus and Anthus. The mosaics with the Seven Wisemen of Greece in Augusta Emerita and with homeric themes in Cabezón del Pisuerga (Valladolid) are owed to Greek artists. Several paleochristian mosaics in the Balearic Islands owe their influx to Palestinian synagogues, probably coming through artists from Orient or copy-books.

Bu çalışmanın konusu oryantal mozaiklerden etkilenmiş olan Hispania'daki Antik Çağ'ın sonuna ait mozaiklerdir. Bunlar, Fraga (Huesca), Daragoleja (Granada) ve Puerta Oscura'da (Málaga) bulunan Antakya ve Suriye akımından etkilenmiş olan Eros ve Psyche figürlü mozaiklerdir ile Yunan ve Suriye-Filistin akımından etkilenmiş olan Baños de Valdearados (Burgos)'da bulunan Dionysos figürlü mozaik, Avcı Dulcitius mozaiği, el Ramalete (Navara) mozaikleridir. Geometrik bezemeli mozaiklerin bolluğu ve soyut fikirlerin sunumu doğu akımı etkilerinin belgeleridir. Geç Antoninus döneminden Suriyeli bir mozaik ustası tarafından yapılan Augusta Emerita'nın kozmogonik mozaiği 'soyut' kişileştirmelerle doludur ve bu Gazze'dekini ve yine Suriye kökenli Italica'daki Venus'ün doğumu mozaiğini andırır. 2. yüzyıldan, üzerinde şairler olan Augusta Emerita mozaiği Selecus ve Anthus'un eseridir. Augusta Emerita'daki Yunanistanın yedi bilgeleri mozaikleri ve Cabezon del Pisuerga (Valladolid)'daki homerik konulu mozaikler varlıklarını Grek sanatçılara borçludurlar. Baleares adalarındaki muhtelif eskihıristiyan mozaikleri stillerini muhtemelen doğulu sanatçılar ve patron kitapları yoluyla Filistin sinagoglarına borçludurlar.

Key words: myths, geometric, Augusta Emerita, paleochristian, copy-books

Hispanien hatte in der Spätantike intensive Beziehungen mit dem Nahen Orient. Ein Aspekt innerhalb dieser Beziehungen ist der Einfluss der orientalischen Mosaiken auf die hispanischen. Es genügen einige Angaben als Einführung zu diesem Thema.

Hispanier waren der Kaiser Theodosius und seine Gattin Flacilla. Er war der letzte Kaiser, der das Imperium ungeteilt regierte; und auch die Gruppe der Hispanier, wie Flavius Timaisus, Nebridius, Maternus Cygnelius und Nummius Aemilianus Dexter (Chastagnol 1965: 289-290) hatten hohe Verwaltungsposten inne.

D. Fernández Galiano (1983: 411-430) weist auf den starken Einfluss der Mosaiken des Orients am Ende der Antike auf einige hispanische hin. Diese Einflüsse sind folgende: seit der Mitte des IV Jh. zeigt sich deutlicher Einfluss auf hispanische Mosaiken. Er umfasst die Technik und neue Entwicklungen, neue Beiträge und neue Betrachtungsweisen der figürlichen Thematik, neue Kompositionsschemen, unveröffentlichte geometrische Motive und verschiedene Behandlungsarten schon vorhandener. Die orientalischen Einflüsse können zwei Ursachen haben: die Ankunft orientalischer Künstler, die in Hispanien arbeiteten, oder das Erscheinen von *copy-books*.

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Abbildung 1
Mosaik mit Eros und Psyche

Zwei Motive mit griechischen Mythen zeigen die Mosaiken aus Fraga (Huesca), aus der zweiten Hälfte des IV. Jh. Der Künstler wurde vermutlich im "Zentrum der Mosaiken" des Orients ausgebildet, in dem der Einfluss der hellenischtischen Welt sehr stark war bis zum Anfang des IV. Jh.; er dauerte sogar bis zum Anfang des VIII. Jh. Diese Mosaiken stellen Eros und Psyche dar (Abb. 1) und Eros und Venus (Abb. 2). Die rein malerischen Szenen, der Kanon der Gestalten und die Starrheit ihrer Tátigkeiten führen uns zu den Mosaiken von Antiochia des IV. Jh. und zu denen von Syrien. Die geometrsichen und pflanzlichen Motive erinnern uns an diese Gebiete.

Es erscheinen neue Techniken auf den hispanischen Mosaiken, seit der Mitte des IV. Jh., wie die Anordnung der Mosaiksteinchen in Fächerform für ein Untergrund mit Figuren ab der zweiten Hälfte des IV. Jh. bis zum V. Jh. Diese Technik erscheint auf Mosaiken in Antiochia und in Kilikien im V. Jh.

Auf einem Mosaik der Villa Daragoleja (Granada), aus der Spätantike, erscheint das Thema zweier gegenüberstehender Truthähne auf einem Krug (Abb. 3), eine häufige Komposition auf den Mosaiken des Orients. Die Anordnung eines

Abbildung 2
Mosaik mit Eros und Psyche

Abbildung 3
Detail des Mosaiks von der Villa Daragoleja (Granada)

figürlichen Themas in einem geometrischen Feld, ohne Trennung noch Rahmen, ist charakteristisch bei den Mosaiken in Syrien, wie z.B. auf dem Mosaik von Phoenix aus Daphne, aus dem Ende des V. Jh. Es gibt auch Beispiele aus Antiochia und Apamea.

Die Mosaiken von Bellerophon und der Chimäre aus Puerta Oscura (Málaga) (Abb. 4) und aus Córdoba (Abb. 5) mit den vier Jahreszeiten, werden wegen ihres Stils mit den späten Mosaiken aus Griechenland unf Syrien-Palästina in Verbindung gesetzt. Einige Schemen reflektieren ein neues Empfinden, begründet in den Verflechtungen.

Die Mosaiken der Villa in Baños de Valdearados (Burgos) (Abb. 6) zeigen starken orientalischen Einfluss. Ein Mosaik aus dem V. Jh. ist mit acht spitz auslaufenden Schildern in Kreisform geschmückt (Abb. 7). Diese Dekoration ist weder in Hispanien noch im gesamten westlichen Mittelmeerraum zu finden, aber sie ist eine vereinfachte Form eines Mosaiks in der Basilika von Misis-Mopsuhestia (Kilikien) (Abb .8). Ein vereinfachtes Schema wiederholt sich auf einem Mosaik in Saloniki, in dem Palast des Galerius.

Abbildung 4
Mosaik mit Bellerophon und Chimäre aus Puerta Oscura (Málaga): Blázquez 1981: 77-78 Abb. 61

Ein Mosaik aus Almunia de Doña Godina (Zaragoza) (Abb. 9), aus dem V. Jh., zeigt ein in Hispanien und im Okzident unbekanntes Schema, aber es ist bekannt aus der Basilika von Ermione (Abb. 10) und aus Betlehem (Abb. 11).

Das Schema des Dulcitius-Mosaiks (Abb. 12), das aus einem zentralen Kreis besteht, der von acht kleinen umgeben ist, die unter sich und mit den inneren Kreisen verflochten sind, steht in Beziehung zu orientalischen und Beispielen aus Italica aus dem V. und VI. Jh. Es erscheint im Odeus in Saloniki und im Palast des Galerius, ähnlich und identisch in der Kirche con Herbet-Muqa, aus den Jahren 378 und 385. Die italischen Mosaiken (Basilika von Santa Maria delle Grazie in Grado, VI. Jh., die Basilika Santa Eufemia, zwischen 571-586, und die Basilika von Canzian d'Isonzo), aus der zweiten Hälfte des V. Jh., etc., sind später entstanden als in El Ramalet, am Ende des IV. oder Anfang des V. Jh.

Eine Tendenz zur Verminderung der Figuren tritt auf den Mosaiken ein und wird abgelöst durch eine vermehrte Entwicklung geometrischer Elemente, und allegorische Darstellungen, von denen später gesprochen wird, bestätigen den starken Einfluss orientalischer Mosaiken auf die hispanischen.

Es erscheinen nun neue geometrische Themen auf den hispanischen Mosaiken. Die Blumenrahmen mit Göttergestalten schmücken die Mosaiken der Villa von Fraga und sind praktisch einmalig in Hispanien, aber zahlreich in Syrien-Palästina.

In der Spätantike gibt es überaus zahlreiche Mosaiken, geschmückt mit geometrischn Themen (Fernández Castro-Blázquez 1982: 61-75, Abb. 27-42). Es genügt an einige Beispiele zu erinnern: alle sechzehn Mosaiken (Blázquez-Mezquiriz 1985: 31-52, Abb. 19-32), ausser einem, in der Villa von Rielves in Toledo; in der Villa von Lieden in Navarra, ausser einem bacchantischen und einem mit Vögeln und kantharoi; ebenso die Mosaiken der Villa in Villafranca (Blázquez-Mezquiriz 1985: 74-84, Abb. 45-49) und auch in Navarra; alle Mosaiken, ausser zwei, mit den Büsten der Abundantia, in Cuevas de Soria (Fernández Castro 1983, in Blázquez-Ortego 1983: 53-79, Abb. 6-22, 25); in

Abbildung 5
Mosaik mit Bellerophon und Chimäre aus Córdoba: Blázquez 1981: 36-38 Abb. 22

Quintanares (Blázquez-Ortego 1983: 16-38, Abb. 1-12, 26-36) und Santervás del Burgo (Blázquez-Ortego 1983: 40-49, Abb. 13-22); in der Villa von Almenara de Adaja (Neira-Mañanes 1988: 16-29, Abb. 1-12, 25-31, Fig. 2-4); in Valladolid, ausser zwei Mosaiken, eins mit Fischen und das andere mit der Toilette von Pegasus; auch in der Villa del Prado (Neira-Mañanes 1988: 53-62, Abb. 18-24, 37-40, Fig. 8-10), ausser einem Emblem mit Diana. Alle diese Mosaiken, geschmückt mit geometrischen Themen, stammen aus der späten Kaiserzeit.

Die vier Efeublätter auf dem Mosaik der Villa in Baños de Valdearados wiederholen sich in Antiochia, Soria, Jericho, Gaza, Gerasa und Saloniki. Die in Kreisen gebildeten Bänder, eines über das andere, sind im Okzident unbekannt, aber dagegen häufig im Orient zu finden, z.B. in den Basiliken in Khalde, im Libanon und in Nea Paphos, in Zypern. Die Dekoration zweier parallelen, ineinanderverschlungenen Stäbe mit einer wellenförmigen Linie, in der Villa von Albadalejo (Ciudad Real), ohne Parallelen im Okzident, aber wohl bekannt auf Mosaiken in Griechenland, wie in den Basiliken von Ermione, von Theben und Ephesos.

D. Fernández Galiano denkt an die Anwesenheit orientalischer Künstler in Hispanien, ausgebildet in den Werkstätten des Orients.

Personifizierte Allegorien auf hispanischen Mosaiken

Es ist ein dekoratives Motiv, das mit Sicherheit aus dem Orient kam. Das Thema ist von G. López Monteagudo (1997: 335-361) gründlich studiert worden. Die Personifizierungen sind folgende:

Auf den Mosaiken des Orients wurden häufig abstrakte Ideen mit allegorischen Bildern gezeigt, hauptsächlich die Tugenden in Verbindung mit der politischen Macht, und erhielten Kultbedeutung. Es gab viele allegorische Darstellungen mit abstrakten Ideen, die in Beziehung zum Kosmos standen (Aion, Annus, die Jahreszeiten, Aeternitas, Kronos, etc.), mit geographischen Orten (Mons, Gé, Thalassa, Caellus), mit der Kultur, wie den Museen, und mit Ideen und philosophischen Konzepten (Philosophie, Weisheit, Wohlergehen, Schönheit, Edelmut, Glückseligkeit, Gerechtigkeit, Anmut, etc.). Einige dieser abstrakten Ideen wurden zu Göttern erhoben.

Diese Tendenz der Personifikation wurzelt in der Götterlehre des Hesiod, und sie teilt sich in zwei grosse Kategorien: eine ist die Personifizierung der Abstraktionen; die zweite umfasst die Personifizierung der Elemente mir archaischen Religionen. Zeitweise vermischen sich beide Kategorien oder sie überdecken sich.

Die allegorischen Personifizierungen der Tugenden und Laster der Seele erscheinen bald in Griechenland, nicht nur in der Philosophie und Literatur, sondern auch in der Mythologie. Die Tendenz zur Abstraktion ist Zeuge in der Kunst und in der Dichtung Griechenlands ab dem VI. Jh. v.C., und motiviert die Erschaffung neuer mythischer Personen, entstanden aus den Konzepten. In der klassischen und hellenistischen Kunst entstehen Ilias und Odysee, die Weisheit und andere Abstraktionen.

Abbildung 6
Mosaik von der Villa in Baños de Valdearados (Burgos): López Monteagudo-Rosario de Palol, 1998: 13-20 Abb. 1-5

Abbildung 7

Die römische Kunst empfing dieses Erbe der Personifizierung abstrakter Ideen der griechischen Kunst auf vier grossen Gebieten: dem Mythos, der Kunst, der Poesie und dem Kult. In der byzantinischen Kunst waren die Personifizierungen der abstrakten Konzepte weit verbreitet. Die allegorischen Darstellungen der klassischen Kunst neigen mehr zu metaphysischen Wesenheiten und haben einen mehr unpersönlichen Charakter; in der byzantinischen Kunst dagegen einen konkreten Charakter, und sind konventioneller und abstrakter. Mit der Zeit verlieren die Personifizierungen der abstrakten Konzepte ihre Persönlichkeit und verwandeln sich in allgemeine Symbole; sie identifizieren sich durch die Inschriften, die sie begleiten.

In Griechenland und Rom war die Vergöttlichung der abstrakten Ideen in Beziehung zu den Tugenden der politischen Macht: Themis, Nike, Eirene, Eukleia, Eumonia in Griechenland, und Virtus, Victoria, Concordia, Pax und Fides in Rom. Die Griechen waren die ersten, welche die Abstraktionen zum Kult erhoben. Zuerst waren es Gottheiten, und danach Abstraktionen. Man denkt, dass jede Personifikation aus einer Gottheit entstand. Es bestehen Zweifel, ob zuerst die Abstraktion oder die Gottheit da war. Bei Homer und den archaischen Poeten erscheinen Abstraktion und Gottheit zusammen, und die Gottheit wird als Personifikation angesehen. Oft ist es schwierig eine Gottheit von einer allegorischen Gestalt zu unterscheiden. Die Personifizierungen sind weniger individualisiert als die Gottheiten und die anderen mythologischen Gestalten. Man glaubt, dass in der römischen Kunst dieser Prozess umgekehrt verlaufen ist. Die Gottheiten waren einfache Abstraktion und später verwandelten sie sich in Götter.

Am Ende des Hellenismus spielten die Tugenden eine wichtige Rolle im Orphizismus, im Neuplatonismus und im Gnostizismus, und sie waren die Erschaffer der grossen kosmologischen Schemen, und bildeten die vorhandene Einheit zwischen den Göttern, dem Universum und der Menschheit, wie die Stoiker annehmen. In Rom waren die Tugenden politische Begriffe, sie erhielten Kult durch den römischen Staat und die einzelnen Personen. Der Tugendkult ging von der

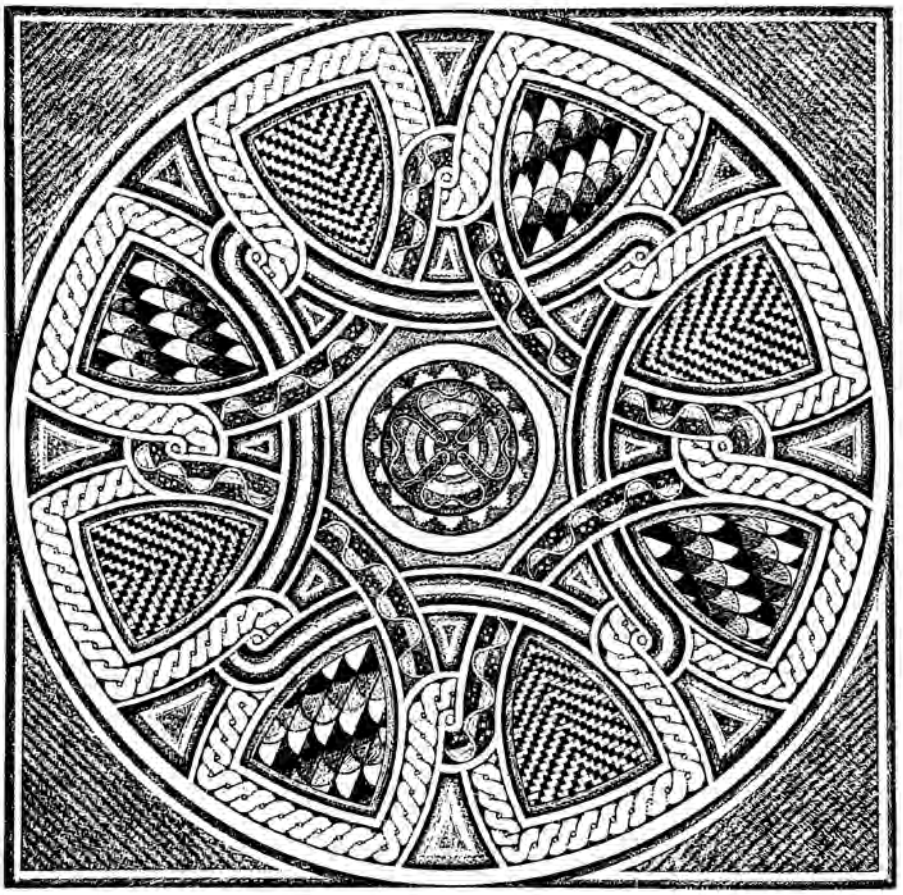

Abbildung 8
Mosaik in der Basilika von Misis-Mopsuhestia (Kilikien)

klassischen Epoche bis zum Ende der Antike und durch das Christentum bis zum Mittelalter in der Theologie und in der christlichen Ikonographie. Die Sophia verwandelte sich auf diese Weise in das Symbol der Weisheit Gottes. Diese Personifizierungen verallgemeinern sich erheblich nach Konstantin I.

Zum Studium der abstrakten Ideen und Allegorien auf hispanischen Mosaiken eignet sich am besten Syrien und besonders die Hauptstadt Antiochia, wo sich die abstrakten Ideen oder die Allegorien ausbreiteten, als zentrales Emblem dargestellt. Die Mehrheit der auf syrischen Mosaiken dargestellten Themen

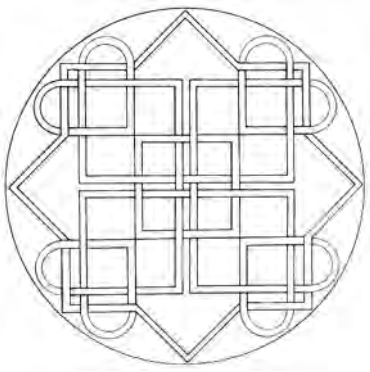

Abbildung 9
Detail des Mosaiks aus Almunia de Doña Godina (Zaragoza)

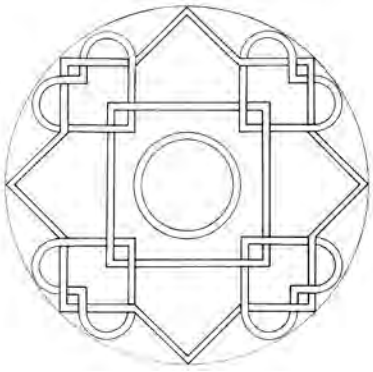

Abbildung 10
Detail des Mosaiks aus der Basilika von Ermione

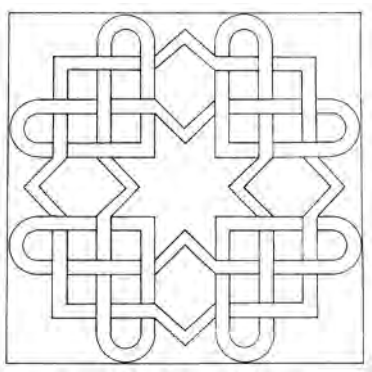

Abbildung 11
Detail des Mosaiks aus Betlehem

Abbildung 12
Das Dulcitius-Mosaik: Blázquez-Mezquiriz 1985: 63-69 Abb. 39-40

gehorchen der klassischen Tradition und beweisen das Überleben des Hellenismus bis in die späte Antike; hauptsächlich die symbolischen und abstrakten Darstellungen, die Mythen und die Bildnisse der Weisen und Philosophen. Die Abstraktionen auf den syrischen Mosaiken stehen in Beziehung zu den philosophischen oder auch religiösen Ideen aus den Anfängen des Hellenismus. Diese Allegorien sind: Ambrosia, Amerinnia, Ananeosis, Apolausis, Athanasia, Bios, Chresis, Dynamis, Eukarpia, Euphrasia, Euprepeia, Eutekneia, Evandria, Ktiosis, Megalopsychia, Philosophia, Sophia, Typhe. Zuerst ist der gesamte Körper dargestellt, begleitet von der Inschrift. Diese Allegorien stellen die Tugenden oder die philosophischen Konzpete dar. In Syrien beginnen die Darstellungen der abstrakten Ideen am Anfang des III. Jh. in Shahba Philippolis. Ab dem IV. Jh. allgemein auch in grossen Städten, wie Apamea und Antiocha, bedeutende Kulturzentren.

Das Mosaik von Shahba Philippolis mit den drei Grazien, zusammen mit den vier Jahreszeiten, gehört in die zweite Hälfte des III. Jh. Euphrasia, Symbol der Fröhlichkeit, befindet sich zwischen dem Frühling und dem Universum, und Pannuchis, eine Anspielung auf nächtliche Feste, zwischen dem Sommer und dem Herbst.

Euphrasia erscheint erneut auf einem Mosaik in Sarachanelasi, von einem Mann begleitet, auf ihrer rechten Schulter einen vollen Korb mit Früchten und in der linken Hand einen Hahn.

An das Ende des III. Jh. oder an den Anfang des folgenden gehört das Mosaik von Shahba Philippolis, mit Eutekneia, Symbol der Fruchtbarkeit, auf einem Thron sitzend, zwischen Dikaiosyne, Allegorie der Justiz und Philosophie.

Abbildung 13
Mosaik von der Villa Los Quintanares:
Blázquez-Ortego 1983: 16-19 Abb. 1

Auf dem Mosaik der Hochzeit des Ares und Aphrodite in Shahba Phillipopolis, aus dem zweiten Viertel des IV. Jh., begleiten das Ehepaar Euprepeia, der Wohlstand, Charis, die Anmut, und Skope. Euprepeia in Gesellschaft von Eirene und dem Frieden, befinden sich auf einem Mosaik aus dem IV. Jh., im Museum von Antalya, als weibliche Büsten in inneren Kreisen dargestellt. Auf einem Mosaik in Byblos, aus der Mitte des III. Jh., erscheint Charis, die Perfektion; rechts befindet sich Eros oder Theros. Akmé erscheint hier zum letzten Mal.

Akmé ist nur einmal in Nea Paphos, Zypern, im Haus des Dionysyos, dargestellt, in Begleitung des Weingottes und des Ikarus. Die Szene ist eine Allegorie der Glückseligkeit, die den mässigen Weingenuss empfiehlt.

Auf einem Mosaik in Apamea, mit dem Thema das Urteil der Nereiden, nehmen Peitho, die Überzeugung, die Krisis, das Urteil, und die Apotheose teil. Dieses Mosaik und verschiedene andere aus der zweiten Hälfte des IV. Jh. erscheinen vermutlich in der von Julianus gegründeten neoplatonischen Schule. Die Krisis ist aus früherer Zeit bekannt, aus der zweiten Hälfte des III. Jh., mit dem gleichen Thema in Palmyra und in dem Haus des Aion von Nea Paphos, auch mit dem Urteil der Nereiden, in Begleitung von Kairos, der Gelegenheit; das Mosaik stammt aus der zweiten Hälfte des IV. Jh. Auf Mosaiken aus Shahba Philippopolis erscheinen weitere Allegorien mit symbolischem Inhalt in mythologischen Szenen: Pothos, der Wunsch, auf der Hochzeit von Dionysos und Ariadne, aus dem zweiten Viertel des IV. Jh., bezugnehmend auf die

Abbildung 14
Mosaik von der Villa Santervás del Burgo, Soria: Blázquez-Ortego 1983: 42-44
Abb. 18

Erzählung von Nonnos (XLVII.443); Theros, die Fruchtbarkeit, und Plutos, der Reichtum, bei der Ehrung der Gottheiten der Erde, Agros und Opora, oder bei der Hochzeit von Dionysos und Ariadne, aus der Mitte des III. Jh., zur Zeit im Museum in Souweida. Die Konzeptionen werden durch die Gestalten der Götter oder ihrer Bezugspersonen dargestellt, wie Dionysos und Ariadne; die Allegorien von Agros und Opora, und Eros und Psyche; Eros, der Wunsch, die Harmonie, Beschützer des sozialen Lebens in den städtischen Einrichtungen; die Wesiheit, symbolisiert durch Odysseus, Silen oder Herkules, etc.

Auf Mosaiken in Nea Paphos wird der philosophische Inhalt der Komposition verstärkt, wie zum Beispiel auf den Mosaiken im Haus des Aion, mit Darstellungen der Theogonia, Symbol der Geburt der Götter, von Nektar und Ambrosia, die Unsterblichkeit verleihen, und in in der Villa von These, mit der Darstellung der Ambrosia im ersten Bad des Achill, aus dem IV. Jh. Ambrosia weist darauf hin, das Achill seit seiner Geburt göttlich ist.

In der Villa von Homs erschien ein Mosaik aus dem III. Jh. in vier Tafeln aufgeteilt, welche graphisch verschiedene Episoden aus dem Leben des Herkules beschreiben. Sie beginnen mit der Kindheit und enden mit der Apotheose. Auf der ersten Tafel erwürgt Herkules als Kind die Schlangen. Er wird von seiner Mutter Almene und seinem Bruder Ifikles begleitet. Amphytrion und die Therapenides sind in dieser Szene anwesend. Auf der zweiten Tafel sitzt Alkmene nachdenklich in einem Sessel. Hinter ihr steht Agucia, die Unwissenheit. In der letzten Szene thront Zeus Olympos und empfängt Herkules in Begleitung der Athanasia, der Unsterblichkeit, und die Apotheose erreicht für den Helden ihren

Abbildung 15
Mosaik aus Emerita Augusta: Blanco 1976: 35-38 Abb. 28-39 Fig. 1; Quet 1981; Dunbabin 1999: 147-150; Lancha 1997: 223-230

Höhepunkt. Ab dem Ende des III. Jh. zeigt sich die Tendenz Personifizierungen der abstrakten Ideen und die symbolischen Interpretationen der Mythen im gesamten Orient und in Syrien darzustellen. Die Hypothese wurde vorgeschlagen, dass die Mosaiken mit Inschriften pädagogischen Zwecken dienen, und die ohne Legenden einen allegorischen Sinn in Verbindung mit philosopischen Ideen haben, und sich an die kultivierte Menschheit wenden. So bilden die Mosaiken mit Odysseus und dem Therapenides aus Apmea ein philosophisches Manifest hellenistischer Werte und eine Ablehnung der vom Christentum gebrachten Ideen. Diese beiden Mosaiken und zwei Nereiden, der gleichen Herkunft, feiern, nach Balty, höchste Autorität syrischer Mosaiken, den Sieg der Weisheit, der der Seele des Weisen erlaubt, die Unsterbichkeit zu erreichen. M.H. Quet schlägt als Interpretation der Allegorie vor, dass jeder Mensch Odysseus nachahmen kann, Model der menschlichen Kondition, und die Kenntnisse (Therapenides) erreichen und zur Philosophie (Penelope) Zutritt erlangen, und von dort die Weisheit erreichen könnte.

Auf den Mosaiken in Antiochia ist eine grosse Zahl allegorischer Gestalten. Die Personifizierung der abstrakten Ideen auf den Mosaiken in Antiochia steht in

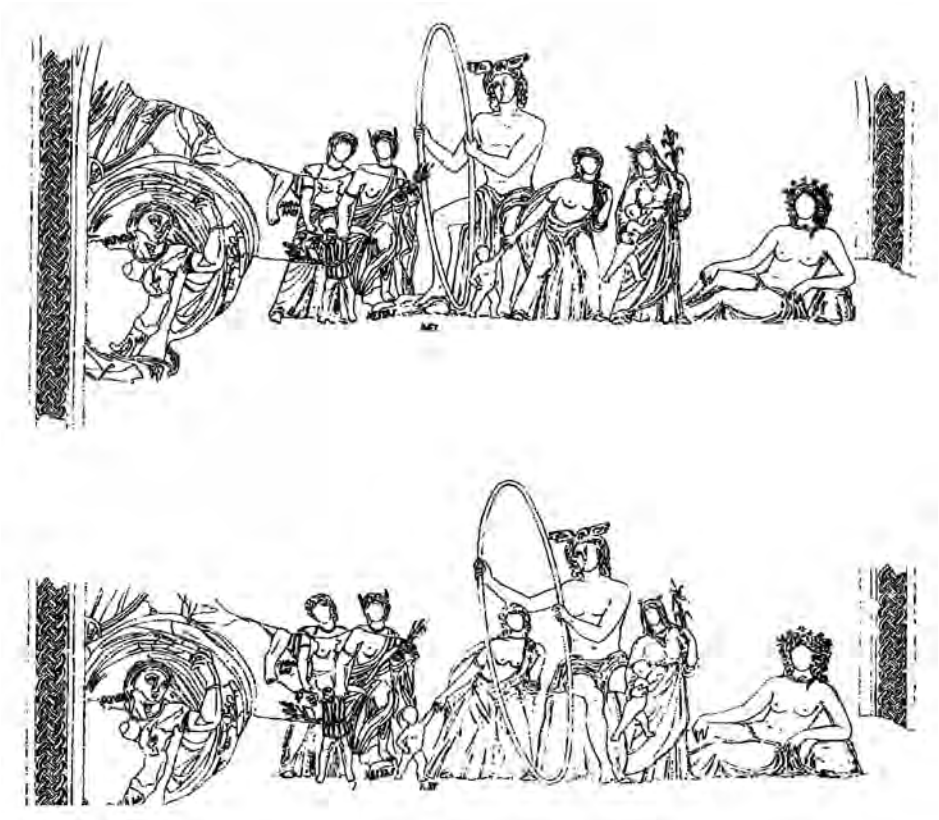

Abbildung 16
Nach der Rekonstruktion von M.L. Musso

Beziehung zu den philosophischen Konzpeten. Amerinnia, der Friede der Toten, befindet sich in einem Grab. Er ist dargestellt wie eine thronende Matrone. Amerinnia ist dem lateinischen Ausdruck Seguritas gleichwertig, eine vergöttlichte Personifizierung der Sicherheit des Staates. Diese Bennenung passt nicht gut in die der Mosaiken von Antiochia, sondern, wie Tryphe, Vergnügen und Musse, Bios, das Leben, im House of the Drunken Dionysos, stehen in Beziehung mit der gefälligen Lebensführung, im Gegensatz zu den von der Philosophie gepredigten Tugenden. Tryphe wird als sitzende Matrone dargestellt, und Bios auf dem Boden ruhend. Sie ist auf einem Mosaik als Frauenbüste im House of the Peddler of Erotes dargestellt, aus der Mitte des III. Jh. Tryphe ist im House of Menander als Büste dargestellt. Chresis, die Verwendung des Reichtums, befindet sich als sitzende Matrone mit cornucopia im House of the Triumph of Dionysos. Ktisis, Besitz oder Stiftung, ist auf einem Mosaik in Antiochia sehr gut abgebildet. Im Haus mit ihrem Nahmen, befindet sie sich als weibliche Büste in einem Kreis, aus der Zeit etwas vor 500. Im Haus der Gé und der Vier Jahreszeiten wiederholt sich die weibliche Büste gegenüber der Ktisis.

Im House of the Sea Goddes, befinden sich die Büsten der Ktisis, der Anneosis (Erneurung), der Evadria (Männlichkeit oder Reife) und der Dinamis (Charakterstärke oder kreative Macht). Sie könnten die Personifizierung der Vier Jahreszeiten sein, oder die Lebensabschnitte des Mannes. Die vier und zwei verlorene Figuren wiederholen sich in der Villa Constantiniana. D. Levi stellt klar, dass in dieser Villa die Personifizierung der abstrakten Ideen den gleichen Charakter hat wie die Allegorien aus byzantinischer Zeit.

Ktisis erscheint häufig auf den Mosaiken des Orients und in Zypern. Ihre Büste befindet sich in den Thermen im Haus von Eustolios, aus dem IV. Jh. Ktisis leitet sich von Dynamis ab und ist ein philosophischer Terminus der stoischen Philosophie, mit der Bedeutung schöpferischer Macht. Auch Dynamis bezieht

Abbildung 17
Mosaik aus Gaza

sich auf die kosmischen Anfänge. Sophia ist eine der am häufigsten dargestellten Allegorien in der byzantinischen Welt. In einer byzantinischen Kirche in Petra, wird Sophia von den personifizierten Jahreszeiten begleitet. Gé, Thalassa, Evandria stehen in Beziehung zu Dynamis, eine bewunderte Tugend der Stoiker. Die drei Abstraktionen Ktisis, Dynamis und Evandris stehen unter sisch in Bezug, vielleicht auch Ananeosis, die Erneurung, die in der Halle von Philia als gekrönte Büste mit Früchten dargestellt ist. Sie stammt aus dem letzten Viertel des V. Jh. D. Levi nimmt an, dass das Mosaik von Ananeosis, von 450-457, eine heidnische Version des synkretischen Konzeptes aus dem Ende der Antike ist. Sie hat die gleiche biblische Form, die auf dem Mosaik von Philia steht. Diese Personifikationen wurden vom Christentum übernommen. Agora, der Überfluss, und Eukarpia, die Fruchtbarkeit, befinden sich bei einem Begräbnisbankett, in

Abbildung 18
Mosaik von Shahhba Philippopolis

Geselsschaft der Jahreszeiten, als weibliche Büsten in dem Grab der Mnemosyne, aus den Jahren 350-400. Im oberen Teil erwähnen zwei Inschriften Mnemosyne, das Gedächtnis, und die Aioxia, das Bankett. Im Bad der Apolausis befinden sich im innern der Medaillons zwei Figuren mit ihren Schriften; sie stellen Soteria, das Wohlergehen, und Apolausis, das Vergnügen, dar. Beide Damen personifizieren abstrakte Ideen. Es sind Anspielungen auf die Beschreibungen, die Libanis über die Quellen von Antiochia macht. Apolausis ist erneut in einer Blumenkrone auf einem Mosaik von Argos dargestellt, aus der Zeit um 500, und auf einem zweiten Mosaik unbekannter Herkunft, möglicherweise aus dem Libanon, aus dem VI. Jh. Beide gleichen dem erwähnten Mosaik von Byblos, mit Akme und Charis. Apolausis ist sitzend im ganzen dargestellt, mit einer Blumenkrone geschmückt. Ihre linke Hand liegt auf der Schulter Plutos, dem Reichtum. Im Bad D in Antiochia, befindet sich die Büste Gethosynas, mit ihren Inschriften. Dieses Mosaik datiert aus den Jahren 300-325. Die letzte Personifizierung der philosophischen Gedanken auf Mosaiken in Antiochia ist Megalopsychia, der Edelmut. Ihre Büste, in einem Medaillon, beherrscht ein Mosaik aus dem V. Jh. im Yakto Complex, mit Jagdszenen auf denen die Jäger mit Namen aus der griechischen Mythologie bennant sind: Adonis, Aktos, Meleagros, Tiresias, Hippolytos und Narziss, die auf die Grosszügigkeit des Grundbesitzers anspielen, der die Jagd veranstaltet.

Abbildung 19
Detail des Mosaiks aus Aranjuez, Madrid

Auf hispanischen und nordafrikanischen Mosaiken befinden sich zahlreiche Personifizierungen, die auf das Wetter oder den Kosmos anspielen, auf Aion, Annus, die Jahreszeiten, die Monate und die Musen. Die Personifikationen der

Abbildung 20
Mosaik aus Augusta Emerita

abstrakten Ideen auf hispanischen Mosaiken, ausser dem kosmogonischen in Augusta Emerita, tragen keine Inschriften. Sie werden nur durch ihre Attribute identifiziert. In der Villa Los Quintanares (Abb. 13), hält die weibliche Büste der Abundantia eine cornucopia, Symbol des Reichtums. Die Büste von Los Quintanares weist stilistische Parallelen mit den Büsten von Soteria, Apolausis, Ananeosis und Megalopsychia auf, Mosaiken aus Antiochia. Chresis, in dem erwähnten House of the Triumph of Dionysos, hält auch eine cornucopia. Eine weitere Büste der Abundantia, auch mit cornucopia, befindet sich auf einem Emblem der Villa Santervás del Burgo, Soria, aus dem IV. Jh. (Abb. 14).

Die Abundantia, als sitzende Matrone, ist vermutlich auch auf dem Mosaik in Lusitania in einer Villa von Rabaçal, aus dem IV. Jh. Auf einem Mosaik der Villa von Tarazona de la Mancha, Albacete, ist Virtus oder Salus zu lesen, begleitet von einer Menade.

Abbildung 21
Mosaik aus Cabezón de Pisuerga: Neira-Mañanes 1988: 36-46 Abb. 13-17 35-36; Lancha 1997: 184-187

In einer zweiten Arbeit hat G. López Monteagudo (2000: 35-153) die Darstellungen der Zeit auf den römischen Mosaiken Hispaniens und die im Norden Afrikas studiert. Aion befindet sich auf wenigen hispanischen Mosaiken, im Gegensatz zu Nordafrika, wo er häufig dargestellt ist, wie z.B in Haidra, Hippo Regius, Karthago, Dougga, El Djem und Hippona.

Auf hispanischen Mosaiken ist er auf dem kosmogonischen in Emerita Augusta (Abb. 15), aus antoninischer Zeit, zu finden. Genauer gesagt, gab es zwei Skulpturen des Aion in dem Mithras-Heiligtum in Augusta Emerita, aus der Mitte des II. Jh.

Die Inschrift Aet(ernitas) unter der Gestalt eines nackten Jünglings, die Anwesenheit der Jahreszeiten, Aestas und Auntumnus, nach der Rekonstruktion von M.L. Musso (Abb. 16), sind dabei den Tierkreis zu durchschreiten, und lassen diesen als Aion erkennen.

Auf dem kosmogonischen Mosaik gibt es Darstellungen der Elemente und geographischer Orte. Diesem Mosaik wird ein mithraischer Charakter (Blázquez 1993: 380-385) zugesprochen, durch die Darstellung von Himmel, Erde und Luft. Die Figuren sind mit Inschriften versehen; dadurch ist die Identifizierung gesichert. Nach der Interpretation von A. Blanco, wird die Komposition von einer Triade angeführt, bestehend aus der Zeit (Saeculum) und seinen Söhnen, dem Himmel (Caelum) und dem Chaos. In ihrer Gesellschaft befinden sich die Titanen, Söhne des Himmels und der Erde: der Pol (Polum), der Donner (Tonitrum) und, um sie herum, die grössten Gestirne: die Sonne (Oriens), der Mond (Occasus), die Winde (Boreas, Zephyrus, Notus und Eurus) und die Wolken (Nubs und Nebula).

In der Mitte des Bildes, das am meisten zerstört ist, sieht man die Natur (Natura), die Jahreszeiten (Aestas, Autumnus), einen Berg (Mons), möglicherweise der

Abbildung 22
Mosaik der Villa von Hinojal: Blanco 1976: 52 Abb. 95-96

Olymp; er hält in seinen Armen ein schlafendes Mädchen, mit dem Namen Nix (der Schnee). Inmittten der gennanten Figuren befindet sich eine männliche Person mit Flügeln an den Schläfen. Sein Name beginnt mit den Buchstaben AET und entspricht Aether oder Aeternitas, gleichwertig mit dem griechischen Aion.

Auf dem inneren Drittel, auf grünem und blauem Grund, herrschen die Personifizierungen des Wassers vor: die grossen Flüsse der zivilisierten Welt, der Nil (Nilus) und der Euphrat (Euphrates); der Hafen (Portus), vielleicht der Portus Ostiensis von Rom, und sein Leuchtturm (Pharus), welcher auch der von Alexandria sein könnte, und schliesslich der Ozean (Oceanus), das Meer (Pontus), der Wind, welcher die Schiffahrt begünstigt (Tranquilitas), die Navigation (Navigia) und die Früchte der Erde (Copiae), welche die Schiffe von einem Hafen zum andern transportieren. Diese Beschreibung des Firmamentes und der Welt, stammt aus der Beschreibung des Achillesschildes durch Homer (Il. XVIII. 483-489), und der von Euripides im Ion (1141 und folgende).

Johannes aus Gaza (Abb. 17), zu justinianischer Zeit, beschreibt ein Bild oder Mosaik aus Gaza oder Antiochia, das sich in Winterthermen befand, und das er „kosmisches Bild“ nennt. Es befand sich auf einer Wand oder in einem Gewölbe. Das Datum dieser Komposition ist ungewiss. Die Mehrzahl dieser Figuren waren mit Wörtern zur Identifizierung versehen. Es sind folgende: Kreuz. Uran. Gé mit Karpoi und Angelos. Helios mit Atlas. Areté und Sophia. Thálatta mit Angelos. Okéanos mit Bythós und Angelos. Aion. Hésperos. Cheimón. Hámaxa. Bronté und Angelos. Cheimón mit Ombroi. Astrapé und Angelos. Selene. Iris. Notos. Euros. Zéphyros. Boreas. Phoenix. Euphóriai. Eos mit zwölf Horai. Orthros. Anatolé. Nyx. Vier Horai Aithér mit Kosmos unf Physis.

Abbildung 23
Mosaik aus Augusta Emerita: Nogales 2000: 65 Abb. XIII; Álvarez-Nogales 2005: 1228 Fig. 1

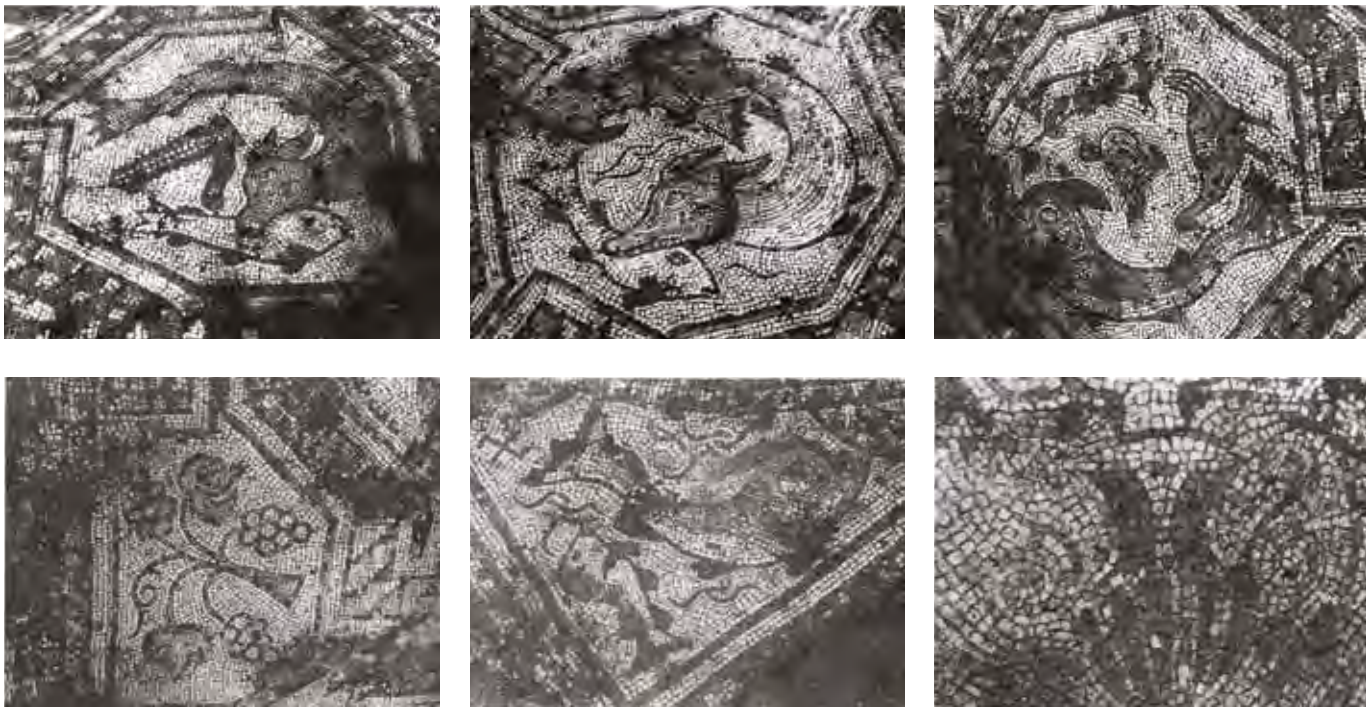

Abbildung 24
Mosaik von der Villa von San Martín de Losa (Burgos): López Monteagudo-Navarro 1998: 31 Abb. 17-18

Abbildung 25
Mosaik in Cardeñajimeno, Burgos: López Monteagudo-Navarro 1998: 27 Abb. 9

Die Übereinstimmung des kosmogonischen Mosaikes aus Augusta Emerita mit der von Johannes von Gaza geschriebenen Komposition, ist erstaunlich, und ebenso mit der Gesamtheit des syrischen Mosaikes von Shahhba Philippopolis (Abb. 18), aus der zweiten Hälfte des III. Jh. Zusammenfassend ergibt sich folgende Tabelle:

Mosaiken aus Merida	Johannes aus Gaza	Mosaiken von Chehba
Saeculum	Ouranos	
Caelum	Aither	
Nox (?)	Nyx	
(Ton)itrum	Bronté, Astrapé	
Nubs und Nebula	Cheimon. Ombroi	Drósoi
Notus	Nótos	Nótos
Zephyrus	Zéphyros	Zéphyros
Eurus	Eûros	Eûros
Boreas	Boréas	Boréas
Oriens	Anatolé	
Occasus	Seléne	
Polum Mons	Atlas	
Natura	Physis (in Gestalt eines Löwen, am Fuss des Kosmos)	
Autumnus Aestas, etc.	4 Horai	Tropai
Aet(ernitas)	Aión	Aión
Tellus (?)	Gaîa	Gê
Copiae	Karpoi	Karpoi
Oceanus	Okéanos	
Pontus	Thálatta	

Abbildung 26
Mosaik mit der Hochzeit von Gadmos und Harmonia: Fernández Galiano 1992: 162-177: Royo 1992: 148-161; Balty 2005: 1307-1323; Canto 1976: 293-338; Blázquez 2003: 45-142; Bowersock 1992

Die Beschreibung aus Shahba Philippopolis, nach J. Balty, erweckt die philosophischen Diskussionen der neuplatonischen Schule in der Zeit Plotins, bezüglich der Relation zwischen der absoluten Zeit, Aion, und der relativen Zeit, Chronos.

Das Mosaik in Augusta Emerita ist voller abstrakter Personifizierungen. K.M.D. Dunbabin glaubt, dass es zur malerischen Tradition aus dem II. und III. Jh. gehört. Der Künstler könnte Syrier gewesen sein, aber das Mosaik wurde in Hispanien angefertigt.

Ein vielfarbiges Emblem aus Aranjuez, Madrid (Abb. 19), zeigt die Büste eines mit einer Krone aus Früchten und Blättern gekrönten Jünglings. Er hält eine cornucopia. Diese Attribute sind für Aion und Annus bezeichnend. Die Krone aus Früchten und Blättern ist auf den Mosaiken von El Djem und von Volubilis zu finden, aus der Zeit der Severer und von Dougga, aus der ersten Hälfte des IV. Jh. Ein Jüngling mit cornucopia befindet sich auf den Mosaiken von El Djem, aus dem Ende der Antoninen Periode; in Hadra, aus dem Ende des III. Jh. oder dem Anfang des IV. Jh.; auf dem in Karthago und Hippo Regius, aus der ersten Hälfte des IV. Jh. Diese Büste ist eine abstrakte Personifizierung der Fruchtbarkeit.

Eine gekrönte weibliche Büste mit Weizenähren, Blumen und Früchten wurde als Aion oder Tellus ausgelegt, oder wie eine Personifizierung des Jahresgenius.

In diese Gruppe der Personifikationen der abstrakten Ideen gehören die Darstellungen der Musen, die in Hispanien auf den Mosaiken von Arróniz, Mérida,

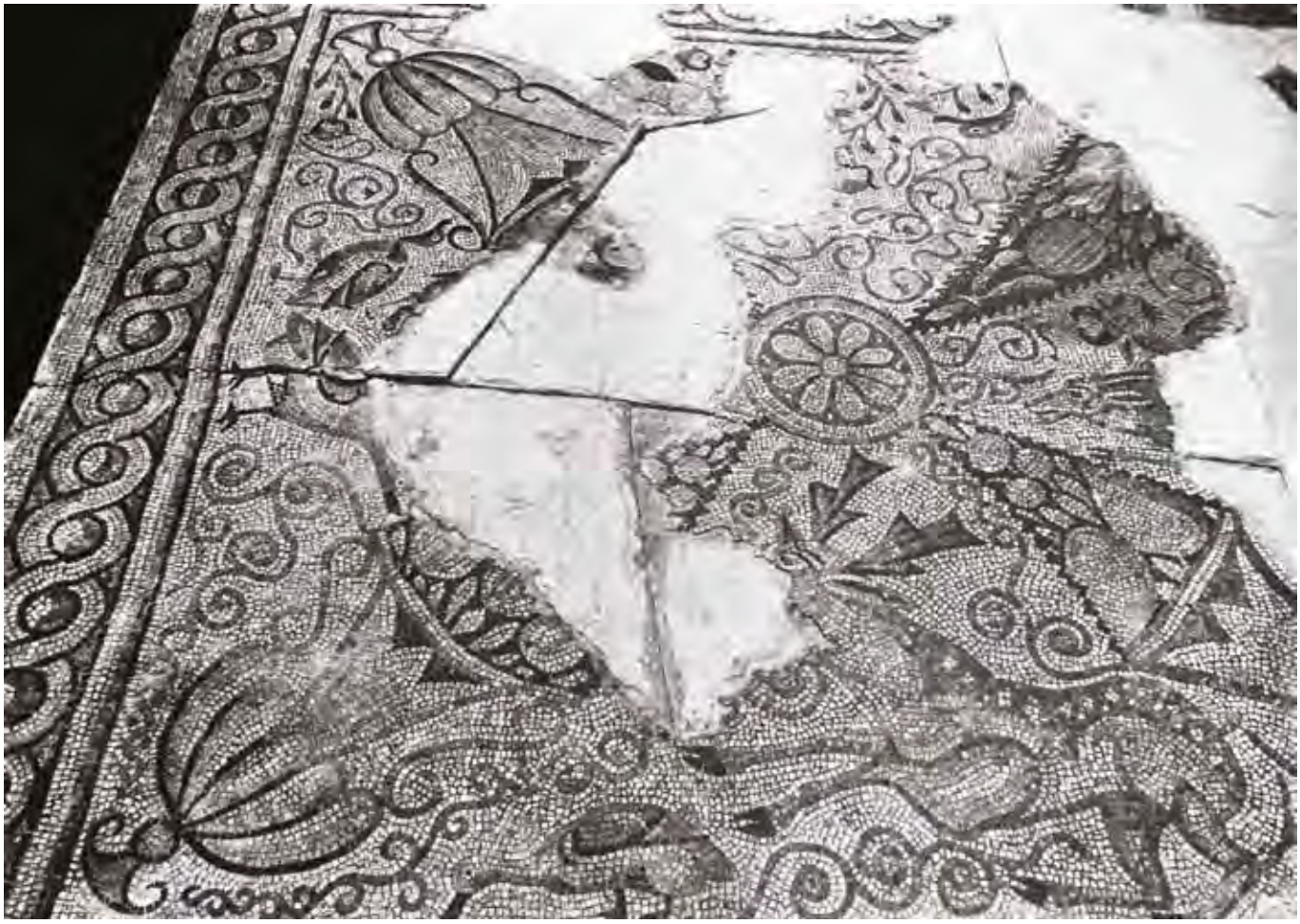

Abbildung 27
Mosaik von La Illeta del Rei:
Schlunk-Hausduld 1978: 184-186

Italica, Torre de Palma, Moncada und Montemayor (Blázquez 1993: 411-412) abgebildet sind.

Auf den Mosaiken in Hispanien fehlen aber die Personifizierungen der abstrakten Ideen, die in Beziehung zu der Philosophie und dem Neuplatonismus stehen, und im allgemeinen, mit den Konzepten, die auf den Mosaiken des Orients häufig zu finden sind und vorher erwähnt wurden. Im Orient waren diese Ideen im Umlauf, aber nicht im Okzident (Fontaine 1980: 241-330; Blázquez 1998: 463-490; Id. 1989: 307-322: Id. 1993: 99, 137: Id. 2004: 179-185). Ohne Zweifel war die mythologische Kultur bei der besitzenden Klasse in Hispanien erstaunlich. Einige Mythen sind äusserst selten und auf den Mosaiken der späten Kaiserzeit kaum dokumentiert (Blázquez 1993: 275-317, 386-444).

Im IV. Jh. hatte das Christentum nur geringe Fortschritte gemacht, ausser in dem Tal der Betis; das übrige Land war gröstenteils heidnisch.

Weitere hispanische Mosaiken mit vermutlich orientalischem Einfluss

Eine bedeutende Gruppe hispanischer Mosaiken haben auch vermutlich orientalischen Einfluss, da die Mosaikkünstler aus dem Orient kamen, oder copybooks hatten, oder von hispanischen Künstlern stammten, die in orientalischen Werkstätten ausgebildet waren.

Das Mosaik in Augusta Emerita mit den Sieben Weisen aus Griechenland (Älvarez 1990: 69-79, Abb. 32-38: Lancha 1997: 184-187), die im unteren Teil die griechischen Namen Agamemnon, Achill, Odysseus und Briseida aufweisen, wurde vermutlich von einem orientalischen Künstler hergestellt, der in Augusta Emerita (Abb. 20) arbeitete.

Auf einem Mosaik aus Cabezón de Pisuerga (Abb. 21) in Valladolid, mit dem Kampf zweier Paare griechischer Krieger, eines mit griechischen Buchstaben, das andere in Latein, bewahren nur die Endungen der Verse aus den Liedern der Iliade (VI.120; XX.159; XXIII.814). Sie erwähnen den Kampf zwischen Glaukos und Diomedes, Aienas und Achill, una Ayax und Diomedes. Mit höchster Wahrscheinlichkeit handelt es sich um das erste Paar. Die zweite Inschrift in Latein, bezieht sich auf das zweite Paar und sagt aus, dass die Krieger nach dem Kampf sich die Hände reichten und die Waffen austauschten, was auch in der Iliade erwähnt wird (IV.119-236). Die Krieger sind Glaukos und Diomedes. Der herstellende Künstler stammte vermutlich aus dem Orient.

In der Villa von Hinojal (Abb. 22), nahe Augusta Emerita, sticht ein Jäger mit einer Lanze auf ein Wildschwein. Eine ähnliche Szene ist auf einem Mosaik von Antiochia dargestellt, das Haus der Megalopsychia (Levi 1947: Abb LXXVII b), mit einer Aufschrift die zeigt, dass es sich um Adonis handelt, der ein Wildschwein jagt. Der Künstler könnte aus dem Orient stammen.

Auf einem in Augusta Emerita gefundenen Bild, sticht eine Person mit einer Lanze auf eine Löwin (Abb. 23). Eine ähnliche Parallele, sogar in Details, befindet sich auf einem Mosaik mit einer ähnlichen Szene in dem Grossen Palast von Istambul (Cimok 1997: 12-13; Blázquez-García Gelabert 1989: 29-37; Jobst 2005: 1083-1011; Parrish 2005: 1103-1117).

Auf einem Mosaik der Villa von San Martín de Losa (Burgos), sind die achteckigen Felder mit Fischen, Delphinen, Seeungeheuern und Vögeln geschmückt. Sie sind einzeln oder bilden Paare, oder fressen sich auf (Abb. 24). Ein dekoratives Motiv, das auch auf einem Mosaik von Antiochia dargestellt ist; ein Mosaik das „The striding Lion“ (Levi 1947: 321-323, Abb. LXXIV a) gennant wird, innerhalb rechteckiger Tafeln aus der späten zweiten Hälfte des V. Jh. Die gleichen Themen und aus späterer Zeit, gegen 575, wiederholen sich in Madaba, Jordanien (Piccirillo 2002: 153).

Auf einem Mosaik in Cardeñajimeno, Burgos (Abb. 25), ist die äussere Einfassung mit Köpfen von bärtigen, alten Männern geschmückt, eine Dekoration die dem Geschmack des Orients auf Mosaiken entsprach, wie in der Villa Constantiniana in Antiochia (Levi 1947: 16-21, Abb. I b), in Bichapour und Shahba Philippopolis (Balty 1981: 396-404, Abb. XXXIV, 12) und in der Kirche von Al-Khadir in Jordanien (Piccirillo 1993: 131). Der Wechsel von menschlichen Köpfen und von Tieren wird in der Villa des Falkners in Argos und in Hagios Taxiarchis belegt, aus dem Anfang des VI. Jh. (Akerstrion-Hougen 1974: 59-69, Abb. I-V, X) Alle diese Mosaiken sind aus der Spätantike.

Das Mosaik mit den Hochzeiten con Gadmos und Harmonia (Abb. 26), in Begleitung der Götter des Olymps, ist unter den hispanischen Mosaiken einzigartig, auch in der hohen Qualität seines Stiles. Vermutlich war der Künstler ein Syrier.

Einige orientalische Künstler fertigten in Hispanien Mosaike an und hinterliessen ihre Namen. Seleucus und Anthus stellten in Augusta Emerita auf den Mosaiken am Ende des III Jh. Dichter und Musen dar, und in der Umrandung, den Kampf der Pygmäen und der Kraniche (Blanco 1978: 30-32, Abb. 12-19).

Auf einem Mosaik mit dionysischem Thema in Andelos, Navarra, liest man nur die Endung des Künstlernamens in griechischer Sprache (Mezquíriz 1987: 59-62). Diese orientalischen Künstler arbeiteten an den Stätten, wo die Mosaiken sich befanden. Die Mosaiken der Sieben Weisen aus Griechenland und die beiden Krieger aus Cabezón del Pisuerga, sind Arbeiten orientalischer Künstler, die In Hispanien lebten.

Die Namen der Künstler, welche die Mosaiken in Hispanien anfertigten, sind ausser zweien, keine griechischen (Lancha 1984: 46-61; Id. 2000: 130; Id. 1997: 167, Abb. LXX; Blázquez 1996: 49, Fig. 8), sondern scheinen afrikanischen Ursprungs zu sein.

Orientalischer Einfluss auf den Balearen

Abbildung 28
Detail des Mosaiks von Es Formás de Torello: Schlunk-Hausduld 1978: 182-184 Abb. 78-79

Verschiedene Basiliken auf den Balearen (Blázquez 1978: 163-177), wie Son Bou, La Illeta del Rei (Abb. 27), Es Formás de Torello (Abb. 28) und Puerto de Fornelló, weisen jüdischen Einfluss des Orients auf. Die Fussböden der Basilika von La Illeta del Rei ähneln denen von Es Formás de Torello, die mit dem Mosaik der Synagoge von Hamman Lif verglichen wurden. Die längliche Halle des Tempels von Es Formás de Torello zeigt einige Dekorationsmotive ähnlich mit denen des Diaconicon des Tempels der Propylala, in Gerasa. Man hat Ähnlichkeiten zwischen den beiden Böden in Menorca und denen der Synagoge von Palästina festgestellt. Die Mosaiken auf Menorca geben ein Beispiel des frühchristlichen Einflusses des Westens.

Die Mosaiken von Es Formás de Torello und von La Illeta del Rei sind mit zwei symmetrisch angeordneten Löwen auf dem Lebensbaum geschmückt, wie in der Synagoge von Ma'on (Nirim), nahe Gaza, aus der Zeit um 238, wo die beiden gegenüberstehenden Löwen die *menorah* umgehen. Ähnliche, sich gegenüberstehende Löwen, erscheinen in der Synagoge von El Hammeh; in der Synagoge von Na'aran; auf dem Mosaik von Beter Alpha, aus dem Ende des V. Jh. oder aus den Anfängen des VI. Jh.; in der Synagoge von Tiberias, aus dem VI. Jh., und in der Synagoge von Jalfa. Auf dem Boden von Santa María del Camí, auf Mallorca, wird auf sechs Tafeln eine Szene im Paradies beschrieben: ein Löwe und einige Hirsche, Adam und Eva, und Josef, der von seinen Brüdern verkauft wird. Der Einfluss der jüdischen Kunst in Hispanien betrifft die Jahre zwischen 540 und 500.

Die Mosaiken des Orients hatten grossen Einfluss auf die hispanischen Mosaiken, wie aus dem Studium hervorgeht.

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Etude de la dégradation des mosaïques romaines de Volubilis (Maroc)

Abdelilah Dekayir*

Roman mosaics in Volubilis are opus tessellatum *type. They show different deterioration features represented by the lacunae formation (lack of tesserae) and break down of mosaic pavements by fracturing. The deterioration of the* tessellatum *and the formation of cracks are related to the swelling of soil supporting these mosaics. Furthermore, the* tessellatum *is also damaged by chemical dissolution of the fine grained-mortar between (lime and quartz fine grain) and under tesserae, giving an important porosity and making the* tessellatum *very easy to collapse. A part from limestone tesserae, which show formation of vesicles by chemical dissolution, other ones such as marble and glass tesserae appear to be resistant to the weathering action.*

Volublis'deki Roma mozaikleri opus tessellatum *tipindedir. Bu mozaikler, Lacunae düzeninde (tesserae eksikliği) belirtilenden farklı bir bozulma özelliği göstermekte olup mozaik döşemeleri çatlaklarla ve kırılmalarla bozulur.* Tessellatum*'un bozulması ve çatlakların düzeni mozaiği taşıyan topraktaki kabarmalarla ilişkilidir. Ayrıca, döşeme tesserae aralarında ve altında bulunan ve onlara önemli derecede gözeneklilik veren ve* tessellatum*un kolayca çökmesine sebep olan ince taneli harçtaki (ince taneli kireç ve kuvars) kimyasal bozulmalar nedeniyle de zarar görebilir. Kimyasal çözünmeden dolayı kabarcık oluşumu gösteren kireçtaşı tesseranın dışında, mermer ve cam tesseralar kötü havadan aşınmalara karşı direnç göstermektedir.*

Keywords : Volubilis / Roman mosaics / Degradation / Mineralogy / Tesserae / Soil

1. Introduction

Au Maroc, le site archéologique de Volubilis est classé patrimoine mondial de l'UNESCO depuis 1997. Ce site est connu pour ses belles mosaïques qui datent de l'époque romaine (fig.1).

Les mosaïques romaines du pourtour méditerranéen montrent souvent des figures d'altération dues à l'action d'agents météoriques (eau, gel-dégel, thermoclastie) ; de végétaux, d'interventions antérieures et du comportement mécanique du sol (Boschetti *et al*. 2005). A Volubilis, malgré l'exposition très prolongée de ces mosaïques aux différents agents d'altération, quelques unes demeurent bien conservées (Capedri *et al*. 2001 : 7-22, Panetier 2002). Par contre, d'autres mosaïques montrent des figures d'altération représentées par des arrachements localisés de tesselles (mosaïque du Cavalier) ou généralisés, comme dans le cas de la mosaïque de Flavius Germanus. En plus de ces figures d'altération, certaines mosaïques sont traversées par des fractures, les débitant en blocs décimétriques à métriques, difficiles à restaurer et touchant au design artistique de ces mosaïques (ex. mosaïque de la Citerne). Dans les parties humides et non exposées, certaines mosaïques sont colonisées par des lichens.

Le but de ce travail est d'étudier les mécanismes qui sont à l'origine de l'altération de ces mosaïques. Cette étude servira de base pour les travaux de restauration futurs.

2. Matériel & méthodes

Le site archéologique de Volubilis est situé prés de la ville sainte de Moulay Idriss Zerhoun (30 km au NW de Meknès). Cette région est caractérisée par un climat continental ave une précipitation de 650 mm/an comportant des fluctuations importantes à l'échelle saisonnier et annuel. D'un point de vue géologique, Volubilis est construite sur des dépôts de graviers Plio-Villafranchien et de marnes Miocènes.

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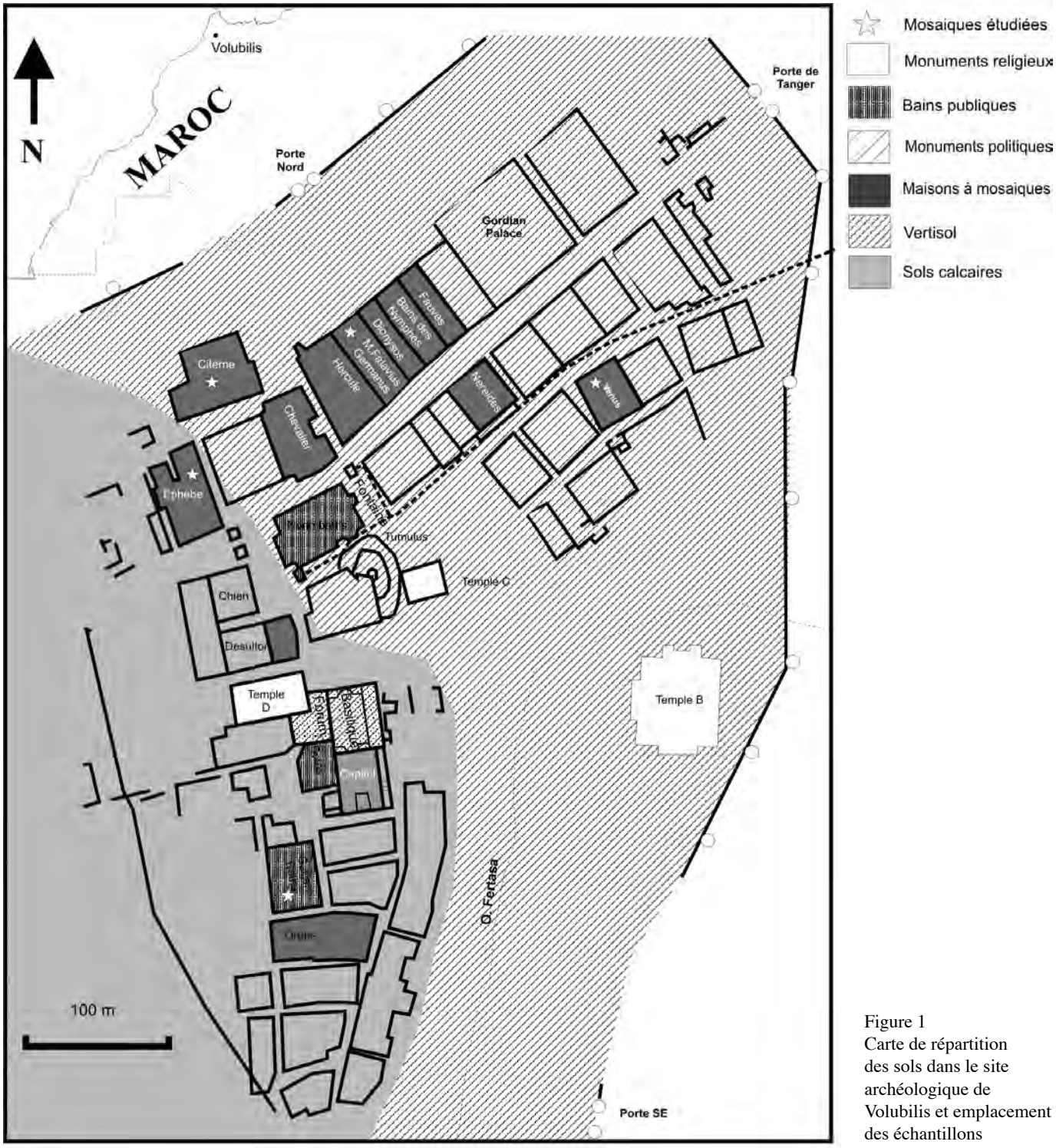

Figure 1
Carte de répartition des sols dans le site archéologique de Volubilis et emplacement des échantillons

Les mosaïques romaines de Volubilis sont de type opus tessellatum. Elles sont formées de petits cubes, taillés dans des roches (2 cm^3) ou à base de verre (mm^3) de différentes couleurs connus sous le nom de tesselles. Elles montrent des couleurs : noir, marron, rose, rouge brique. Les autres couleurs telles que le bleu, le vert et le jaune sont assurées par des pâtes de verres artificielles (Dekayir A. & Nadiri 2005, Dekayir *et al*. 2004 :1061-1070 , Limane *et al*. 2001, Dominguez-Bella et al. 2005).

Figure 2
Exemple de figures de dégradation des mosaïques romaines à Volubilis :
a-b) dissolution du bain de pose entre tesselles ;
c) formation de lacune avec détérioration du bain de pose;
d) action de végétaux ;
e) disparition du tessellatum et exposition du nucleus ;
f) fissuration

Diagnostic des mosaïques: les surfaces de nombreuses mosaïques ont été analysées dans le but d'évaluer l'action de l'altération. Les mosaïques étudiées (Ephèbe, Orphée et thermes de Gallien) (fig. 1) sont construites sur des sols calcaires et ont été détachées et redéposées. En revanche, les mosaïques de Flavius Germanus (FG), la Citerne et Vénus sont construites sur vertisol (sol gonflant) (fig.1). Les figures d'altération relevées sur les mosaïques romaines sont attribuées à l'action de l'eau et à la nature du matériau (exfoliation, érosion, fracturation, décoloration des tesselles, détachement de tesselles, détérioration des mortiers de restauration etc.) (fig. 2).

Au laboratoire, les tesselles ont été préparées et montées sur lames minces et observées au microscope optique. Les fragments de *tessellatum* (pavement et tesselles) ont été observés au microscope électronique à balayage, équipé d'un spectromètre EDX. La caractérisation minéralogique des différents composants des mosaïques a été réalisée par diffraction de rayons X (Philips PW 1729).

3. Résultats

3.1. Détérioration du tessellatum *par dissolution chimique*

Le *tessellatum* est composé de tesselles de différentes couleurs (blanc, marron, rose), taillées dans des roches calcaires ainsi que des marbres de couleur blanche et noire. Les autres couleurs ont été apportées par des pâtes de verre artificiel. Observées au MEB, les tesselles à base de calcaire montrent des vides de dissolution. Par contre, celles à base de marbre montrent une bonne résistance aux agents d'altération. Quant aux tesselles à base de verre artificiel, elles montrent une perte de coloration.

Entre les tesselles : les tesselles sont cimentées par un mortier à base de chaux et de sable, de granulométrie très fine (Dominguez-Bella *et al*. 2005, Dekayir & Nadiri 2005). Les joints entre tesselles représentent des chemins préférentiels aux solutions d'altération chimique. Localement, ce mortier montre des vides de

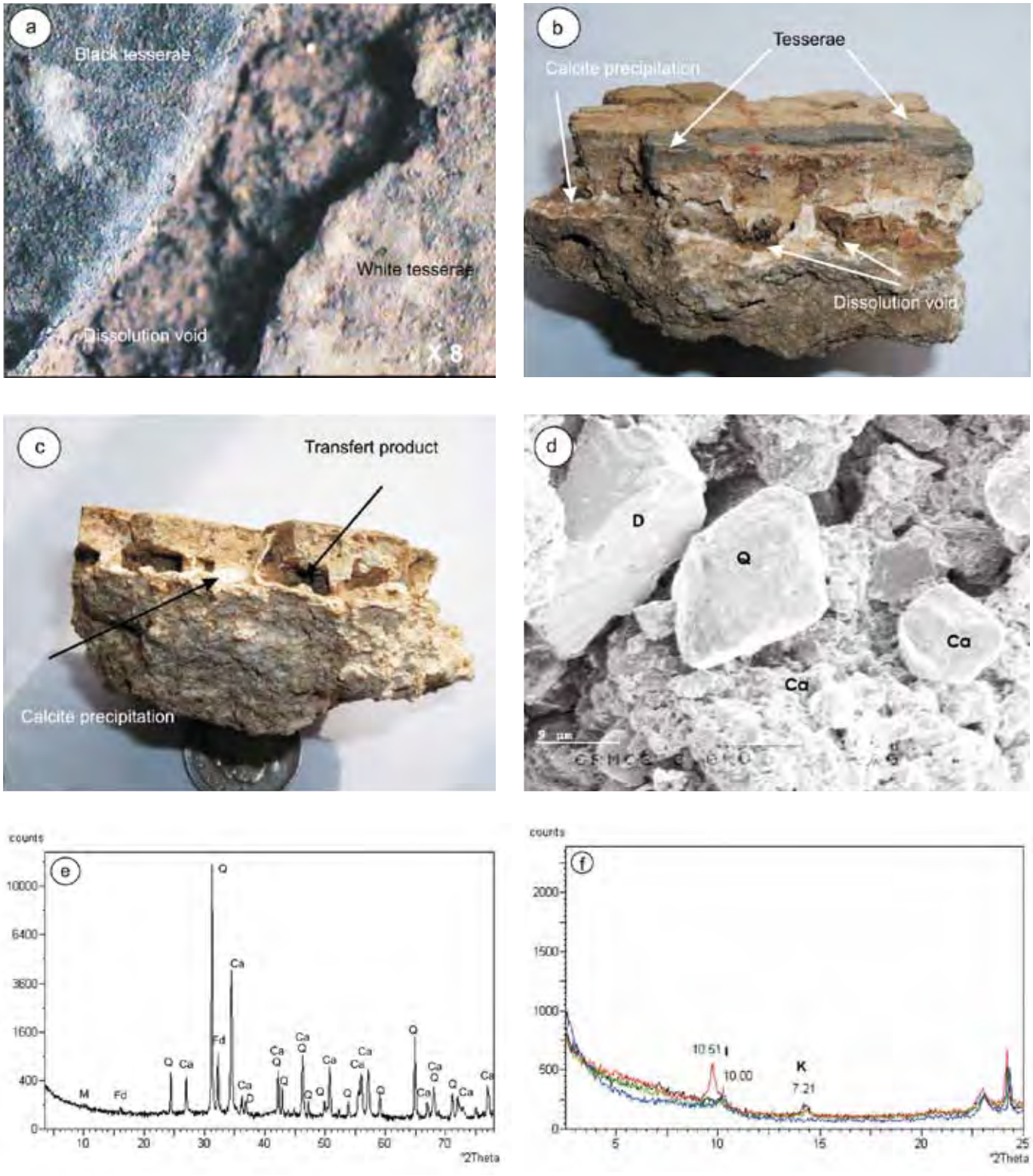

Figure 3
Détérioration du tessellatum de la mosaïque de Flavius Germanus :
a) figures de dissolution du liant fin entre les tesselles ;
b) figures de dissolution du liant fin sous les tesselles et formation des pores (cm) à remplissage argileux ;
c) détails de la couche calcitique ;
d-f) observation MEB et analyses XRD du produit de remplissage des pores
(I-M : illite, K : kaolinite, Q : quartz, Fd : feldspath, D : dolomie, Ca : calcite)

dissolution de différentes tailles, qui fragilisent la structure du mortier et facilite le détachement des tesselles et la formation de lacunes (fig. 2a).

Sous les tesselles : une grande porosité s'ouvre, représentée par des pores de quelques millimètres à 1 centimètre, remplis de produits argileux (fig. 3b, d). Les analyses XRD et les observations réalisées sur ce produit au MEB montrent qu'il est constitué de grains de quartz, de calcite et de dolomite de quelques microns. Les analyses XRD des minéraux argileux montrent la présence de kaolinite et d'illite (fig. 3e, f).

4. Discussion et conclusion

Les mosaïques romaines de Volubilis sont de type *opus tessellatum*. Elles sont formées de la base vers le sommet par i) le *rudus*, ii) le *nucleus* et iii) le *tessellatum* (Dominguez-Bella *et al*. 2005, Dekayir & Nadiri 2005). Généralement, ces mosaïques sont décorées par des tesselles de couleur rose, marron et blanche à base de calcaire oolitique, par des tesselles rouge brique à base de terre cuite et de grès calcaire et à base de marbre noir et onyx. Les tesselles à base de verre ont une couleur bleue, verte et jaune. En effet, la mosaïque romaine représente un système pétrographique très complexe. Les tesselles à base de roches ont été taillées dans des formations calcaires avoisinantes d'âges Aalénien et Bajocien (Capedri et al. 2001 : 7-22, Faugères 1978).

Après diagnostic de plusieurs mosaïques, l'action des phénomènes d'altération est traduite par une destruction par dissolution chimique du bain de pose à la base et entre les tesselles, aboutissant à la formation de pores remplis de produit argileux. Ce processus est contrôlé par des réactions chimiques de type dissolution précipitation (Stumm & Morgan 2005). Les solutions d'altération qui s'infiltrent le long des pores existants, provoquent une dissolution et un élargissement de ces pores, comme en témoigne la présence de produits de transfert formé de dolomie, quartz et calcite

$$CaCO_3\,(s) + CO_2 + H_2O = Ca^{2} + + 2HCO_3^{-}$$

En conclusion, les mosaïques romaines de Volubilis sont construites en partie sur des sols calcaires qui jouissent d'une bonne stabilité mécanique. En revanche, celles qui sont construites sur des vertisols (sols gonflants) montrent plus de dégradation (par ex. la mosaïque de Vénus). A l'échelle de la mosaïque, les tesselles résistent mieux à l'altération en fonction de leurs caractéristiques pétrographiques. En revanche, la composition très calcitique du bain de pose le rend très fragile et très exposé à la dissolution chimique aboutissant à la formation de pores et à la destruction du *tessellatum*.

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The Port Illustration on the floor mosaic of the Yakto Villa

Ayse F. EROL*

The most important materials that can shed light on the historical atmosphere of Antiocheia on Orontes are mosaic panels. The floor mosaic obtained from the Daphne Yakto villa provides valuable information by showing the topography, the architecture and the daily life of Daphne and Antiocheia on Orontes. While a part of the academic research labelled the U-shaped, colonnaded structure filled with water as a reservoir, certain details of the depiction give us clues to the possibility that this could actually be a port. Records provided by antique writers on the city and comparisons made with architecturally similar material seem to yield data that support the idea that this structure functioned as a commercial port.

Günümüzde Antiocheia on Orontes antik kentinin tarihsel dokusuna ışık tutan en önemli malzeme mozaik panolarıdır. Daphne Yakto villasından ele geçen taban mozaiği, Daphne ve Antiocheia on Orontes kentlerinin antik dönem topografyası, yapıları ve günlük yaşamına ait tasvirler içermesi açısından önemli bir buluntu grubunu oluşturmaktadır. Mozaik tasvirinde gözlenen U planlı, kolonadlı ve ortası suyla dolu olan yapı, araştırmacılar tarafından su rezervuarı olarak tanımlanırken, tasvirde gözlenen detaylar liman yapısı olabileceği yönünde ipuçları vermektedir. Kentle ilgili antik yazarların kayıtları ve mimari yönden benzer malzeme ile yapılan karşılaştırmalar, yapının bir liman yapısı işlevinde olabileceği şeklindeki değerlendirmemizi destekleyen veriler sunmaktadır.

Keywords: Antiocheia on Orontes, border mosaic, water reservoir, port.

The floor mosaic that was revealed by the excavations carried out in the Daphne Yakto villa in 1932 provides a lively depiction of the topography, architecture and daily life of Daphne and Antiocheia (Fig.1). The villa, which was a countryside residence for Daphne, is also known as the Ardaburius villa. He was magister milutum of Antiocheia during 450-457 A.D., thus dating the mosaic to the mid-5th century (Campbell 1934: 202).

The buildings illustrated on the border that frames the central panel of the floor mosaic have no spatial relationship with each other. Generally being frontally depicted, they are identified by inscriptions or by scenes pointing to their function. Among them, there is an interesting U-shaped structure with a roof supported by a colonnade (Fig. 2). Its middle is filled with water and there is an illustration reminiscent of a boat. Making use of records of antique writers and comparisons made with architecturally similar materials, our interpretation of the function of this building is presented below.

There are certain suggestions that have been put forward by previous scholars on the nature and function of this structure. To quote from Malalas (Jeffreys 1963:147), after building an aqueduct extending from Daphne to Antiocheia, Emperor Hadrianus erected a spectacular reservoir to store and control water flowing from Daphne's Saramanna source and named it as "theatre of source of Daphne". Based on that, R. Chowen and D. Levi suggested that this building could be the reservoir mentioned by Malalas (Chowen 1956: 275-277; Levi 1947: 326). However, if one compares it to architecturally similar formations, one gets the impression that this structure was meant to be a port. The aim of this article is to demonstrate this by reference to some similar architectural material. The fact is that in his piece "Antioch Mosaic Pavements", while Levi declares the building is a water reservoir, he also asserts that there is a boat-like depiction on the water-filled area of the illustration, which appears to support our hypothesis (Levi 1947: 329).

On the other hand, Chowen believed that this building presented a public scene for those who sat on the theatron and watched the water go by (Chowen 1956: 275). He then backs his assertion by stating that on his visit to Africa in 128 A.D., Emperor Hadrianus had built an aqueduct extending from Carthage to Zaghouan Mountain, after which

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Figure 1
Levi, 1947, Fig. LXXIX/a
The mosaic of Yakto villa, topographical border

he also ordered a reservoir to be constructed by the water source on the mountain (Chowen 1956: 277). As mentioned above, Levi suggested that the building on the depiction could be a storage area from where the water coming from Daphne's Kastalia and Pallas sources was to be distributed (Levi 1947: 326). However, to the right of the U-shaped structure, there is another formation illustrated in the mosaic that might be a water reservoir. Furthermore, water flowing into this second structure is clearly indicated with two separate white lines which symbolize the Pallas and Kastalia sources whose names are inscribed in the upper part of the mosaic border (Fig. 3). Within this context, the reservoir which Malalas referred to as storing water coming from sources of Daphne must be this second building located to the right of the U-shaped structure on the mosaic.

On the basis of Libanios's remarks about a dock by the River Orontes for ships to manage their loads (Downey 1959: 652), the same U-shaped structure can be thought of as a port building. The following comparisons with architecturally similar material present information that confirms this assertion.

The building on the mosaic includes a colonnaded area consisting of columns designed in Ionian style. This colonnaded part, behind which stairs are placed in a U-shape, encircles the water in the middle. While there is the image of a boat in this water-area, a sort of platform to which the boat approaches is observed to be attached to a stair that is placed in front of the colonnaded area (See Fig. 2).

The city of Antiocheia was situated in a very important and fertile area by virtue of its being founded at an intersection point between the roads to the east and west. The River Orontes, and the canals joining it, facilitated the transfer of goods to Seleucia Pieria, Antiocheia's port settlement through the river. From there, they could further be sent to the Mediterranean (Downey 1962:27). A similar design was realized during the reign of Emperor Claudius who connected Rome, first to the port of Ostia through the canals he built on the River Tiber, and then to the sea (Sear 1982:123; Savile 1941:231). By virtue of the remaining ruins, it is widely known that in the antiquity there were many docks that ships could resort to across the River Tiber (Blackman 1982:187 Fig. 2). Libanios, from the 4th century A.D., offers us the most comprehensive information on Antiocheia. While describing the town, he wrote that ships carrying wheat approached the city and discharged their load to a stone-made dock, from where their goods were taken to the agora by the river. (Downey 1959: 652, Downey 1959: 652)[1]. This statement also supports the observation that the description on the mosaic shows a boat on the water-filled area of the U-shaped structure approaching a sort of a platform. The goods that were unloaded on this platform

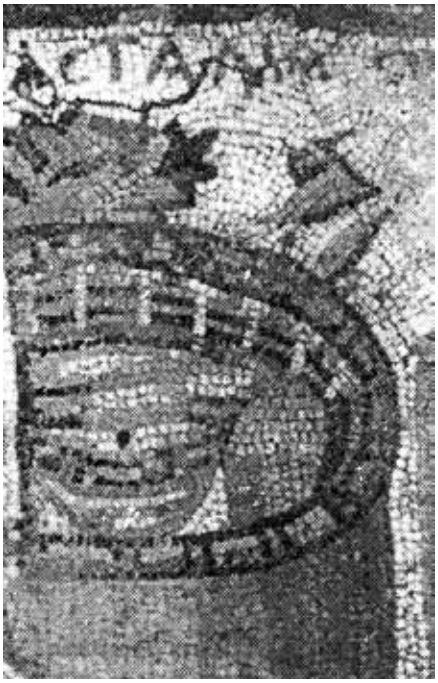

Figure 2
Campbell, 1934, Fig. XXII/A
The mosaic of the Yakto villa, topographical border, U-shaped structure

1 For one of the oldest examples of the complex allowing ships to approach cities through rivers, please see Lothal dock and its canals from the Harapan region, India (J. W. Shaw., Greek and Roman Harbourworks, A History of Seafaring Based on Underwater Archaeology (ed. G. F. Bass), 1972, 88-89), please see a harbour settlement possibly situated on the Nile, Egypt in 3rd millenium B.C. (N. M. Flamming., Cities in the Sea, London, 1972, 40).

Figure 3
Levi, 1947, Fig. LXXIX/a
The mosaic of the Yakto villa, topographical border, U-shaped structure and water reservoir

were first taken to the frontal staired area of the colonnade that was painted in black in the mosaic. From there, they were carried to the agora by the river. Farther on, a man is seen walking to the left of the U-shaped building, carrying a basket in his outstretched right hand and a package under his left arm. Even though it is not really possible to make a precise point, the presence of this man can be evaluated as if he is carrying goods unloaded from the port. This colonnaded part and the black stairs behind it must have been designed to offer the public a recreation area where they could relax and enjoy the breeze[2].

Moreover, architectural similarities between the U-shaped structure and the harbour descriptions on a Pompeiopolis city coin (Fig. 4) and on the Kelenderis mosaic (Fig. 5) further present evidence in line with the idea that this structure was a port rather than a water reservoir.

Excavations that were carried out in Kelenderis revealed a floor mosaic in which a city scene presenting the harbour and some surrounding buildings was described (Zoroğlu 1994: 31, fig. 15) (See Fig. 5). What is interesting in this depiction is a U-shaped structure, with a tiled roof supported by a colonnaded part consisting of arched-columns extending throughout the harbour (Zoroğlu 1995: 265). The depiction of the city-port in the mosaic is highly important since it provides valuable information on the location and plan of the Kelenderis harbour. On the water-filled area of the structure, there are again portrayed a sailboat and a simple boat. Zoroğlu believed this building to function as an entreport or shops for the harbour. (Zoroğlu 1993: 195, fig. 13; Zoroğlu 1994: 32, fig. 15). The structure next to it, with its high windows and dome, looks similar to the port baths whose remains we find today and whose current location coincides with the plan suggested in the mosaic (Zoroğlu 1995: 265). Because the stylistic characteristics of both the geometric adornments and the lotus buds placed in the border framing the mosaic are dated to either the second half of the 5th century or the beginning of the 6th century A.D, the mosaic itself should be traced back to the same dates (Zoroğlu 1993:196; Zoroğlu 1999:519).

Figure 4
Boyce, 1958, Fig. 10/1
Harbour Illustration on a coin from the Antoninus Pius period of Pompeiopolis

In Soli Pompeiopolis, a coin dated to the reign of Emperor Antoninus Pius was found (See Fig. 4). The harbour depiction on that coin displays similarities with the architectural features of the structure shown in the mosaic (Boyce 1958:68 Fig. 10) since the U-shaped structure with a roof supported by a colonnade is also present on that coin. In the water-filled part, there is an illustration of a water-god. According to the information provided by Beaufort in his piece Karamania, the Pompeiopolis harbour looks like a basin surrounded by semi-circular walls or breakwaters (Beaufort 1818: 249, 259). The structure depicted on the Pompeiopolis coin and the research conducted by Vann's team which validated the presence of breakwaters (Vann 1994:530-534), confirmed Beaufort's descriptions and his city plan (Beaufort 1818: 249, 259). The closest example to the form and location of the water-god in the middle of the water-filled area of the building is a figure of a god that was placed at the entrance of the Ostia port that was depicted on a sestertius from the reign of Emperor Nero (Boyce 1958: Fig. 10/2). Several suggestions have been put forward as regards the identification of this port god shown on the coin (Boyce 1958: 71; van Buren 1911: 194, footnote 2.). The similarity observed in both illustrations led to a conclusion that the god depiction in Pompeiopolis, which is a province, must have been adopted by the capital Rome (Boyce 1958:77). Port structures with similar plans have already been observed in depictions placed on coins from the Imperial period at Ostia (Savile 1941: 231, Fig. 9), Corinth and Mothone (Boyce 1958: Fig. 13) (Fig. 6).

2 For portico examples encircling the harbour in the ancient Anatolian cities of Miletos and Elaiussa Sebaste, please see Akurgal, 1988, 451, Schneider, 2008, 101-102.

Figure 5
Zoroğlu, 1999, Fig. 2
Harbour illustration on Kelenderis mosaic

As the capital of the Seleucian Kingdom, Antiocheia was the administrative centre of the Syrian province during the Roman period. Situated between the River Orontes and the Silpius Hill on a crossroads for trade routes extending from east to west, the city was strategically very important. With its fertile lowlands and abundant water resources, Antiocheia produced grain, oil and wine. Its agricultural appeal and strategic significance made the city a very important trade centre across the eastern and Greco-Roman world. The River Orontes and its canals into the city provided a route for the Persian, Indian and Chinese goods to be first transported to Seleucia Pieria from Antiocheia and then to the Mediterranean ports (Downey 1962: 11).

The mosaics displaying scenes from the city life shed light on the settlement from the antique period and its structural features. Currently exhibited in the Museum of Archaeology of Hatay, the floor mosaics of the Yakto villa are particularly remarkable since they provide indispensible information on the city life and the architecture of Antiocheia, whose structural characteristics were heavily damaged by earthquakes. The fact that the River Orontes was appropriate for small ships to sail along and that Antiocheia's canals offered an easy route into the port of Seleucia Pieria and thus to the Mediterranean enable us to imagine the idea of a port, connected to the city, into which ships would approach to load and unload.

In his piece "Antioch Mosaic Pavements", Levi's theory that the U-shaped building constituted a water reservoir is refuted by his remarks about a boat-like illustration placed in the middle of the water-filled area of the same building (Levi 1947: 329), while this testifies to the point made in this article. There is no evidence accommodating a setting in water reservoirs of the antique period that

Figure 6
Boyce, 1958, Fig. 13/ 4, 13/5
13/4- Harbour Illustration on a coin from the Antoninus Pius period of Corinth
13/5- Harbour Illustration on a coin from the Emperor Caralla period of Mothone

allowed ships or boats to enter. However, Libanios's remarks on ships unloading wheat by the river in Antiocheia (Downey 1959: 652), confirms the existence of a port by the River Orontes. The fact that in the mosaic, the boat was depicted as approaching a platform-like area[3] reminds us of the presence of a setting where ships could use as a dock to unload their trade goods. Furthermore, it is also plausible to deduce that, since the city agora was situated by the river, trade goods were first unloaded in this port from where they were then taken to the agora. Because the U-shaped structure on the mosaic is colonnaded, it also recalls Vitrivius's statements that porticos and shipyards that accessed the commercial centre of cities were constructed at ports that enjoyed a natural curve or U-shape (Vitruvius. V. XII.1). Architectural similarities between our U-shaped structure and the ports of Pompeiopolis and Kelenderis[4] remain as further evidence for the hypothesis that this was a port. Because the mosaic illustrations of Yakto and Kelenderis are dated to the mid-5th century A.D, they also chronologically overlap with each other. Although the Pompeiopolis coin is an earlier example, ports with similar plan were built in the capital and in provinces during the entire Roman Imperial period (Boyce 1958: Fig. 13).

3 For boats that were used for transportation on the river, please refer to Lionel Casson, "Harbour and River Boats of Ancient Rome", JRS 55 I/2, 1965, 31-39

4 For an illustration of a port with similar plan, please see the portico of the Kenchreai port of Corinth, dated to the end of 4th centuty A.D., in L. İbrahim et. al. Kenchreai. Eastern Port of Corinth, Leiden, 1976, Fig. 94; for the circular port observed on late-period coins of Side, please see A. M. Mansel, Side. 1947-1966 Yılları Kazıları ve Araştırmalarının Sonuçları, Ankara, 1978, Fig. 76.

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JMR 1-2, 2008 45-54

The Ship Depicted in a Mosaic from Migdal, ISRAEL*

Zaraza FREIDMAN**

Iconography of ships in mosaics comprises two fields: ancient ships and shipping, along with mosaic art and techniques. This theme is very complex and however it has been paid insufficient attention in the past. Due to this durable art form, the ships depicted in mosaics may be referred as actual images of vessels concurrent to the period when such surfaces were made. The research started with my MA dissertation (1999, unpublished), which encompassed the eastern Mediterranean, Israel and Jordan. Throughout my PhD dissertation (2003, unpublished), this theme dealt with the entire Mediterranean world. It relates to shipbuilding materials, types of ships, sailing environments, as well with the propulsion and steering rig. The following paper describes one of the earliest mosaics with ship depiction that was found in Israel, at Migdal, located on the western shore of the Sea of Galilee (in Hebrew: Yam Kinneret) (fig. 1). Although some reddish-brown tesserae were used for some distinct parts in the objects depicted in the mosaic, it follows the black-and-white technique (rare example in the eastern Mediterranean). The mosaic reflects tight art connections with the early Roman Empire of the 1st centuries BCE – CE. The Migdal mosaic is no longer found at it original location. Today it is mounted into a metal frame and placed among other artifacts in the courtyard of the "Church of the Multiple Loaves and Fish", at Capernaum (Tabgha).

Mozaiklerdeki gemi ikonografisi mozaik sanatı ve tekniğinin, yanında antik gemiler ve gemicilik alanlarını da kapsamaktadır. Bu konu oldukça kompleks olmasına rağmen geçmişte yeterince ilgi görmemiştir. Mozaiklerin kalıcı sanat formu olması sayesinde, betimlenen gemiler yapıldığı periodla eşzamanlı gerçek görüntülerine kaynak olarak gösterilebilir. Araştırma, Doğu Akdeniz'i, İsrail'i ve Ürdün'ü kapsayan yüksek lisans tezimle (1999-basılmamıştır) başlamıştır. Doktora tezim boyunca (2003-basılmamıştır), bu konunun kapsamı tüm Akdeniz Bölgesini içine alır. Tez, gemi yapı malzemeleri, gemi çeşitleri, deniz yolculuğu şartları ve gemilerin yürütücü güç ve dümen aksamları ile ilgilidir. Bu makale, bulunmuş olan en erken gemi betimli mozaiklerden biri olan İsrail, Migdal'daki Galilee Denizi'nin (İbranice: Yam Kinneret) (fig. 1) batı kıyılarında bulunan mozaiktir. Mozaiğin bazı farklı bölümlerinde kızıl-kahverengi tesseraeların kullanılmış olmasına rağmen, genel olarak siyah-beyaz teknik uygulanmıştır (Akdeniz'deki nadir bulunan örneklerden). Mozaik, M.Ö. ve M.S. ki 1. yüzyılların erken Roma İmparatorluk Dönemi ile sıkı sanatsal bağlar yansıtır. Migdal mozaiği artık orjinal konumunda bulunmamaktadır. Günümüzde, metal bir çerçeceye monte edilmiş halde Capernaum'daki (Tabgha) Katmerli Somun ve Balık Klisesi'nin (Church of the Multiple Loaves and Fish) avlusundaki diğer eserlerin yanında yeralmaktadır.

Location of Migdal

Migdal (Israel map ref. 1988.2488), is situated on the western coast of the Sea of Galilee, about 5-km north of Tiberias (fig. 1). The town was established in the Hellenistic period (300 BCE), and was known as Migdal Nunaya/ Nunia (in Aramaic) – "*Tower of Fish*"[1]. The town is also known as Magdala (in the Christian world), as being the hometown of Mary Magdalena[2]. According to the writings of Josephus, Migdal/Taricheae had many ships, shipyard workers and wood supply.[3] He also wrote that Taricheae had a population of forty thousand inhabitants.[4] Josephus gives a detailed account on the nautical activities at Migdal and on the Sea of Galilee, during the time when he was

* *This paper is an extension and updated data of the Migdal mosaic chapter from the writer's MA dissertation, 1999, unpublished. I would like to dedicate this paper to the memory to Prof. Michele Piccirillo, my advisor for both MA and PhD Dissertations, a close and a very good friend, who just passed away before his time, 26.10.2008, and left all of us with an enormous sorrow and emptiness.*

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1 Raban, 1988, p. 323.

2 he Synoptic Gospels describes Mary of Magdala as one of the women from the Galilee who gave financial help and domestic service to Jesus and his disciples. The Fourth Gospel gives Mary of Magdala the pride of being the first witness of the resurrection and the risen Christ; Comay and Brownrigg, 1980, pp. 299-301. Luke: 8.2, informs that a certain women which had been healed by evil spirits was called Mary Magdalena.

3 Nun, 1992, p. 34.

4 Josephus, Wars, II.21.4.

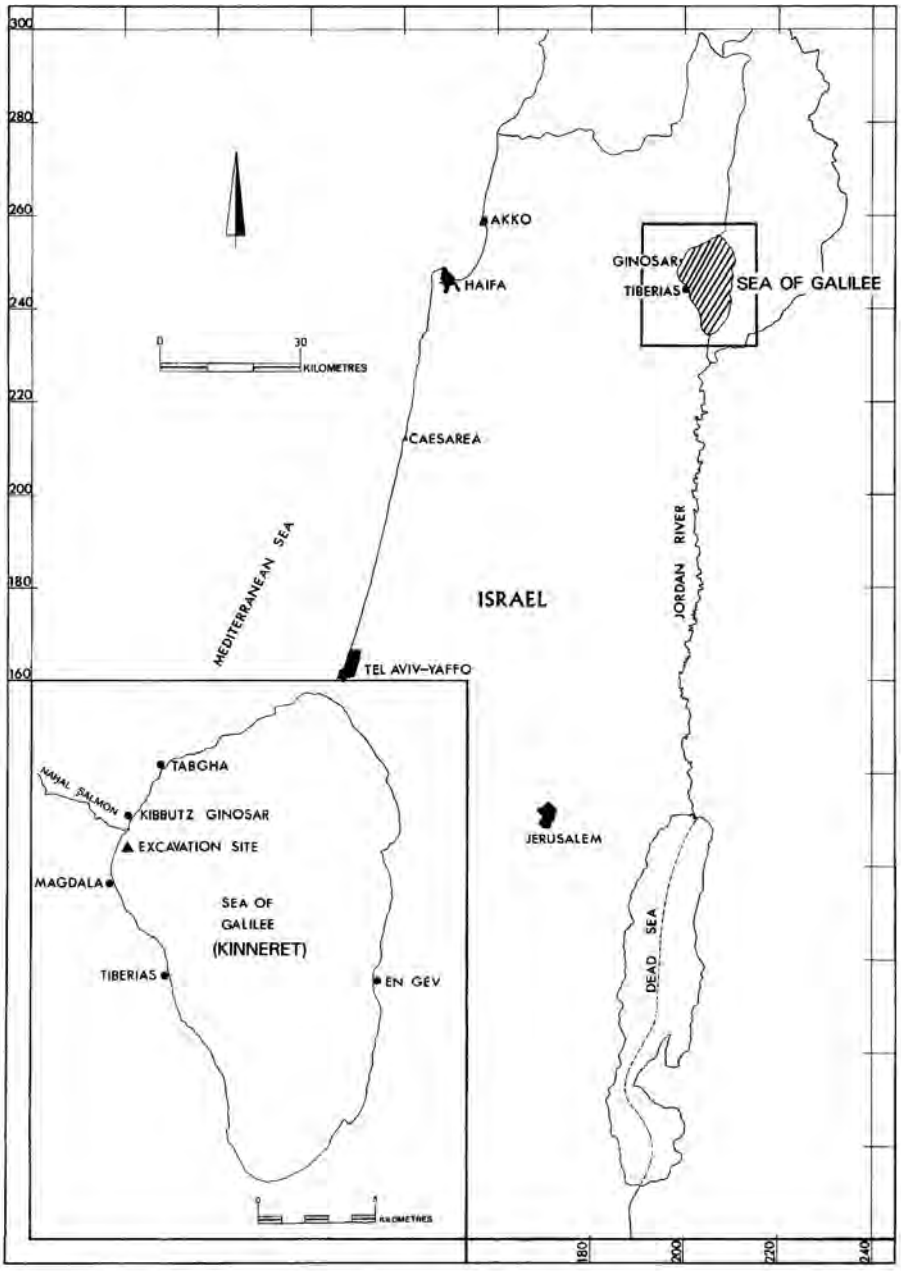

Figure 1
Location Map (after: Wachsmann, 1990, p. 2)

appointed as military governor.[5] He also mentions that many Jews from Tiberias sought refugee at Migdal/Taricheae at the outbreak of the Jewish Revolt in 67 CE.[6] During the Revolt, the combat that took place on the Sea of Galilee (Kinnerer) and its shores was a very cruel one. The Romans attacked Migdal and massacred a large part of its population. Though that many Jews sought to escape by boats were caught by the Romans and slaughtered.[7]

5 Life 12; 18; 32; 59; 73; Wars II.21.4; III.10.1; III.10.9.

6 In order to show his authority, Josephus sailed in 230 bots from Migdal to Tiberias as an act against opposition of the inhabitants; Wars, II.21.8.

7 Wars, III.10.9.

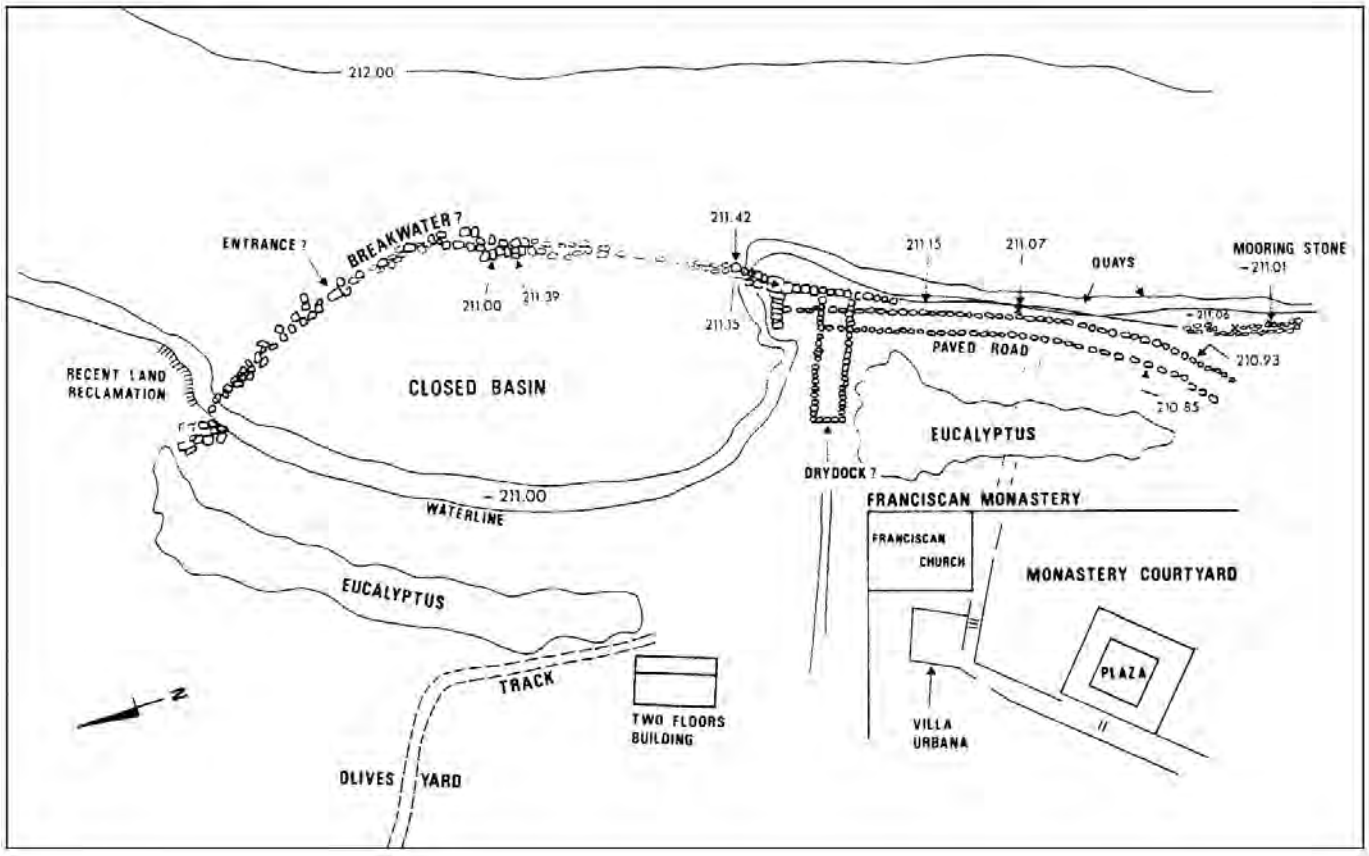

Figure 2
Migdal Harbor (after: Raban, 1988, p. 53, Fig. 4)

Archaeological Context of the Mosaic

Taricheae or Migdal Nunia (the ancient name of Migdal) attests for its maritime character. Strabo mentions that "*…at the place called Taricheae the lake supplies excellent fish for pickling*".[8] During the survey carried out in 1970, by Prof. Avner Raban, from the Institute of Maritime Studies, University of Haifa, remains of a harbor were found in the vicinity of the courtyard belonging to the Franciscan church (fig. 2). The harbor basin was formed within the natural bay that was enclosed by a breakwater to the north-east; its area extended for one hundred acre.[9] A wharf built with basalt stones, ran parallel to the shore at a length of *c*.100 m. At its eastern end protruded a mooring stone where the mooring lines of ships were tight in antiquity.[10] Vessels of medium size could be moored along the quay.

The excavations carried out at Migdal, from 1971 to 1977, and conducted by Dr. Virgilio Corbo from the Franciscan Institute, in Jerusalem, revealed the Town Square, some streets, various buildings and the water system (fig. 3). During the excavations carried out in 1977 at the villa, to the northeast of the "Water Tower" (Area C), the work mostly concentrated on the mosaic pavements.[11] The mosaic floor of Room C6 (figs. 3, 4), the purpose of this paper, belonged to the original phase of the villa. The room led to a patio that in its center a plastered pool was built.

8 Starbo, *Geo*. XVI.2.45. Probably Strabo referred to Migdal fish industry, where was produced of *oxygarum* a very prized condiment for the Roman culinary. The main production center was in North Africa. The finished product was exported to Greece, Italy and Gaul; Avi-Yonah, 1976, p. 24.

9 Nun, p. 35.

10 Raban, 1988, p. 53, Pl. VII.5.

11 Corbo, 1978, p. 236.

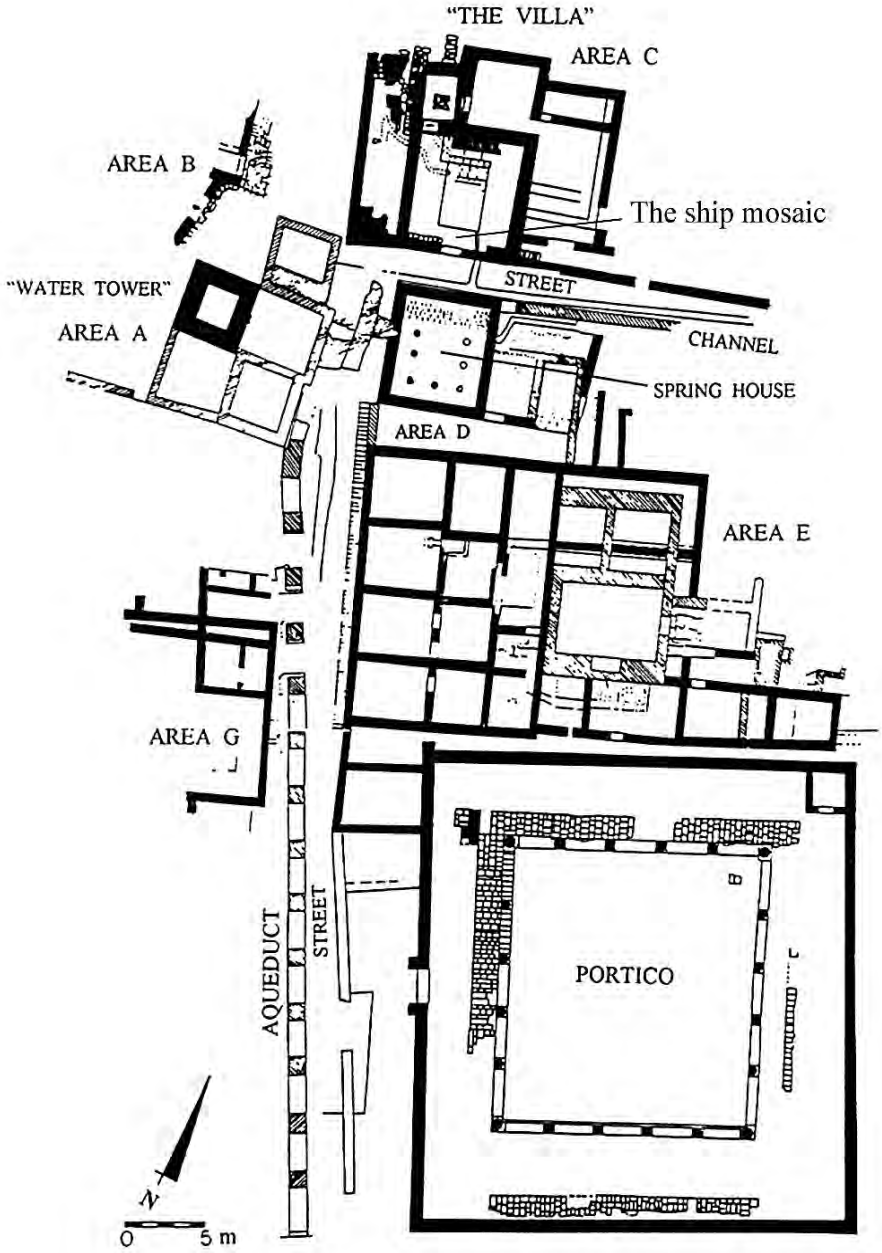

Figure 3
Plan of the excavations
(after: Corbo, 1978, p. 72)

The Mosaic Floor in Room C6

Room C6 was virtually the most central part of the villa (fig. 3). It almost formed a square of 2.80 x 2.60 m, and its floor was entirely paved with mosaics. The southern wall of this room is adjacent to the *Cardo*. The mosaic mostly made with black-and-white tesserae and depicting the maritime scene was found underneath a later mosaic that had been removed in order to allow the excavators a better study of this pavement. The style of the mosaic work and the shreds found with this context indicates that the complex was built during the 1st century CE.[12] The mosaic pavement consists of two parts:

1. A short Greek inscription found on the southern doorstep reads "*KAI CY*" (you too). It was made with black tesserae and set on white background.[13] The length

12 Corbo, p. 237; Two such inscriptions found in villas at Antioch were dated to the 1st century CE.

13 This inscription was removed from its original location. It also was mounted into a metal frame and today it is found in the closed yard at Capernaum Church.

Figure 4
Migdal Mosaic (photo: Z. Friedman)

of the inscription is 33 cm, while the width is 7.5 cm. Such inscriptions had not been found in Palestine before, but are mostly known from private houses in Antioch.[14] They are associated with invocations against the "evil-eye".

2. The main part of the floor consists of a large mosaic rectangle (1.10 x 1.12 m), which formed the pavement of this room (fig. 4). A double black frame borders the maritime scene.[15] The outer black frame (5 cm wide) is made of three rows of tesserae. The black stones are basaltic, originating in the area of the Kinneret, the Galilee or the Golan Heights. The wide space between the black borders is made of five rows of white tesserae, while the second border is made of two rows of black stone cubes. The inner field comprising the figurative decorations measures 0.78 x 0.81 m. The background is white and the objects depicted within this field are made with black, while some details are made with brownish-red tesserae. The mosaic depicts a sailing ship, a ring with *strigili* and *aryballos*, two grounding-mills?, one *cantharus* with two handles, and a partly preserved fish.[16]

The Ship

The ship is depicted from its port side and occupies about 1/4 of the entire field.[17] It had been placed close to the lower left corner of the mosaic. The prow almost touches the frame. The hull, mast and rigging lines are depicted with black tesserae, while the oars and the sail are depicted with brownish-red stones (fig. 5a). The Migdal Ship has an elongated hull with a broad pointed stem and narrowing raised stern. This depiction may have resulted from the mosaicist's lack of nautical knowledge and therefore not understanding the shape of the hull, or he intended to give some perspective view to the ship. What appears to be a pointed stem probably indicates a pointed cutwater or ram, which in a proper depiction should end at the water-level.[18] The shape of the stem resembles the head of the fish depicted to the right of the ship, below the stern (fig. 4). The gunwale is almost horizontal, or it may indicate the top edge of the protective screen, whereas the heads of the rowers project above (figs. 5a, b). The left-hand end extends forward, and appears to be supported by an angled spar. This element may indicate the sprit-bow, used to tight around the fore-lines of the sail. The horizontal white strip that extends at about 2/3 of the ship's length may represent the wale above the water-level. It reinforced the outer hull and also protected the ship when it was moored long-side (parallel) the quay or pier. In the middle of the port stem is depicted a single brownish-red tesserae, probably indicating the *oculus*. We assume that the same decoration was true on the starboard stem. The stern is raised and ends in an inverted sternpost above the deck. At the point where the stern curves is depicted a single brownish-red tesserae (fig. 5a). This cube doesn't have a specific function. The artist who produced the mosaic may have inserted it by mistake, or the stone was assumed to indicate the ship's trade mark, or other decoration.

Figure 5a
The Ship (photo: Z. Friedman)

14 Corbo, p. 237.

15 The writer took the measurements of the mosaic in May 1996, at Capernaum. Prof. Michele Piccirillo from the Franciscan Institute in Jerusalem granted me the permit to take the measurements of the displayed mosaic in the fenced yard of the church.

16 For a detailed description of the patterns depicted in the mosaic: Corbo, 1978, p. 237-8; Raban, 1988, p. 313. Reich identified all the objects depicted in the mosaic: 1991, pp. 455-458, Pls. 53-54.

17 Overall length of the ship 32 cm; height at amidships 9 cm; mast height (from the tip of the masthead to the gunwale) 26 cm; length of the yard 27 cm; length of row-oars 15 - 17 cm; steering oar (with the blade) 20 cm; Friedman, 1999, Table 2.I.1, p. 12.

18 Vessels of the Greco – Roman periods are depicted with pointed cutwater or ram; Basch, 1987, figs. 329, 334, 351, 353, 363 A, 677-78, 739, 804/14, 804/28, 1055, 1057-59, 1073, 1076, 1106, 1108.

The ship is depicted with both means of propulsion: sailing rig and row-oars (figs. 5a, b). The mast is represented by a vertical spar made with one row of black tesserae. It is stepped 1/3 fore amidships and secured by the forestay, which extends between the joint of the yard with the masthead and the fore tip of the sprit-bow. The yard (depicted with one row of black tesserae) is set perpendicular to the masthead. The furled sail beneath the yard is depicted with one strip of brownish-red tesserae; it is slightly shorter than the yard. The vertical hanging line attached to the tip of the right-yardarm indicates the right-hand brace. It worked the yard and sail to be adjusted to the optimal wind direction (figs. 5a, b). The row-oars indicated by two shafts (depicted with brownish-red tesserae) are mounted on the port gunwale with backward slanting. The missing blades probably are submerged in the water. The steering oar is depicted with a short rectangular blade with rounded shoulders. The same oars arrangement was true on the starboard side. We may suggest that the mosaicist intended to distinct the row-oars from the steering-oars and therefore he depicted the blade on the aft oar. Four protrusions above the gunwale are the heads of the rowers seated on lower thwarts, or behind the protection screen set above the gunwale (figs. 5a, b). The crew also comprised the helmsman and the captain. The helmsman may have been seated beneath the arching sternpost to work the steering oars. The coloring of the sail and the oars were made intentionally, thus to distinguish these elements from other gear of the ship. The hull does not show any flotation or draft line, nor is a water-line indicated. We may assume that the ship leaves the harbor, whereas the oarsmen rowed the ship to open waters and only then the sail was unfurled and adjusted to the optimal winds, thus to set the sailing course. The ship may symbolize a patrolling vessel along the shores of the Sea of Galilee or a merchantman.

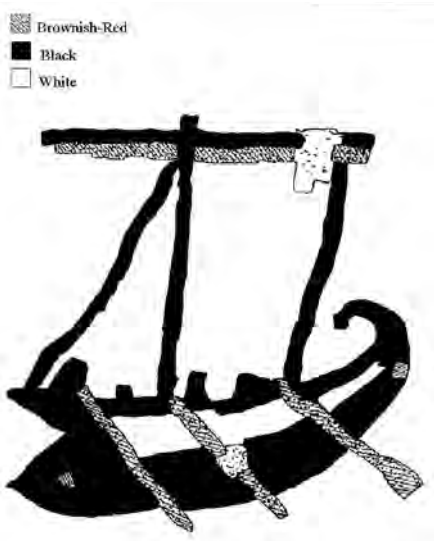

Figure 5b
Drawing of the Ship (drawing: Z. Friedman)

Discussion

Although, the ship in the Migdal mosaic is depicted schematically it provides us with valuable information that may help us to associate it to a specific type. Fishing vessels depicted in mosaic floors were quite a common subject in the sea or lakeside villas of the Roman Empire during the 1st - 4th centuries CE.[19] Most of these sites were located in North African provinces, and Italy. The Migdal mosaic decoration may be a symbolic depiction of scenes or activities specific on the Kinneret seaside. The ship appears to be shown in a 3/4 view and not in a full side view as the picture may suggest. The highly raised and narrowing stern indicates an attempt of fore-shortening (figs. 5 a, b), thus emphasizing a perspective view of the ship. Inner-volute sternposts appeared in ship iconography since the 7th century BCE.[20] This feature became a distinct element on merchant vessels from the 1st – 4th centuries CE.[21] It also appeared on some warships.[22] The inverted volute-like sternpost of the Migdal ship indicates a preserved tradition of this element that became a distinct feature of the Roman merchantmen.

Figure 6a
Kinneret Boat (photo: Z. Friedman)

The pointed stem of the Migdal Ship (figs. 5 a, b) probably resulted from the mosaicist's misinterpretation, lacking nautical knowledge and therefore not understanding properly the ship's hull. Pointed ram appeared for the first time on Phoenician ships since the 9th – 8th century BCE, as evidenced by the vessels

19 Dunbabin, 1978, figs. 16, 119, 123, 125, 150, 154; Aurigemma, 1960; Pls. 67, 69, 87, 89, 94, 95, 110.

20 Ivory fragment from Chiusi, end of the 7th century BCE; Basch, 1987, fig. 871.

21 Basch, figs. 919, 921, 1081, 1089; Casson, 1971, fig. 177.

22 Basch, figs. 971-B, 973-A.

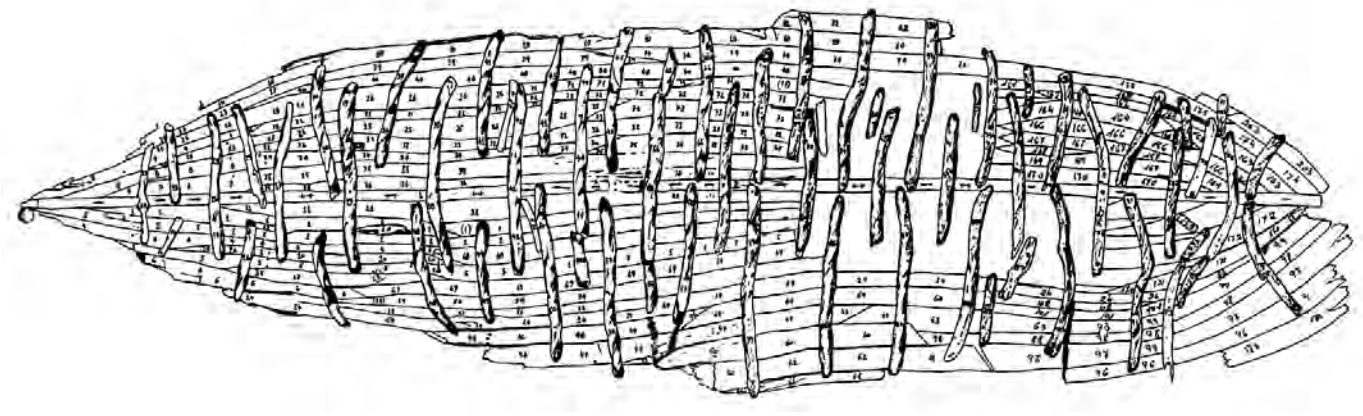

Figure 6b
Plan of the Kinneret Boat
(after: Wachsmann, Folder 1)

Figure 7
Odysseus Ship (after: Basch, 1987, fig. 882)

depicted on the wall-reliefs from Khorsabad,[23] or on Greek ships dated to the Geometric period[24]. The Hellenistic and Roman ships were fitted with two or three pronged ram. A single pointed ram on Roman warships makes its appearance shortly after the middle of the 1st century CE.[25] An earlier example of pointed broad stem similar to the Migdal ship is evidenced by a sailing ship (associated with the story of Odysseus), depicted on an amphora dated to *c*.330 BCE (fig. 7)[26]. On the port stem of the Odysseus ship is depicted an *oculus* with eye-lashes. The brownish-red tesserae placed on the port stem of Migdal Ship, also indicates an *oculus* (figs. 5 a, b). Odysseus' ship has a crew of four rowers, one helmsman and Odysseus tight to the mast. On the port hull are mounted two row-oars. Besides the time-span difference (370 – 400 years) between the Odysseus and Migdal ships, we may presume that such type of ships continued to be built in the eastern Mediterranean at least till the end of the 1st century CE. Evidently, ideas may be transferred from place to place, not only by passengers and crews, but also by the vessels themselves[27]. Boatbuilding and their handling were seen and copied everywhere since these vessels reached places through trade and/or sea combats.[28] Similarities of ship types and decorations strongly indicate that such influences could be seen on ships sailing in the Mediterranean in antiquity.[29] The closest parallel to the entire appearance of the Migdal Ship is evidenced by a ship graffito from Delos, at Maison aux Stucs (fig. 8), dated to the 1st century BCE. The sprit-bow of the Delos ship is supported by the raised stempost (at one end) and by two short spars, set on the bow (at the other end). The forestay is tight to the aft part of sprit–bow (fig. 8). The forestay of the Migdal Ship is tight to the fore part of the sprit-bow (figs. 5 a, b). The Delos ship is depicted with partly open square sail that is in raising or lowering process, as deduced from the lowered right-yardarm on the stern. Close to the edge of the right-yardarm are depicted four brails that worked the bunt. The brace is attached to the tip of the yardarm (it worked the yard and the sail to be adjusted to the optimal wind direction). The angled left-hand line, stretching between the left-yardarm and the aft end of the sprit-bow, may indicate the left brace or the leech of the lowered

23 Casson, figs. 76, 78.

24 Casson, figs. 30, 62, 64-66, 68, 72-74.

25 Casson, p. 146 and n. 22.

26 When using comparable evidence in any art form, we have to relate to examples that come from earlier periods than the subject in discussion and not later; e.g. the Migdal mosaic dates to the 1st century CE, and therefore we can't make comparison to later mosaics with similar scenes and dated to the 2nd – 4th centuries CE.

27 Lucian, *The Ship* 1-4; Athenaeus, v.204-209.

28 Friedman, 2006, p. 141.

29 Friedman, 2006, p. 141.

sail. The main propulsion of the Delos ship is provided by twenty-eight row-oars (fourteen oars are mounted on each side of the hull). The blades are missing, or probably are submerged in the water. We may conclude that the crew comprised twenty-eight rowers, one helmsman and the captain. The Delos ship missies its steering-oar (fig. 8) or it is not as distinct as in the Migdal Ship (figs. 5 a, b). The crew of the Migdal Ship is suggested symbolically by the four protruding heads above the gunwale. We may assume that the Migdal ship may have had a larger crew, comprising at least twenty-eight rowers, the helmsman and the captain, similar to the Delos ship (a total of thirty crew men). The slanting shafts of the row-oars may indicate that the rowers in the Migdal ship are facing the stern, and their backs are turned to the stem. Apparently, this depiction shows that each rower works one oar in *one/sit/pull* technique.[30] The helmsman seating beneath the inverted volute sternpost and facing the stem worked the steering oar (figs. 5 a, b); he also may have supervised and instructed the rowers, thus serving also as *keleutes*. The ship probably leaves the harbor and therefore the crew rowed the ship while the sail is still furled. When the ship reached open waters only then the sail was opened and adjusted to the proper wind direction. Both Migdal (figs. 5 a, b) and the Odysseus ships (fig. 7), indicate small to medium size vessels (5 – 120 tons, load capacity), mainly propelled by a square sail, whereas the row-oars appear to be auxiliary equipment used only when the winds failed or entering/leaving harbors. The Delos ship appears to represent a small size warship, probably a type of *liburna*, patrolling along the eastern Mediterranean shores, or transporting supplies and warriors for the navy. The sail was used when the vessel had not been engaged in sea combat or in faster movement. We may assume that the Migdal Ship had dual function, being an auxiliary in the navy stationed along the shores on the Sea of Galilee, or trading goods on the Sea of Galilee, or engaged in fishing. The writer may suggest that the Migdal Ship probably represents a more specific class known as *myoparone*. In ancient literature is mentioned that such vessels were fighting ships of no size and were used throughout the Mediterranean in the 1st century BCE.[31] One of the earliest pictographic evidence of a *myoparo* type appears in the Althiburus mosaic, Tunisia and dated to the 3rd century CE[32]. From the writings of Josephus, we may conclude that Migdal *myoparo* type may have been engaged in the Jewish Revolt sea combat in 67 – 70 CE.

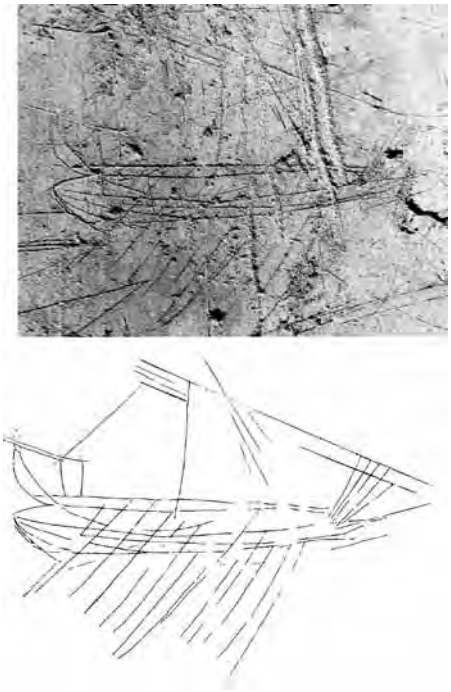

Figure 8
Delos Ship (after: Basch, 1987, fig. 804/41 Maison aux Stucs)

The load capacity of Migdal Ship may be deduced from the results of anthropological studies on skeletons dated to Josephus' period. These studies showed that the average weight of men was 62-67 kg[33]; e.g. only the crew of fifteen men weighted about one ton. Such vessels when fully loaded with warriors (at least fifteen *hoplites* or *epibatai*) and their full gears had a draft of over five tons. An additional source of information for the size of the Migdal Ships may be related to the unique, yet, wooden Kinneret Boat that was excavated in 1986.[34] It was

30 McGrail and Farrel, 1979, Table 1, p. 157, fig. 6, p. 160.

31 Torr, 1964, p. 119; *myoparone* ships apparently were hybrids of long ships (warships) and rounded vessels (merchantman).

32 The mosaic floor with the *Catalog of Ships*, at Althiburus, Tunisia (a mountain site about 200 km, inland from the northern coast), belonged to a shipper's association, or a bath-floor, or the villa of a very wealthy ship owner. The catalogue comprises twenty-seven vessels of different types and sizes, the majority are followed by Greek or Latin names; Gauckler, 1905, p. 132; Dumbabin, 1978, p. 128.

33 Zias, 1990, p. 125; Wachsmann, 1988, p. 32.

34 Wachsmann, 1988, pp.18-33; Steffy, 1990, pp. 29-47. The discovery of the boat was possible due to the "dry" periods of greatly reduces rainfall in the area (1985 – 1987). During this period the water level receded drastically to -211m (bellow the Mediterranean sea-level).The preserved hull was 8.2 m long, a breath of 2.3 m, and 1.2 m deep at the stern. The boat was built in the Mediterranean "shell-first" tradition. C-14 analysis of wooden samples were dated to 40 BCE±80; Carni, 1990, p. 128.

a fishing boat, whereas the Migdal Ship may represents a small to medium size auxiliary vessel or warship (*myoparo*), patrolling along the shores of the Sea of Galilee, or a merchantman (*navis oneraria*) to transport cargo and/or passengers along Lake Kinneret shores. The vessel in the mosaic and the Kinneret Boat belong to the same period, the 1st centuries BCE - CE. We may conclude that the Migdal Ship was built in the "shell-first" Mediterranean tradition as augmented by the excavated Kinneret Boat.

The Migdal mosaic (2.8 x 2.6 m) indicates that it was made in the *direct technique*, at its original location. We may suggest that all the objects depicted in the same orientation, were made intentionally by the mosaicist, therefore referring to a stationary viewer (fig. 4). Each object may be viewed individually, but together they all create a whole picture. Depiction of strigili, aryballos, and cantharus, are bath-floor themes. The ship, two grounding-mills?, and the fish indicate themes of trade and commerce nature. This mosaic is an allusion to the occupation of the villa's owner, or it hints to the function of the room as the office of a trader or shipper trading in the Sea of Galilee and in the eastern Mediterranean. The Greek inscription "*kai su*" on the doorstep was intended as an *apotropae* for the household and the business. The mosaic work indicates that the artist was a local artisan trained by a Roman expert craftsman, or probably he followed Roman traditions of mosaic making, or he had used patterns from circulating pattern books.

Conclusion

The archaeological context of the Migdal mosaic with the ship depiction was dated to the 1st century CE. The ship is a symbolic representation of a small to medium size vessel with dual function. It was propelled by wind on its voyages, while the oars were auxiliary gear use only when entering/leaving harbor or when the winds failed. The Migdal Ship may have been used as an auxiliary vessel in the navy stationed on the shores of the Sea of Galilee (patrolling or transporting of supplies and warriors). This ship also could be engaged in maritime trade on the Sea of Galilee or even fishing. It was built in the Mediterranean "shell-first" tradition as evidenced by the Kinneret Boat. We may suggest that the ship may represent a more specific type known as *myoparo*.

The mosaic technique apparently following the black-and-white style may suggest that the owner of the villa was familiar with this art, especially known in Italy (1st – 3rd centuries CE). The mosaic also may indicate that for economic reasons the villa's owner used local available materials: black from basalt stones, originating in the area of the Kinneret, Galilee or the Golan Heights, while the white and the brownish-red were provided by the local limestone. The ship associated with the other objects in the mosaic (strigili, aryballos, cantharus), emphasis theme of bath-floors. Both grounding-mills?, the fish and the ship may symbolize the owner's profession, who probably traded in fish, as it may be deduced from the ancient name of Migdal Nunia or Taricheae. Apparently the artist who made the mosaic had first-hand information from the vessels sailing on the Kinneret or he may have used a pattern book depicting vessels in the Mediterranean style. The state of the mosaic's preservations indicates that the villa was abandoned before the iconoclasm (in the 8th century CE).

Although the Kinneret is a small body of water, it had an active maritime life, as indicated by the writings of Josephus, the ship depicted in the Migdal mosaic and the Kinneret Boat.

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Islamic Re-use of Antique Mosaic Tesserae

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Such large quantities of antique mosaics survive around the Mediterranean that an obvious question is whether they had any influence on decorative art in the Middle Ages, in style or material. This question has sometimes been studied for the West and Byzantium; but by the Millennium, it was Islam rather than Byzantium or any of the states in the West that occupied the largest number of mosaic-rich sites of the Roman world. What might Islamic re-use of antique mosaic tesserae tell us about the further development of this medium?

This paper surveys the evidence for the re-use of antique tesserae, examining some of the ways in which the medium was used, on the outside and inside of buildings, and on both floors and walls. It discusses the various possible sources of the tesserae, the evidence for mosaic trading far and wide, and tesserae collection as war booty. It concludes with an overview of the specifically Islamic speciality of jigsawed cut-stone mosaic portals and façades, which were still being constructed in 16th-century Cairo - a cleverer and more sophisticated form of mosaic than any to be seen in Christendom, and surely using ancient marble offcuts.

Akdeniz çevresinde bu denli çok antik mozaik kalıntısı bulunması; bunların Orta Çağ betim sanatına stil ya da malzeme bakımından etkisinin olup olmadığı sorusunu ortaya koymaktadır. Bu soru Batı bölgeleri ve Bizans İmparatorluğunu kapsayan coğrafyada araştırılmıştır, ancak İ. S. 1000 yılından itibaren, Roma dünyasının mozaikler konusunda zengin olan şehirlerinde ikamet eden Bizans ya da diğer batı uygarlıkları değil İslam dünyası olmuştur. Buradaki soru; acaba, bu antik mozaik tesseraların İslam kültüründeki tekrar kullanımı bize mozaiklerin daha ilerki gelişmeleri ile ilgili neler anlatabilir?

Bu makalede öncelikle Antik dönem mozaik teseralarının tekrar kullanım belgeleri araştırılmaktadır ve hangi parçaların binanın dışında ya da içinde, zeminde ya da duvarlarda kullanıldığı incelenmiştir. Ayrıca, tesseraların çeşitli olası kaynakları tartışılarak, mozaik ticareti konusundaki belgeleri ve tesserae kolleksiyonlarının savaş ganimeti olarak ele geçirilmesi olasılıklarını sorgulamaktadır. Makale, 16. yüzyıl Kahire'sinde kullanımına devam edilen belirli bir biçimde İslami dünyaya özgü oyma testeresi ile kesilmiş taşlardan oluşan mozaik revakları ve ön cephelerin –Hristiyanlıkta görülen mozaiklerden ve çok daha zarif ve gelişmiş bir mozaik üslubu- özet bir anlatımı ile bitmektedir.

Keywords: marble; re-use; mosaics; Jerusalem; Damascus; Cairo

Introduction

Of the thousands of studies devoted to mosaics, few deal in any detail with those designed by mediaeval Islam. This is surprising even on the simplest grounds (survival, documentation and quantity), for Islam is predominant in large areas of the erstwhile Roman Empire, with more survivals in standing monuments than anywhere in Christendom (Byzantium included), and a better documentation, partly bolstered by Moslem attachment to large inscriptions, which generally offer dates. And although many Islamic complexes have disappeared (the original Al-Aqsa (707ff), the 8th-century palaces in Damascus, Jerusalem (730s) and Samarra (mid-9thC)), yet many have survived, from the Umayyad Mosque in Damascus (706ff) and the Dome of the Rock in Jerusalem (687ff) to the Mezquita in Córdoba (785ff). There is of course no doubt that church (and perhaps less frequently palace) walls were extensivly covered with mosaics in Christendom, but nothing survives in quantity to match the dates of the Islamic monuments listed above, although spectacular floors survive at Madaba and Umm Al-Rasas.

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Figure 1
Haghia Sophia church, Iznik, mid-6thC: interior: intact mosaic floor in a city large portions of which were spoliated – So may we assume spoliators were not interested in this type of floor?

Four general arguments may be applied to the use of tesserae in the Islamic world, and to their likely re-use. The first is that, given the recycling of other precious materials including coinage,[1] glass,[2] and marble (Greenhalgh 2008), it would be strange if tesserae were not re-used, not only for original works, but for later restorations.[3] Certainly, Roman tesserae were reused in Byzantine enamels (Freestone 2007), were stockpiled for re-use in Palestine,[4] and were scavenged for Damascus, and some of them then used yet again (Flood 1997, 70; Flood 2001a, 24). At Haghia Sophia in Istanbul, there is evidence of earlier tesserae re-used in the 10thC mosaics (Ozil 2000); and elsewhere late compositions dis-

1 Gondonneau 2002, 588: "until about ad 750 all of the Islamic world recycled the previous coins: Byzantine and Sassanian coins in the Orient, Byzantine coins in North Africa and Visigoth coins in Spain. During the transition period between the end of the Ummayad dynasty and the arrival of the Abbasids (around ad 750), we have observed a change in the silver and gold supplies all over the Arab Empire."

2 Schibille 2008, 638: "potentially indicating the recycling of Roman glass or even the reuse of whole window-panes as spolia. The use of spolia is well attested in Petra … and the reuse specifically of window glass seems to be very likely."

3 cf. Flood 2006, 516: "Mamluk interest in this archaic art can be directly linked to the impact of the Umayyad monuments of Syria, which were repeatedly restored and renovated during this period. Glass mosaics were among a range of features that were integrated into Bahri Mamluk monuments with the intention of appropriating some of the kudos of the early Islamic structures for their mediaeval successors."

4 cf. Shugar 2000, 383: ca.95 litres of tesserae were uncovered in a tunnel at Beat Shean: "The tunnel is interpreted as being a storage facility for tesserae reclaimed for recycling and supporting evidence is provided. This should alert future investigators to the possibility that tesserae collected from a single mosaic can derive from either a single batch or from multiple sources if they were stored and reused." Cf general discussion in Henderson, Julian, The Science and Archaeology of Materials, London 2001, 67ff.

Figure 2
Umayyad Mosque, Damascus, 709-15: The "treasury" in the courtyard. All the marble elements are in re-use, so may we assume the same about the mosaics" damascus_umayyad_treasury.JPG – AD 709-15

play more re-use than earlier ones.[5] A similar argument applies to their import, given the long distances over which – for example – lead[6] and ceramics[7] were imported, and the likelihood that in any case mosaic-workers were probably (like marble workers and masons generally) by nature itinerant.[8] Thirdly, it is now considered likely that Islam in Syria, far from killing mosaic production and the churches they decorated, stimulated what Balty calls a "renaissance,"[9] and sometimes shared churches for worship, as perhaps at Tamra (Lower Galilee), where it is surmised that a Greek mosaic inscription was laid to cover a mosaic with birds (Di Segni 2004). In this (and in their taste for spoliated marble) they followed in the footsteps of the Persians before them (Foss 2003, 157, 159, 162). And finally, it is clear that mosaic floors (whether iconic or aniconic, and

5 Vandini 2006, 591: results from a wide variety of sites confirm "the lack of homogeneity of the late Byzantine tesserae … this can be explained by the re-use of tesserae from previous decorations and/or by supposing partial remelting of more ancient glass."

6 Wolf 2003 Synopsis: "most probably obtained from distant ore sources in Iran or Tunisia, Sardinia, Spain and the Taurus Mountains … at no time did the Fustat potters use the potentially more accessible Egyptian ore sources."

7 Bobin 2003, Synopsis: "*probably came from Mesopotamia, from a major production centre, possibly Baghdad, Samarra or Basra*." See 570: Saladin & Marçais established via texts that the monochromatic tiles were made in Kairouan by a craftsman from Baghdad, and the polychrome ones in Baghdad, Basra or Samarra – so their sources turned out to be trustworthy.

8 Alföldi-Rosenbaum 1980, 5 suggests that the mosaicists had worked in Greece before they went to Cyrenaica.

9 Balty 1977, 10: "Loin de porter un coup fatal à l'art de la mosaïque, la conquête arabe semble au contraire avoir donné aux derniers mosaïstes byzantins et à leur héritiers l'occasion de développer sous la dynastie omeyyade une ultime "renaissance." d'un singulier éclat ... Dans les schemas seculaires du repertoire classique, les Omeyyades ont en effet trouve les moyens d'expression de leur vision intime: en se les appropriant, ils leur ont insufflé une vie nouvelle."

irrespective of any iconoclasm) went in and out of fashion, for there are several instances where such (Christian) floors were covered over with marble slabs, as in the Atrium Church at Apamea (Foss 1997, 211-14). [10]

While for artworks true documentation is as lacking in Islam as it is in Christendom, some narrative accounts have survived of how tesserae were obtained, allowing some sensible guesses about availability and re-use. This paper surveys the various sources of tesserae (abandoned villas, churches, diplomacy, booty), and then the evidence for the mechanics of how the cubes got onto the walls, floors and domes of Islamic buildings. It then offers a brief outline of the florescence of marquetry mosaic especially in Aleppo and Damascus, as an indication of an invention which distances Islam from any Graeco-Roman tradition, although probably using mostly old marble. The conclusion is that Islam did indeed re-use ancient tesserae, occasionally but not always in designs imitated from Byzantium or Rome.

Sources of mosaic tesserae

The first recourse for hunters of tesserae and marble would have been abandoned Roman villas or cities, which were common in many now-Islamic lands. The longevity of Roman ways of life in some parts of Africa provided exempla for Moslems. In Tunisia, for example, floors and walls were often of mosaic tesserae, and some very splendid complexes survive, such as the House of Lucius Verus at Thysdrus. Some villas were apparently refurbished at the beginning of the 7th century, such as the Casa dei due Caccie at Clipea (today Kelibia, conveniently by the sea), and some villas at Carthage were certainly still in use (Bullo 2003, 285-7, 80-3) – models, perhaps, of splendid living to inspire Moslem palace-builders. Further west, on the coast of Morocco, the Roman remains have disappeared, and we might suspect that they went into mosques and palaces. One such is Sala (the lair of the "Sally Pirates"), of which Al-Idrisi (1173-1251) writes that the city "is today in ruins. Remains are to be found there, still standing, of monuments and imposing temples." Ibn Abd Al-Mun'im notes it was on the edge of the sea, with "numerous antiquities, chateaux, vaults, etc" while at Tandia "much marble and large cut stones were [note past tense] to be found" (Siraj 1995, 109, 117).

Scavenging abandoned antique sites was the main method of acquiring tesserae and other marble materials, and there is narrative evidence of the process, but with no specifics about the sites thus treated. At Damascus, for example, the Umayyad Mosque was to be roofed in lead, and prospectors went out to look for re-usable material, particularly in sarcophagi, for lead was not natively available in Syria, and hence supplies of this essential material had to be sought from spoliation.[11] At one site (unnamed) they found a stone vessel with a lead coffin inside – but when the corpse started bleeding from the mouth they ran away in terror (Sauvaire 1896, 196). This is surely a fanciful tale, yet it is likely that lead was indeed obtained from Christian cemeteries, even if Umm-Al-Rasas is not to be translated as "mother of lead" (Piccirillo 1994, 26). Lead would also be used

Figure 3
Madrasa Al-Firdaws, Aleppo, 1235-41: Mihrab

Figure 4
Madrasa Al-Firdaws, Aleppo, 1235-41: Mihrab, detail

10 Presumably the practice was widespread, for the tombaroli at Umm Al-Rasas removed such slabs to get at tombs beneath the earlier mosaic floor: cf. http://198.62.75.1/www1/ofm/fai/rasas99.html.

11 The lead for Damascus must have been scavenged if we are to believe Yakut, writing in 1225 notes (Le Strange 1890, 262) that "Al Walid ordered that it should he roofed with lead. And they brought lead from all lands to accomplish this, but at the last a piece (of the roofing) remained, for which they could find no lead, except some that belonged to a certain woman, and she refused to sell it except for its weight in gold. And the Khalif commanded them to buy it of her, even though it were (at the price of) double the weight in gold. And they did so."

Figure 5
Madrasa Al-Firdaws, Aleppo, 1235-41: Mihrab, detail

for fixing veneer (already seen at the Dome of the Rock[12]), as well as for fixing bases to columns and capitals to columns.

There are some instances where new buildings went up using the materials from those knocked down to make way for them. Such reconstructions follow from a desire to use monolithic columns as supports because, lacking special arrangements, they cannot be moved without destroying what they support. In most cases, however, it is not known where the material went. Qasr Al-Hayr West, for example, is now a shell with some stucco and fresco-as-marble-panel fragments; its antique decorated marble doorway lintel and jambs survives, but the marble and mosaic have been robbed out.[13] In one case, however, we do know: Yaqut writes of Al-Hayr, a palace at Samarra, on which Al-Mutawakkil spent 4m dirhams. "Then Al-Musta'in gave the materials from its demolition to his wazir Ahmad b. Al-Khasib" (Northedge 2005, 304). Just as in the mediaeval West, as far as we know there are no instances of ancient mosaic floors being transported and relaid intact, although at several sites pagan or Christian floors were left intact and the Moslems simply moved in and used them, as we have seen.

Ibn Batuta, writing nearly seven centuries later, states that the builder of the Umayyad Mosque at Damascus, Al-Walid I (705-15) "applied to the Roman Emperor at Constantinople, ordering him to send craftsmen to him, and the Emperor sent him twelve thousand of them" (Ibn Battuta 1958, I., 46). In another

12 Wilson 1865, 22: "The slabs are fastened to the stone by metal cramps, run in with lead , a good even bed of mortar having been prepared to receive them."

13 The site is being excavated: cf. http://www.slsa.ch/Projekte/QasrAl-HayrAl-SharqiE.htm.

Figure 6
Zahiriyya Madrasa and Mausoleum of Sultan al-Zahir Baybars, 1277-81: interior with various types of mosaic in costly marbles and mother-of-pearl

account, Mas'udi (writing 943) points to the Church of Mary at Antioch as the source for some of the antique marble for Damascus: "a round church, and one of the wonders of the world for the beauty of its construction and its height. The Khalif Al Walid, son of Abd al Malik carried off from this church a number of marble and alabaster columns, of wondrous size, to place in the Mosque at Damascus. They were transported by water down to the coast near to Damascus. The greater number of the columns, however, still remain in the Church at Antioch, as may be seen at the present day" (Le Strange 1890, 368). In yet another variation, Al-Muqaddasi relays that Al-Walid, "in order to construct these mosaics, brought skilled workmen from Persia, India, Western Africa, and Byzantium … And this does not include what the Emperor of Byzantium and the Amirs of the Muslims gave to him in the matter of precious stones and other materials for the mosaics" (Le Strange 1890, 228). So if the marble architectural elements supporting the "Treasury" in the courtyard (Figure 2) are in re-use, may we assume the same about the mosaic tesserae?

The nature of the mosaics, which might equally be found in a church or a Byzantine palace,[14] supports this story. He paid large sums "for the purchase of spectacular marbles, paving the courtyard with marble and the walls with da-

14 Grabar 1992, 190:"il n'y a rien d'islamique dans ces mosaïques, rien qui n'aurait pu être fait pour une église chrétienne ou un palais byzantin." The same might be said of the mosaics uncovered in 2000 at Qastal (Bisheh 2000) or indeed of Qasr Al-Hallabat, although the elements are although put together in unusual conjunctions. Indeed, the author (Bisheh 1993, 55) writes of Qasr Al-Hallabat: "Had it not been for the archaeological evidence, one would be inclined to attribute them to different periods" – so is it conceivable that some elements of these floors are indeed relaid from earlier buildings?

Figure 7
Zahiriyya Madrasa and Mausoleum of Sultan al-Zahir Baybars, 1277-81: interior with gold mosaics and opus sectile marble panelling

does of variegated marbles" (Ibn Hawqal 1965, I.172), a large part of which probably went on transport. Like his father, Abd Al-Malik, who supposedly used the revenues of Egypt for seven years to pay for the Dome of the Rock, Al-Walid also assigned to the construction seven years of the tax revenues of Syria. Whatever their source and the home of their craftsmen, the classical nature of the mosaics' vocabulary meant that "there is little that could not have been found in the architecture of the eastern Mediterranean in the preceding two centuries, if not four centuries earlier in Constantinian Rome" (Flood 2001a, 200). Indeed, there were churches in Syria ornamented with mosaics on the exterior. Ibn Butlan writes (1051) that "The palace called Kasr Rusafah is a fortress only second to the abode of the Khalifate at Baghdad. It is constructed of stone. Within it is a mighty church, the exterior of which is ornamented with gold mosaics, begun by order of Constantine, the son of Helena" (Le Strange 1890 522). The mosaics of the Dome were probably intended to recall Byzantium, and certainly did so for Al-Harawi (d.1215), who said he had seen work similar to that in the central cupola in the lands of Rum, although no mosque equalled this one (Al-Harawi 1957, 38f). Writers in this later, Mamluk period were alert to mosaic decoration because it saw a revival of Umayyad forms – as for example, in the Mausoleum of Baybars I (d.1277; monument 1281). This monument is rich in gold and marble mosaics, with not only an extravagant portal (Figure 10), but also a rich interior, with mosaic mihrab (Figure 8) echoed by hoods over the door (Figure 9). The structure is a fitting decoration for the structure of a man who paid for the restoration both of the Umayyad Mosque in Damascus (almost adjacent) and the mosaics of the Dome of the Rock in

Figure 8
Zahiriyya Madrasa and Mausoleum of Sultan al-Zahir Baybars, 1277-81: interior hood of mihrab

Jerusalem.[15] The surviving fragmentary mosaics in Baybars' Mausoleum (Figures 6 & 7) give some idea of the building's initial splendour – not necessarily an attraction for pious Muslims. Thus Caliph Umar (717-20), frugal and public-spirited as well as pious, supposedly pondered selling the mosaics if he were sure he could recoup the outlay for the public treasury (Mas'udi 1965, II 262ff). If this did happen, then we may deduce both that there must have been an active market in mosaic tesserae (to beautify probably Muslim buildings of which we know nothing), and that even in its initial form old materials were added to beautify the mosque. The Byzantine flavour of the mosaics suggests that Byzantine craftsmen really did work there, perhaps for motives of snobbery and/or triumphalism (Grabar 1964, 82f); and early 8th-century papyri from Aphrodito in Upper Egypt detail the responsibility of the governor there to send men to Damascus (as well as to Jerusalem) and to pay for them (Elad 1995, 37ff).[16] Hillenbrand points out (Hillenbrand 1999, 134) that this corvée system was a channel for the introduction of foreign forms and motifs to Syria, and we might add that it was not unusual for emirs to be called on to provide materials and workmen for construction projects, as with Alaeddin Keykubad's construction of the city walls of Konya, which in this case certainly included antiquities (Huart 1897, 174f). In the case

15 Flood 1997, 60: "it is likely that the art of glass mosaic was revived following the restoration of the Dome of the Rock (beginning in 1261) and the Great Mosque of Damascus (in 1269);" and then 66: "Such programs of work on the mosaics of both buildings may be convincingly corre- lated to the use of the same medium in the decoration of contemporary Mamluk buildings" – although it is likely that Saladin was collecting tesserae fromm the Christians of Jerusalem over a generation earlier. But NB Flood is dealing only with glass tesserae.

16 Grabar 1996, 211 note 34 points out that the Aphrodito papyri do not state that the "palace" was in Jerusalem - and, in any case, the word used should be translated as "aula" or "hall."

Figure 9
Zahiriyya Madrasa and Mausoleum of Sultan al-Zahir Baybars, 1277-81: interior hood over door, with wall mosaics

of Syria, the antique marble would have had to be imported, apart from the quantities that could be scavenged from the decoration of local Roman and Byzantine structures. Al Walid also embellished the Prophet's Mosque at Medina, in its 707-10 rebuilding, when again he supposedly received materials from the Byzantine Emperor, and also green, red and white marble from Syria (Flood 2001a, 197f). Al-Baladhuri writes (1916, I, 20) that after Uthman's rebuilding of the mosque ("making its columns of stone") Al-Walid wrote to the governor there and told him "to destroy the mosque and reconstruct it. Meanwhile, he forwarded to him money, mosaic, marble, and eighty Greek and Coptic artisans from Syria and Egypt."[17] According to Al-Tabani, the earlier structure was pulled down in 707, and "Al-Walid had sent to inform the lord of the Romans that he had ordered the demolition of the mosque of the prophet, and that he should aid him in this work. The latter sent 100,000 mithqals of gold, and sent also 100 workmen, and sent him 40 loads of mosaic cubes; he gave orders to search for mosaic cubes in ruined cities and sent them to Al-Walid." Al-Maqdisi noted (repeating Al-Muqaddasi's comment, hence suggesting a common source) that at Medina "the walls of the porticoes are covered on the outside with mosaics. Craftsmen from Syria and Egypt were brought there for the purpose and their names are still to be seen there" (Bisheh 1979, 158, 162, 202f., 206). This follows Christian practice, for churches in Syria/Palestine had wall mosaics, and glass tesserae have been excavated at Apamea, Bosra, Bethany, Pella and Petra (McKenzie 2007, 359). At least some of the marble imported from Byzantium might have been veneer,

17 Al-Baladhuri 1916, I, 21 also notes that "In the year 246, caliph Ja'far al-Mutawakkil ordered that the mosque of al-Madinah be repaired. Much mosaic was subsequently carried to it; and the year 247 marked the completion of the work."

Figure 10
Zahiriyya Madrasa and Mausoleum of Sultan al-Zahir Baybars, 1277-81: exterior portal with marquetry marble decoration matching the intricacy of the limestone muqarnas

and used for the Prophet's tomb as well as the mosque, for Ibn Jubayr praised the veneers there which were similar to those he had seen at Mecca (Ibn Jubayr 1952, 86ff, 199); but just how accurate is Sauvaget's very Roman-looking opus sectile reconstruction of the prayerhall walls is impossible to determine.

In many areas Moslems lived day by day with Christians, the large implantation of whose churches could often provide useful materials, as well as inspiration.[18] There are plenty of examples of the takeover of marble-rich churches, even late ones such as the Panaghia in Antalya, and of the reworking as well as re-use of antiquities (Grassi 1990, 93-107, 111f). At several sites, evidence suggests re-use from Christian structures, probably close-by – such as the relief crosses on some of the pillars at Khirbat Al-Mafjar, the chancel-screen balustrades on the second storey of the same building, or the fragmentary Greek inscription on the jambs of the entrance door at Qasr El-Kharanah. Such re-use is far from unusual – witness the several examples of Crusader sculpture (including figured ones) in various of the monuments of the Haram in Jerusalem (Jacoby 1982, passim). At Khilda-Amman (Jordan), a new church was constructed atop an older one, and "the walls of the new rooms were built directly on the top of the mosaic pavement … Later on, the mosaic pavement was almost completely removed and only those parts of it that were under the walls or covered by a thin layer of plaster were preserved … In the south apse the mosaic floor was completely

18 Mouton 2006, 50 for the church on the site of the Burning Bush: "elle est très vaste, la charpente est supportée par des colonnes de granit dur, et l'autel est constitué d'une dalle de marbre reposant sur un support semblable. Et, en-dessous, se trouve le buisson ardent, qui est l'emplacement du buisson où Dieu parla au prophète Moïse. Le sol est pavé de marbre blanc et les murs sont revêtus de marbre polychrome, jusqu'au sommet."

Figure 11
Maristan Arghun, Aleppo, 1354-5: courtyard with marquetry marble

removed." What is more, "The whole floor of the atrium was most probably also paved with plain mosaic. In its northern part the mosaic floor was completely removed except for a small segment that was under the threshold of a door to one of the Mamluk rooms. In this area not only the mosaic floor, but also the bedding was dug out down to the bedrock which was leveled and used as floor for one of the Mamluk rooms. All these activities took place during the Mamluk period" (Najjar 1994, 549f, 554). Mosaics were also used in Moslem buildings there: Al-Muqaddasi recording (Le Strange 1890, 391) that at Amman "In the city near the market-place stands a fine mosque, the court of which is ornamented with mosaic." At Tiberias, new houses built after the 749 earthquake included one with "a plain but attractive coloured mosaic floor, with a central medallion featuring intertwining bands" (Walmsley 2007, 78f). In the Church of the Lions at Umm Al-Rasas, the western section of the floor and large parts of the nave tesserae were completely removed, probably during the site's occupation as housing (Piccirillo 1992, 203, 211). Such removals suggest that the tesserae were targeted for re-use, especially if the removers had an eye for quality, since the Umm Al-Rasas floor was "per finezza di esecuzione resta uno dei capolavori dei mosaicisti operanti nella regione di Madaba nella seconda metà del VI secolo." Against this should be set floors which were left strictly alone, as with the Justinianic opus sectile floor in Haghia Sophia in Iznik (Figure 1) – and this in a city which was extensively spoliated.

In occasionally appropriating Christian buildings, Islam simply followed Christian practice in appropriating pagan buildings, sometimes with refurbishments, sometimes not. The "East Cathedral" at Apamea (where the whole of the two-kilometre-long main street appears to have been mosaiced) has its small marble paving stones laid directly on top of the beautiful mosaics of what is believed to be the famous school of philosophy in which it is built; so was this done in order to erase its very memory? Or is it just part of the common practice of laying new floors on top of older ones?[19] On the other hand, the five-aisle church in the courtyard of Basilica III "of Servus" at Sbeitla (Tunisia, with many surviving monuments) takes over part of the colonnade, with the cella of the temple

19 Balty 1977, #40: geometrical floor in the museum at Apamea, from the pagan building under the cathedral; # 8: geometrical floor, Apamea, house in insula V.10, 2nd half 3rdC – both of which would also have been perfectly suitable for any Moslem building. The same applies to other sites: cf. Germain 1969 for Timgad.

becoming the baptistery; the same thing happens at Thuburbo Maius, where the church uses the south colonnade of the temple courtyard for its own.

Many of the settlements the Muslims founded were located in or near ruined antique cities or Christian sites, and appropriation was a common practice,[20] including living in abandoned churches.[21] Especially in Andalucía, there are more "continuing" towns than new Islamic ones,[22] and this was perhaps part convenience, part emulation, since markers for the prestige of an antique site were large or enormous cut stones, Latin and Greek inscriptions, and Roman walls (Siraj 1991, 929ff). Islam generally left functioning churches alone, but appropriation (with payment) was sometimes practised, and disused churches and those of rebellious subjects were considered fair game for plundering. Minarets attached to erstwhile churches are one sign of takeover.[23] It is conceivable, but not provable, that the Dome of the Rock's mosaics did indeed come from stripping local churches, thereby providing overtones of triumph to echo the great old columns. Certainly, churches in the vicinity did have mosaics, as at Bait Lahm between Jerusalem & Bethlehem, where Ali of Heart writes that "There is also a church most wonderfully built with marble, and gold mosaics, and columns" (Le Strange 1890, 299). At Fa'lul, in Syria, the apse windows of the church had lintels of yellow marble in Butler's day, and he believes this was the source of the column-shafts of yellow marble and the white marble Corinthian capitals in the building to its south, when it was converted into a mosque (Flood 2001a, 200). At Jerash, of the remains of some thirteen churches, "Most of the inner walls of these churches were cased in marble, coloured limestone slabs, painted plaster and sometimes glass mosaics; little but the holes into which the slabs were pegged now remain…" (Harding 1967, 100). And Ibn Jubair writes in his diary that "Bait Lahiyyah, or Libya, lies east of Damascus … In ancient times there was a church here, which is now a mosque. It was of old the temple where the father of Abraham made his idols and kept them. But Abraham came and broke them to pieces. The temple is now the mosque of the inhabitants, and its roof is beautifully ornamented with mosaic of coloured marbles" (Le Strange 1890, 413).

At Damascus, the fitting-out of the mosque was carried out employing old columns, sheet veneers, and mosaic tesserae, and was very expensive. We might imagine that some materials came from the adjacent Byzantine palace.[24] The conversion was to the presumed displeasure of the Christians whose church had occupied part of the site and whose expulsion after years of worshipping amicably together had the flavour of a pre-emptive strike. For supposedly when Umar became caliph, he wrote to Damascus "to his 'amir ordering him to return to the Christians that part which he had added to the mosque from their church. The people of Damascus disliked the idea saying, "Shall we destroy our mosque after we have called to prayer and held service in it?" (Al-Baladhuri 1916, 192).

Figure 12
Al-Atrush Mosque, Aleppo, 1393ff: exterior window with ablaq masonry and marquetry marble

20 Examples from the Maghreb in Wheatley 2001, 300-1. At Dumayr (Jordan), sarcophagi (?from a nearby church) are used as pillars: cf. Genequand 2001.

21 As with the late Umayyad-Abbasid houses at Umm al-Rasas: cf. http://198.62.75.1/www1/ofm/fai/rasas99.html and http://198.62.75.1/www1/ofm/fai/2005.html. The mosaics at Madaba came to light when the town was reoccupied by Christian families in 1880: http://198.62.75.1/www1/ofm/fai/FAImadab.html.

22 Pavón Maldonado 1992 for listings - 17+ new as against 59+ built on earler towns.

23 King 1983, 133ff for the minarets; 125f some mosaic cubes found in the apse of SS Sergius & Bacchus (at Umm Al-Surab), with tesserae of white and pink marbles, and glass in blue-green, green and yellow-green - the rest surely robbed out.

24 Flood 2001a, 149 writes of the Byzantine palace adjacent the mosque, the rich decoration of which included "simple polychrome floor mosaics, opus sectile pavements, and stained glass, gives some idea of how the Khadra might have been embellished" - viz. the Umayyad Palace.

The objection indicates the extent of the refurbishment, and an element of triumphalism, for competition with Christianity could be engaged by building mosques more splendid than churches, in many cases probably using materials from churches. With old capitals (Wilkinson 1987, passim), columns, mosaic tesserae and marble floors,[25] the Dome of the Rock was certainly intended to outshine the Church of the Holy Sepulchre below, and to attract the attention of Christians.[26] The Fatimid Gate of David also displayed polychrome mosaics including an inscription (Kaplony 2002, 610ff) to echo those of the Dome. The Dome's exterior shows it to be an early exhibitor of monumental inscriptions (context in Blair 1998, 29ff), later echoed by the prayer hall at Damascus, its inscription now lost (Golvin 1970, I, 135). Christian mosaic inscriptions were generally small-scale, but some exceptions might have provided inspiration: at S. Simeon, for example, the great pilgrimage church near Aleppo converted into a fortress by the Moslems, the marble floor of the central nave has a mosaic inscription 7.84m broad (Obermann 1946, passim). So the erection in the 12th century of a dome on the Holy Sepulchre (a rebuild and heightening of an earlier one) was precisely a response to the Islamic monuments on the Temple Mount. Again, the multi-column Byzantine Imbomon on the Mount of Olives (Küchler 2007, 876-97) is a likely part-inspiration. The Dome of the Rock itself used some of the (already old) capitals from the Al-Aqsa, and was perhaps a response to Christian buildings set within open courts, which were very popular in the Holy Land (Curcic 1996, 57). Competition between Christians and Muslims worked both ways not just when the Dome was constructed, but during the Crusades. So not only were capitals from the Al-Aqsa used to repair the Holy Sepulchre (Wilkinson 1987, 27ff) but, if Strzygowski is correct, marble from the tombs of the Latin kings was used prominently on the Haram to adorn mihrabs, perhaps as another expression of triumphalism (Strzygowski 1936). And according to Al-Muqaddasi (Le Strange 1890, 99, 102), the colonnades around the Haram in Jerusalem had mosaics in their ceilings, just as the Al-Aqsa had gold mosaics in the portico, which were left undamaged by the Franks. Again, mihrabs and qibla walls were to be a favourite focus for mosaics, some of glass.[27] Certainly, the Christians covered the rock in the Dome with a cupola on marble columns and marble bas-reliefs: Saladin had all this torn down, although he left their wrought-iron balustrade (Al-Isfahani 1972, 55).

Diplomacy was also a channel whereby useful gifts could travel across the Mediterranean and further afield, Charlemagne's elephant being perhaps the bulkiest, closely followed by his bronze candelabrum, both from Harun Al-Rashid We are well-informed on the lighter, more precious gifts brought by embassies (Schreiner 2004). And we shall see below that sending to the Byzantine emperor for columns or mosaic tesserae is something of a leitmotif – so was marble ever a part of ambassadorial gifts? Certainly on one occasion it was part of diplomatic "fixing," for example, Syrian marble and mosaics were sent to the court of the 6thC Sasanian ruler, Chosroes I Anushirvan, as part of a peace deal. Pharaonic stone objects were sent to the Umayyad Caliph in Damascus, and Umar (ruled 717-20) apparently delighted in showing them to visitors (El Daly 2005, 41f).

25 Wilson 1865, 36: inside, "The pavement of the mosque between the external wall and screen is a confused mass of old material , amongst which there are many portions of sculptured slabs like those seen outside , one of which , a little to the north of the western gate is nearly perfect."

26 William of Tyre 1872, I.2 col 215: … alique vetusti operis exstantia vestigia demonstrantes, ubi sumptibus qui sufficere possent ad impensam designatis et covocatis artificibus, subjecta pro votis materia tam ex marmorum diversitate quam ex lignorum differentia multiplici, templum aedificari praecepit ... Exstant porro in eodem templi aedificio, intus et extra, ex opere Musaico, Arabici idiomatis litterarum vetustissima monumenta, quae illius temporis esse creduntur."

27 Williams 1994 for various 13thC & 14thC examples from Damascus, Cairo and Tripoli (Syria).

Just as in the West (Desiderius of Montecassino, for example), Moslem patrons supposedly sent to Byzantium for materials and craftsmen. We can assume Abd Al-Malik's architects for the Umayyad Mosque in Damascus knew what was needed, for he simultaneously refused the entreaties of the Byzantine emperor to purchase similar antique architectural elements from buildings under Muslim control (Flood 2001a, 202). This is surely some indication of a dearth of suitable antique marble in Byzantium. Abd Al-Malik (685-705) spent "40 chests of gold for the mosaics, excluding the marble and the ancient materials." There are various accounts of where these came from: Sa'id says that Al-Malik had the Byzantine Emperor provide materials as a condition of their peace treaty.[28] At Madinat Al-Zahra (near Córdoba), according to Al-Makkari, 40 columns supposedly came from the Byzantine Emperor as a personal gift; some from Rome, and 19 from the land of the Franks (probably Narbonne). Large quantities in mostly green and red marble arrived from Carthage, Sfax and other African locations – 1,013, writes Ibn Idhari in the *Al-Bayan* (Ruggles 2000, 60).

But as well as using diplomacy, Muslims also bought marble and tesserae so as not to stain a holy structure by theft (a common theme in accounts of Islamic building, hence perhaps a common practice). Thus Ibn Sasra, in what might be a very late pietistic gloss, tells that when Al-Walid built the Great Mosque at Damascus, "he collected marble, pillars and stone but took nothing from anyone without payment" (Ibn Sasra 1963, 160). In this way also, Christian marbles could be integrated in Islamic contexts (Flood 2001b, notes 2, 56). Ownership could be communal. Troops were used to scavenging, perhaps to supplement their pay, with Muawiya (d.680) supposedly sending figurines collected by his troops for sale in India (El Daly 2005, 10). One story has Umar b. Abd Al-Aziz dissuaded from selling off both marble veneers and mosaics from the Umayyad Mosque in Damascus because the troops had already collected them on campaign. As one of them protested, each of them was enjoined to bring back from the land of Rum a measure of mosaic cubes and a sheet of veined marble. Gold-backed glass tesserae (to represent Heaven) would have been especially popular.[29] Hence ownership was collective – and "so Umar fell silent" (Ibn Sasra 1963, 64). Was this a way tesserae and small sheets of veneer were often gathered – while on campaign, and brought back in the baggage train? If so, then some of the extensive mosaics in the Umayyad Mosque at Damascus may perhaps be seen as "gifts" from the Byzantine Emperor to complement the craftsmen he was supposedly asked to send, and others as a specific and collective exultation of triumph over destroyed Byzantium, or at least over some of her buildings. Then again, the point of the story about Umar is that the mosaics and veneer actually belonged to the plurality of the community (for civilians had also collected lead for its roofs), and therefore were not in fact his to dispose of. Such scavenging by soldiers might have been a long-lived tradition, if we accept Ibn Al-Atyr's account of the sack of Antioch.[30]

Along with silk (which appears sometimes to have functioned as a currency), marble provided another way of paying the soldiers, tesserae (presumably of glass and perhaps gold) being favoured because they could be collected "as of

28 Mas'udi 1965, II, 496; and he might have threatened to strip Christian churches, as he did to exact materials for Mecca: cf. Flood 2001a, 201.

29 In the Paleologan Apostoleion at Thessaloniki the figures have survived, but the gold backgrounds have gone.

30 Ibn Al-Atyr 1872, III, 720: "c'était une ville vaste, riche en édifi ces bien bâtis et de belles proportions . . . partout des demeures en pierres de taille, des portiques de marbre aux arcades solides"—which the emirs took to Syria. And outside the city was "une grande église, belle et ancienne, revêtue de porphyres, incrustée de marbres de différentes couleurs . . . Quand nos soldats envahirent la ville, ils enlevèrent ses marbres, dégradèrent ses beaux édifi ces."

right" from the buildings of conquered enemies. In the 14th century, a poem tells of the Turkish looting of what might have been of an Orthodox monastery, because there were gold-background mosaics, which the Turks took off and carried off in sacks in their ships. The editor believes this might have been near Mount Tragovouni (Greece), where there were ruins to be seen in the 20th century, with white marble column drums, capitals with the cross, and a scatter of mosaic tesserae, all very close to the sea (Lemerle 1957, 126 for verse 1140). No hint has survived of Turks themselves employing such materials at this date (the monuments of Bursa being faced in tile, not mosaic), so surely these tesserae were sold on to Christians, perhaps in Byzantium – or even for S. Marco, Venice.

The juxtaposition of competing monuments may be interpreted as triumphalist in Christian as well as Muslim settings, as when at Tipasa a large church was sited directly opposite temples and capitol.[31] And if the tesserae for the Dome of the Rock in Jerusalem were indeed obtained from Byzantium, or even from looting by soldiers, then this underlines a politico-religious dimension to the monument's dominance over the (externally drab?) Holy Sepulchre down below. Similarly Saladin's exaction of marble from the defeated Christians of Jerusalem for the further embellishment of Islamic monuments may be classified as war booty, as well as triumphalist. Again, the practice is not just Islamic, for in the early 7th century, marble plundered from churches in Palestine was sent to Ctesiphon, the shell of part of which survives (Flood 2001a, 23 & note 39). Ibn Al-Al-Atyr's account of October 1187 notes (Ibn Al-Atyr 1872, III, 705f) that after Friday prayers, Saladin ordered the Al-Aqsa mosque to be repaired "and to take all possible care in ornamenting, paving and decorating it with sculptures. Consequently, he had marble brought the like of which it was impossible to find, and gilded cubes in the Byzantine manner, and other necessary objects, all collected over many years."[32] Perhaps it was the result of his work that Al-Qazwini (1203–83) saw, namely "un gran cupula octagonal sobre columnas de mármol, techadas con plomo, y adornada por dentro y por fuera de mosaico y mármol de colores" (Rubiera Mata 1988, 108f). He also commanded that the mihrabs of Umar should be covered with marble (Al-Maqrizi, 1980, 85), so where did he get the materials, after the Crusader occupation of the city? Part of the answer, hinted at in Ibn Al-Atyr's account, is that the local Christians had hoarded marble as perhaps a bankable equivalent to gold and silver – just as Frankish pilgrims had cut out bits of the Rock and taken them to Constantinople and thence to Sicily – as relics sold for their weight in gold (Al-Isfahani 1972, 56.). They probably decorated their houses with it, as apparently did Jean d'Ibelin (d.1236) his palace at Beirut.[33] When Saladin conquered Jerusalem, an agreement was made for the Christians to evacuate the city. The goods they could not carry they left behind, including "a large quantity of marble beyond compare, consisting of columns, plaques, and little cubes to make mosaics," and pieces of marble and wood "of every kind and in great abundance" (Ibn Al-Atyr 1872, IV, 338). Following the surrender there was an influx of merchants who traded with the Muslim soldiers (Lyons 1984, 274f) – and we might surmise that marble was one of the commodities traded.

31 Balty 1972; 183 & pls LXIII-LXIV for the East Cathedral; 231-3 for Sbeitla and Thuburbo Maius; and 250 for P-A Février's estimation of the opposition at Tipasa.

32 These might have come from Constantinople: cf Golvin 1970, 94.

33 Richard 1996, 139-41, described by Wildbrand of Oldenburg, in 1211: "Il a un pavement de marbre ingénieux … Les murs de la maison sont entièrement revêtus de plaques de marbre qui figurent avec une suprême ingéniosité, des tentures de couleur variée ... Au milieu du palais se trouve une citerne constellée de marbre de diverses couleurs, dont les plaques de teinte différente sont si bien assemblées qu'on ne le sent pas en y passant le pouce; ce marbre montre une variété infinie de fleurs qui s'effeuillent et trompent l'oeuil de ceux qui cherchent à les identifier" - all dismantled by the Mamluks when they occupied the evacuated city in 1291.

How was the past re-used?

In spite of the continuing popularity in the Middle Ages of marble floors in the Christian East and West, and probably in Islam (surviving examples are scarce until the Mamluks), there is little evidence[34] of existing floors being lifted for relaying in the same pattern in a new location. Many floors were aniconic; many splendid opus sectile ones have survived in their original location;[35] and there is possible imitation of the technique in other media.[36] Thus such reuse would have presented no difficulties in Islam; but instead, new mosaic floors were created, with new iconographies. Such neglect surely indicates that Islam was uninterested in the Roman past as such, and sometimes followed decorative traditions from elsewhere (Van Buren 1946 for Tell Uquair and Uruk). The fact is underlined by the widespread (if not perhaps exclusive) use of old marble – indeed, the verso of some tesserae can be identified as such. For the tesserae of wall and vault mosaics certainly were re-used. Islam was supposedly presented with large quantities by the Byzantine Emperor; and these, like the ones the Moslems foraged for themselves, surely came from old Byzantine buildings. Out of these new structures were created, such as the Umayyad Mosque at Damascus. In the West, we know of pilgrims taking marble home as an act of piety; but no references have survived to the same thing happening with the tesserae of mosaic floors, although mosaics were used to imitate other marble decoration (Michaelides 1985, passim).

Lack of lift-and-reuse is all the more striking because of a tendency in mediaeval Islam to treat decoration – from columns and wall veneers to mosaics, doors and portals – as moveable items to be appropriated from old buildings for use in new constructions. In consequence the literature is replete with references to stripping out, and the surviving monuments often reflect the practice by their bare walls and floors. Thus some of Syria's "desert palaces" seem to be hunting lodges, and richly decorated (Qastal was carpeted in floor mosaics in stone and glass, and Qasr Al-Muwaqqar had mosaic pavements in several rooms) but some look like the late-Roman fortresses on which they were modelled, and the materials of which they sometimes re-used (Kennedy 2007, 103). The Qasr Al-Hayr palaces (East and West, 728ff) were sumptuously decorated, but any marble columns and veneers have long since been robbed out, as was Hamman Al-Sarakh, leaving little in place to remind us of what Hillenbrand calls "la dolce vita" (Hillenbrand 1982, passim). If stripping such remote sites is explicable, this also happened in the middle of Cairo, where the remains of the Fatimid palaces were being plundered long after their real life had ended.[37] In Baghdad, some palaces had marble baths and supposedly explicit mosaics,[38] which were

34 Meinecke 1996, 44 for the bath opposite the Great mosque in Bosra: "the sumptuous marble foor, including multicoloured opus sectile, as well as the intricate technical installations, testify to the highest standard of architecture and decoration. This masterpiece of engineering architecture was certainly not achieved by locally available specialists, but by an experienced building atelier from Damascus."

35 For a site inhabited in Vandal and Byzantine times, see Alexander 1973: e.g. Maison de la Cascade and Maison de la Chasse, pl. LXV, and in antiquarium, pl. LIV; plenty of Christian churches are recorded, but nothing survives of Xtian buildings or their mosaics. Dulière 1974, e.g. Boutique IV/V, at fig. 1190.

36 Dodds 1992, 600: at Cordoba in Abd al-Rahma's mosque "though fashioned of brick and stone, the alternating voussoirs were surely meant to evoke, in available materials, the opus sectile decoration of Umayyad buildings of the fertile Crewcent, in particular the Great Mosque of Damascus, and conceivably the Dome of the Rock."

37 Hautecoeur 1932, 140: in 1369, two immense white marble columns were found on the site of the Fatimid palaces, and Sultan Chaban II took them for his madrasa near to the citadel, their transport hymned by the poets.

38 Rubiera Mata 1988, 97ff for Al-Makkari's account: "Habia pilones de mármol de bonita forma

Figure 13
Matbakh Al-Ajami, Aleppo, early 13thC: exterior portal with marquetry of marble and limestone

perhaps stripped by a later and more shockable owner. For sites such as Samarra and the desert palaces, the dismantling was so thorough that the decorative schemes cannot be fully reconstructed, although scraps of fittings have survived from Samarra, and mosaic, glass and other fragments are to be seen in the Turk ve Islam Museum in Istanbul, and in the British Museum. Other schemes include Khirbat Al-Minya (near Lake Tiberias), built by Al-Walid (705-15; as proclaimed on a reused marble inscription) or perhaps his son, where mosaics covered the floors and dadoes and glass mosaic the dome - such mosaic domes having a long ancestry. It is unknown whether an adjacent bathhouse is Roman, Byzantine or Umayyad (Bacharach 1996, 35).[39]

Stockpiling was a constant feature of the Roman marble trade, at quarries, dockssides and building sites, because of the vagaries of sea transport. Because stockpiling is the only sensible way to conduct medium- or large-scale building operations, in Islamic territory we find not only the Christians stockpiling marble at Jerusalem (see below), but (probably) materials for the Mezquita at Córdoba being accumulated over time. This latter was supposedly funded with booty from Narbonne, and yet more arrived from Narbonne after Hisham's assault in 793. One source says that this included "loads of earth out of the demolished walls" (presumably old marble), "and not only was the mosque built of those

... un largo pasillo todo el de mármol purisimo su suelo tenia dibujos ealizados con piedras rojas, amarillas, verdes y doradas, todas ellas de cristal tenido con color rojo y amarillo; el tenido en verde dicen que es un procedimiento que viene de los bizantinos, y el dorado es cristal revestido de oro. El dibujo era bellisimo y formaba diferentes figuras que realizaban el acto sexual..."

39 Marcus Ritter has in preparation *Die Baukdekoration des frühislamisch umayyadischen Palastes Khirbat al-Minya bei Tiberias*.

Figure 14
Mausoleum of Taynabak al-Hassani (or Al-Taynabbiya) 1395, Damascus: exterior portal with marquetry marble and other stones

materials, but a large quantity still remained piled up in front of the royal palace," and the brass knockers were also taken (Al-Makkari 1840, II, 99). Again, columns and mosaic tesserae were supposedly sought from the Byzantine Emperor, although Cutler (2001 254) is sceptical even if Stern is not.[40] This must be a deliberate echo of the building of the Umayyad Mosque in Damascus, several stylistic features of which the Andalucian structure sought to imitate. No doubt many Christian artisans were used for the first construction; and there are masons' marks, some in Latin letters, on the columns of enlargement of Al-Hakam II (961-76) and that of Al-Mansur (976-1002), several of which were probably moved from the first structure.[41] For Pavón Maldonado (1973, passim), many of the decorative patterns used at Córdoba and Madinat are inspired by Roman floor mosaics, while Kubisch (1995) looks east, to motifs at Qasr al Hayr West, Khirbat Al-Mafjar, and Samarra . Mosaics were widely used at Córdoba, and also at Madinat Al-Zahra, where a poetic recitation in 971 hymned the splendour of the Caliph by comparing his glory with the marble and mosaics in the East Salon – "Cubren sus salones mantos de mosaico" (García Gomez 1967, 105ff).

Marble was such a valuable resource, especially in lands where it was not quarried (such as Palestine or Egypt) that Christians and Muslims sometimes seem to have played cat-and-mouse with marble supplies. Thus when Abd Al-Malik built Ramla, with considerable architectural ambitions, he discounted demolishing

40 Stern 1976 38 agrees with Ibn Idhari that the cubes (stone, marble and glass) came from Constantinople; hence 46: the mihrab mosaics are "l'un des rares exemples d'oeuvres monumentales qui portent témoignage d'un art formé au contact du monde byzantin et musulman."

41 Souto 2002, 231: both Qasr Al-Hayr East and Khirbat Al-Mafjar have graffiti in Greek letters, but also in Arabic and Hebrew – so manpower could have been various, and even brought in from afar.

the church at Ludd, and so wrote to the Byzantine Emperor, who sent him an agent "who indicated a place whence he could extract columns of unparalleled dimensions and beauty. They were also able to extract marbles both sawn and unsawn, amply sufficient for the mosque. It was said that this was in a property of Daroum near Gaza, which was called Amuda (Columns)." The Christians were then made to carry the materials to the site of the new mosque (Gaudefroy-Demombynes 1923, 3, 57f). The imported Greek, obviously having done marble- prospecting elsewhere in the Empire (and it could well have involved tunneling for material buried by humans as well as by the sands of time), found the necessary columns from what must have been a stockpile if they had the choice of sawn and non-sawn.[42] Mas'udi's account of building at Ramla leaves out the Greek inspector, and substitutes a direct threat to the Christians, namely that the church at Ludd would be destroyed unless they handed over their hidden stocks of marble (Mas'udi II 1965 184f). Ramla was an excellent place to build marble monuments, for when Nasir i-Khusraw visited in 1047 he came across a veritable marble-cutting industry there: "In the city of Ramlah there is marble in plenty, and most of the buildings and private houses are of this material; and, further, the surface thereof they do most beautifully sculpture and ornament. They cut the marble here with a toothless saw, Avhich is worked with ' Makkah sand.' They saw the marble not in the cross, but in the length — as is the case with wood — to form the columns ; also, they cut it into slabs. The marbles that I saw here were of all colours, some variegated, some green, red, black, and white" (Le Strange 1890, 307).

There has been a certain amount of resistance to the idea that Islam did import mosaic workers, but the action seems defensible for practical reasons, rather than for any notion of triumph over the Christians. Marble also moved around, naturally with the workmen to deal with it. Thus Mecca has had so many alterations and refurbishments, that it is difficult to get a clear picture of the exact use of mosaic there, but it is clear that the complex was at times in competition with the splendours of Jerusalem. Al-Muqaddasi (born c.946) relays that Al-Mahdi had three porticoes of white marble brought from Alexandria to the port of Jeddah,

Figure 15
Mausoleum of Taynabak al-Hassani (or Al-Taynabbiya) 1395, Damascus: exterior portal with close-up of marquetry marble

42 Gaudefroy-Demombynes 1923, 58 also refers to al-Muqaddasi's report that al-Malik learned that the Christians had a cache of columns put aside for building a church at Balaxa, and made them hand them over to ornament the mosque at Ramla. Cf. Al-Muqaddasi 2001, 140.

and that "The mosque [in its present form] was founded by him. The porticoes have their walls decorated on the outside in mosaic, artisans from Syria and Egypt being specially imported for the work. The names of these still appear on their work" (Al-Muqaddasi, 2001, 67, 73). But before this, Al-Baladhuri (1916, I., 76) notes that Al-Walid "amplified the Haram-mosque and conveyed to it columns of stone and marble, and mosaic."

This last remark is the kind of attestation or verification often used by Islamic historians, which could be a topos (Grabar 1996, 203 note 68), as indeed could the story of the import of experts – except that it has probably always been common for skilled workers to circulate. Al-Yaq'ubi writes of Al-Mu'tasim's orders for the building of Samarra as follows: "He wrote for the despatch of the workmen, builders and skilled people ... and for the bringing of worked marble, and slabs of marble" (Northedge 2005, 268). Samarra has been comprehensively plundered (although far from comprehensively excavated) and, if the main decoration was stucco, Al-Mutawakkil's palaces were decorated with marble slabs in the Throne Room complex. The fame of the site lived for centuries, so that Shabushti describes a throne room at Al-Burj (which he cannot have seen because he was writing a century and a half after 870): "The walls of the palace were covered inside and outside with mosaic and gilded marble" (Kennedy 2005, 147). As for the Great Mosque, this "used to be considered superior to the mosque at Damascus. Its walls had been coated with enamel, pillars of marble erected within it, and it was paved with marble" (Al-Muqaddasi 2001, 102). This might have looked something like the luxuriant 5th-century marble dadoes at Antioch, fragments of which survive (Allen 1988, 11ff & fig. 30), so that it is possible to view the use of stucco at Samarra as a translation from marble into another medium.

Elaborate church mosaics were still being created in the mid-8th century, as at Madaba (Walmsley 2007, 124f). In other instances, later refurbishments have obscured the earlier decoration. Thus the Muthir Al-Ghiram (written 1351) states that an earthquake (in 747) brought down the earlier Al-Aqsa, and that Al-Mahdi found it in ruins – but whether it was he who decorated it with mosaic is unknown. By the 11th century, however, the mosque had a polychrome marble floor (Kaplony 2002, 775), and Al-Qazwini emphasises the coloured marbles as well as the mosaics, as we have seen. An adjacent loss is the Umayyad Palace complex, for which the Al-Aqsa might well have been the palace chapel, as were contiguous structures at Damascus, Córdoba and Cairo. There also survive several sites where the evident classical inspiration of the motifs suggests probable re-use of individual tesserae (such as the bath area of the 8th palace at Anjar, Lebanon; Khirbat Al-Mafjar, 743/4, Occupied Palestine; and Qasr al-Hallabat, Jordan), and it seems very likely (could it be proved?) that many of the large mosaic complexes also re-used ancient tesserae.

Jigsaw-mosaic in Syria and Egypt

Against the background of diminishing availability of old marble in most centres, this section discusses the contrary tendency of what appears to be the deliberate flaunting of large reused blocks (often of rare marbles) in a three-dimensional version of opus sectile or marquetry, building on the development of multicoloured walls (ablaq) in the provision of sumptuous portals, window embrasures and mihrabs. Since the flat version of such techniques is to be seen centuries before in other media such as woodwork, and since its appearance from the earlier 13th century predominantly in Damascus and Aleppo is not echoed in Cairo (which

Figure 16
Damascus, Muhi al-Din ibn Al-Arabi complex, 1516, Damascus: courtyard mosaic floor, with roundels cut from antique columns

uses two-dimensional mosaic patterns instead), it appears as if Syria is providing a demonstration of skill which outdistances not only the general run of Moslem wall decoration, but perhaps also Christian techniques as well. For nowhere other than in Syria are such skill and lavish reuse of scarce materials to be seen.[43]

Cairo was a new city, albeit with an adjacent older one a few kilometres south at Fustat (Fu'ad 2000, passim), the site of marble-rich churches the materials from at least one of which was sold to pay taxes, in this case to Ibn Tulun (Lombard 1974, 198). Alexandria was a much-shrunken Hellenistic foundation, with a high-living nucleus surrounded by fields of ruins. It contained many marble capitals (Kautzsch 1936, 24ff; unfortunately, the book does not deal with Venice, Kairouan, Tunis, or Mahdiya) and, also like Cairo, private houses retained plenty of marble in the 16th century, including some complete mosaic floors, as Filippo Pigafetta writes in 1576-7: "In the people's dwellings you can see many pieces of marble and stone of different colours, cut in squares, circles, stars and other shapes which, with exceptional skill, the good people of ancient times employed to cover the floors and the walls of their houses; a really wonderful work as much for the shaping and fitting together of those well-cut stones as for their quality and excellence, and the diversity of their colours; there are some houses there in which such construction remains intact..." (Curatola 2004, 196-7) – though of course they might have been in one of the many later reincarnations known to be common with such Lego-like pavements (Guidobaldi 1983, 518ff).

Such "shaping and fitting together" is probably a spinoff from the ever-increasing shortage of prestigious marbles, which Ibn Khaldun builds into his rise-

43 Greenhalgh 2006 60ff for further discussion and illustrations.

and-fall cycle: "which are taken from empty buildings, from fortresses and palaces disused because there towns are depopulated. The very same materials are perpetually re-used, from palace to palace, from house to house, until they are completely gone" (Ibn Khaldun 1967-8, II.10, 745). This can be seen in the enormous portal to the Mosque of Sultan Hassan, where Rogers has found fixing markers for attaching thin marble veneers which – he points out – are a very different matter from the stylistic source, such as the Gok Madrasa, where the marble panels are six inches thick and must have been carved before erection (Rogers 1970/1, 50). So if the use of ever-smaller and more intricate fragments is a style in Cairene and Syrian buildings, it is conceivably one much influenced by circumstance, and perhaps in part by the example of Roman marble floors available in Egypt.[44]

If in Byzantium and the West mosaics usually constitute a thin veneer on wall or floor, and at least in later centuries re-use antique marble, in Islam another type of mosaic developed in early 13th-century Syria, which bears no relation to any earlier practice. This involves "constructional mosaic," in which substantial pieces of marble are ingeniously cut into intricate marquetry patterns which are not simply skin-deep, but part of the construction of doorways, window embrasures, and sometimes mihrabs. To be effective, such constructions must show two faces of the work – there is no point otherwise – so the viewer can appreciate that these jigsaw "puzzles" are not simply cut in depth, but also employ large pieces of often precious marbles. We can often make an extra check on the mason's ingenuity, for the elements of such structures have often moved over the centuries (earthquakes, etc), and the gaps opened up allow us to inspect the joinery in depth.

The finest of all marquetry displays is the mihrab in the Madrasa Al-Firdaws (by 1242: figures 3, 4, 5), in Aleppo. Sibt b. Al-Ajami, writing in 1274-5, notes the "stone, brought from many places," the black and white marble in the courtyard, the yellow marble columns, and the mihrab, "among the wonders of the world" (Allen 1999, ch.8). Other monuments conspicuous for their jigsaw-work include the mihrab of the Madrasa Al-Sultaniyah (1213/16), the Arak and Wali Al-Shaibani, all of which have a stone muqarnas portal; the Arak Mausoleum with reminiscences of the Al-Firdaws mihrab arabesques in blue tile. Secular buildings were probably equally rich in fine stonework, such as the Al-Atrush Mosque, with its ablaq and marquetry windows (Figure 12), or the fragmentary Matbakh Al-Ajami Palace (Figure 13), with a portal nearly as intricate as the Al-Firdaws mihrab. Mosques also delight in intricately-cut stone, such as the Al-Aqsab with black and white limestone and, like the Al-Tawba, with a splendid stone-work minaret; and the the Mausoleum of Taynabak al-Hassani (Figures 14 & 15), with its mix of marble, limestone inscription, and sandstone muqarnas. In Damascus, the Madrasa As-Zahiriya (1262-3) incorporates the Mausoleum of Al-Zahir Baybars, and is especially elegant, with its portal rich in inscriptions, and its interior retaining elaborate marble dadoes and mosaics inspired by those of the nearby Umayyad Mosque. The technique was to have a long life,[45] as indeed did the vogue for mosaic floors – such as that in the courtyard of the Muhi al-Din ibn Al-Arabi complex (1516), cut from antique columns. As in Aleppo,

44 Daszewski 1982, figs 16-17 for opus sectile floors from Kom Truga (W Nile Delta) and Alexandria (Kom el-Dikka).

45 The Madrasas Al-Jaqmqiya, Sabuniye and Sibaiye, built 1418-20, 1459-64 and 1509-15 respectively, demonstrate the continuing fashion for such exuberant decoration – or, as one critic has it (Eliséef, N., in *EI Damascus*) "everything was sacrificed to outward appearance, and the monument was no more than a support for shown ornamentation."

traditions continue, in the Darwish Pasha Mosque (1574) and Sinan Pasha Mosque (1590-4), which has an especially rich interior with marble columns and wall veneers, and superb marble minbar. For none of the above is the source of the marble or mosaic tesserae known, though sufficient monuments with re-used elements survive to be confident that such dazzling decoration did come from re-cut marble. In Aleppo these include the Bimaristan of An-Nouri (1154) with an antique tympanum gracing its entrance, parallel to Aleppo's Dar Al-Hadith (1154/74) which displays a re-used doorframe carved with a classical moulding; and its lintel block bears an elongated but uninscribed tabula ansata. Classical columns are re-used in Damascus when available, such as those in the mihrab of Nur Al-Din's tomb-chamber. In Cairo, all marble and granite were in re-use, together with the few applications of mosaic tesserae such as the mihrab in the Aqbughawiya Madrasa at Al-Azhar (1339), or the mihrab on the qibla wall of the Mosque of Ibn Tulun (14thC).

Conclusion: Islam & the West

Roman and Byzantine materials allowed Islamic mosaics to be sumptuous, but much more study is needed to ascertain the source of the tesserae, for our narrative accounts never list these, and earlier excavators have usually shown little interest in what might have happened to church structures when they fell out of use. This is a pity, for the mediaeval West was much enamoured of Islamic mosaic patterns,[46] and it would be interesting to know more of any connections. Famously, Abbot Desiderius supposedly imported mosaic workers from Constantinople "peritos utique in arte musiaria et quadrataria" (Chron. Cas. 3.27) because the "magistras Latina" had neglected mosaic-making for centuries.[47] This was probably not true – but in any case it is probably the lands of Islam, rather than Byzantium, which were the focus of mosaic expertise in Desiderius' day. Is it possible, indeed, to chart the progeny and group the relationships of the mosaic tesserae of a selection of important monuments, to ascertain both their source and their spread? This is possible, and has been done both for marble (cf. the various conferences of ASMOSIA[48]) and for glass mosaic, as we have seen. If the Roman left us a "marble map" of the Mediterranean, then a "mosaic map" would be just as useful, allowing us to chart relationships not just at design level, but also at that of tesserae as well. Given that scholars today are often alert to re-use, such endeavours should allow us to learn much more about the diffusion and re-use of tesserae around the Mediterranean.

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46 As at Pisa, where the workshop of Rainaldo was producing Islamic-derived mosaic panels, of which sections survive in the Opera del Duomo, together with capitals, including an Islamic one.

47 Maguire 2001, 164-6: the author of the *Vita Basili* refers to floors ringed with "spokes," which to Maguire suggests comparison with the floor at Montecassino, 1071ff; Giuliano 2003 for Desiderius and his commissions, plus Islamic influences. Bloch, for one, once believed that there were indeed suitable craftsmen in Rome by this date (that is, before the Cosmati: Bloch 1982, 617 note 5); but he later wrote that Greek expertise was needed to help Desiderius re-create Early Christian mosaic: Bloch 1986, 92.

48 Association for the Study of Marble and Other Stones in Antiquity: http://www.asmosia.org

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Quelques remarques à propos de l'étude des sols *in situ*

Marie-Patricia RAYNAUD*

This paper proposes a review of the various contributions of an « in situ analysis » upon the study of mosaics and architecture. They are helpfull to understand the story of the building and to distinguish workshops of mosaicists. They result from the association between mosaic specialists, archaeologists and restorers.

Bu makalede, mozaik ve mimari alanda in situ analizlerine yapılan çeşitli katkıların gözden geçirilmesi amaçlanmaktadır. Bu analizler binan tarihinin anlaşılmasında ve mozaik atölyelerinin ayrımında oldukça yararlıdır. Bu analizler, mozaik uzmanları, arkeologlar ve restoratörler arasındaki işbirliğinin sonucudur.

Key words : mosaic, restoration, workshops, in situ, architecture, handcraft.

L'étude de la mosaïque à travers l'iconographie est la méthode classique, issue directement de l'Histoire de l'Art. Après quelques ouvrages décisifs mais isolés[1], ce secteur de la recherche a réellement pris son essor à partir des années soixante pour devenir une discipline à part entière[2]. La majorité des mosaïques connues étaient alors conservées dans des musées hors de tout contexte architectural, ou sur des sites anciennement fouillés et peu mis en valeur. Les panneaux présentés étaient essentiellement des mosaïques prestigieuses à décor figuré, aussi l'attention des chercheurs s'est tout naturellement tournée vers une interprétation très picturale de leurs représentations.

Ces approches iconographiques et stylistiques, ainsi que l'étude des inscriptions, donnent de multiples indications sur la culture, la prospérité et l'ambition du commanditaire, ainsi que sur le but poursuivi par de tels décors ; leur décryptage peut permettre de deviner la fonction de l'espace que ces sols décoraient. Les tapis figurés sont des témoins culturels relativement bien conservés, du fait de leur structure moins fragiles que celle des peintures. Ils peuvent aussi servir de marqueurs historiques grâce au thème représenté. En effet, le succès de certains sujets et l'évolution des modes et goûts esthétiques tout au long de l'Antiquité sont de mieux en mieux connus.

Enfin, dans les cas de concentration de tableaux figurés dans un même site, les comparaisons stylistiques peuvent s'avérer possibles et précieuses, nous citerons par exemples Piazza Armerina, Antioche, Torre de Palma, Zeugma, Nea Paphos, El jem ou Byllis.

Plusieurs facteurs ont radicalement modifié l'approche des spécialistes. Outre l'évolution et le développement de l'archéologie de terrain, la découverte de très nombreux nouveaux pavements et le souci de leur conservation et leur fréquente présentation *in situ* – en liaison avec le développement du tourisme – ont fait évoluer la recherche dans bien des domaines de l'archéologie[3]. Les chercheurs sur la mosaïque interviennent de plus en plus souvent lors des fouilles et des restaurations des pavements ; la floraison de nombreux corpus de mosaïques[4] a incité à compléter

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1 On citera parmi les travaux anciens sur les mosaïques, ceux bien connus d'Arthaud, Espérandieu, Gauckler, Roux-Barré, Levi, Lassus, Blake, Chehab, etc.

2 La création du Centre de Recherche sur la Mosaïque au CNRS par H. Stern au début des années 50 et de l'AIEMA (Association internationale pour l'Etude de la Mosaïque antique) en 1964 a encouragé la création ou le développement de multiples antennes nationales (Italie, Espagne, Amérique du Nord, Tunisie, Grande-Bretagne, Portugal et dernièrement Turquie…), et la tenue régulière de Colloques internationaux (publiés sous l'abréviation *CMGR*, tome I à IX depuis 1963). Le *Bulletin de l'AIEMA*, bulletin bibliographique sur l'étude de la mosaïque, a été créé en 1967. La vingtième livraison est parue en 2007.

3 Certains chercheurs ont rapidement mesuré l'importance de l'approche par le terrain ; nous citerons V. Daszewski, qui a très tôt attiré l'attention sur l'analyse archéologique des pavements, ou d'autres qui ont prôné un travail simultané des chercheurs et des restaurateurs de mosaïques (D. Michaelides, A. Ben Abed).

4 *Recueil des mosaïques de la Gaule* (CNRS), *Mosaici Antichi in Italia*, Corpus des mosaïques de Tunisie, d'Algérie, de Suisse, d'Albanie, d'Allemagne, d'Espagne, et plus récemment du Portugal, d'Angleterre, et enfin le *Corpus of the Mosaics of Turkey* (création de l'AIEMA-Turkiye en 2006, premier volume sur les mosaïques de Xanthos, M.-P. Raynaud, *Xanthos, East Basilica*, vol. 1, in press). Des volumes de synthèse assez

Figure 1
Byllis, basilique E. Joint séparant des phases de travail, à droite de la ligne de postes (ph. M.-P. Raynaud)

l'étude iconographique et stylistique par une observation plus systématique des pavements. Les mosaïques géométriques sont désormais étudiées dans ces catalogues au même titre que les pavements figurés, ainsi que les sols en *opus signinum*, en *opus sectile* et les dallages. C'est le souci de décrire de façon claire et univoque le décor géométrique jusqu'alors souvent négligé qui a rendu nécessaire l'élaboration d'un vocabulaire descriptif[5] des décors géométriques

complets cataloguant les mosaïques sont aussi apparus sur les pavements de Syrie et du Liban, d'Israël, d'Autriche, de Jordanie, de Tunisie, de Macédoine, ainsi que des catalogues de musées célèbres pour leur collection de mosaïques, tels le Musée du Bardo, de Trèves…

5 Il s'agit de deux ouvrages collectifs, réalisés par le Centre de Recherche sur la Mosaïque (CNRS, Paris) créé à l'instigation de H. Stern : *Décor* 1985; L'oeuvre du fondateur fut essentiellement poursuivie sous la direction de J.-P. Darmon avec la publication du second volume : *Décor* 2002.

Figure 2a
Byllis, basilique C, observer les irrégularités de la bordure, surtout en bas à gauche (ph. CNRS-M.-P. Raynaud)

en cinq langues[6]. L'approche technique s'est faite de plus en plus exigeante, au vu des conclusions enrichissantes et variées qu'elle autorise.

Nous envisagerons ici divers apports d'une telle étude réalisée *in situ* parallèlement à l'établissement d'une documentation graphique et photographique complète, en relation étroite avec archéologues et restaurateurs[7]. Ces expériences de terrain seront illustrées d'exemples récoltés par l'auteur lors de sa participation à des missions en France ou à l'étranger.

1. Liens avec l'architecture : sols et murs

L'étude des liaisons des sols avec les murs et les seuils vient en préalable. La façon dont les pavements sont – ou non – liés avec les murs et avec le décor qui les recouvre (peinture, enduit, placage ou mosaïque) peut aider à établir une chronologie relative et élaborer un phasage qui sert à l'étude d'ensemble du bâtiment[8]. Nous évoquerons l'exemple à Lixus (Maroc) des maisons de la

6 Les cinq langues représentées dans ces dictionnaires descriptifs sont le français, l'anglais, l'italien, l'espagnol et l'allemand. Les traductions furent réalisées par des spécialistes de la mosaïque dans leur langue respective. Les volumes sont en cours de traduction en turc pour servir au Corpus de Turquie. Une traduction en portugais a aussi été réalisée et d'autres langues peuvent être envisagées.

7 Cette collaboration tient tout particulièrement à cœur à la nouvelle association turque *AIEMA Turkiye*, qui a tenu d'emblée à réunir ces différents spécialistes lors des tables rondes annuelles depuis 2005. Le *Corpus of the Mosaics of Turkey* se base sur le travail en commun des restaurateurs et des chercheurs et se soucie très sérieusement de l'état et de l'avenir des sols étudiés (établissement d'une base de données). Par ailleurs, les colloques de l'*ICCM* (Comité international pour la Conservation des Mosaïques) se tiennent tous les trois ans et donnent lieu à des actes, de I à VIII à ce jour.

8 Pour un exemple d'étude conjointe des décors de sols et de murs, voir l'article sur Zeugma : Barbet-Monier 2005: 1301-1306.

Figure 2b
Xanthos, basilique Est, atrium ; ici la bordure est régulière, planifiée dans le détail (ph. CNRS-M.-P. Raynaud)

ville haute. Les mosaïques avaient été déposées dans les années soixante et sont exposées au musée de Tétouan, avec de vagues indications de provenance. Un relevé précis du plan des maisons et l'étude de l'architecture (dimensions, traces éventuelles) ont permis de repositionner graphiquement les sols dans leurs murs[9].

2. L'observation attentive de la surface des sols (in situ)

avant restauration peut donner de multiples informations sur les avatars subis par l'édifice. Les plissements, effondrements et fissures indiquent des mouvements de terrain, dont l'orientation est utile pour étudier la destruction des structures. Ils révèlent aussi quelquefois la présence de structures sous-jacentes ou une éventuelle instabilité du sous-sol (pente, terrassements, remblaiements ou ruissellements).

Les lacunes permettent des observations sur le processus de destruction du bâtiment, particulièrement importantes lorsque les couches recouvrant les sols ont été antérieurement enlevées du fait d'une réoccupation ultérieure ou de fouilles anciennes. Elles sont l'œuvre de la chute d'éléments lourds, de la détérioration des supports (exposition plus ou moins longue aux éléments) ou témoignent d'une action volontaire de destruction[10]. Les traces de rubéfaction qui ont altéré la surface des mosaïques sont l'indice soit d'incendies, soit d'une réoccupation postérieure (foyers).

L'observation attentive de la surface de la mosaïque, en lumière rasante par exemple, permet dans certains cas de déterminer des « phases de travail ». Le lit de pose n'est versé qu'au moment de l'installation des tesselles, par petites

9 Fouilles franco-marocaines à Lixus, sous la direction de J.-P. Darmon et Z. Qnimba. Ces hypothèses devraient se trouver confirmées par l'étude des archives du premier fouilleur, G. Taradell.

10 Voir plus loin, dans la partie concernant les restaurations anciennes.

zones. La pose des panneaux se fait souvent séparément de celle des bordures. Les limites entre ces différents secteurs, indiscernables au premier abord, peuvent se manifester par un joint d'aspect différent (plus large et continu), ou par certaines irrégularités de niveau entre les deux parties. C'est le cas dans la basilique E de Byllis (Albanie)[11] (fig. 1), où le panneau figuré a nettement été réalisé séparément, à un autre moment que la bordure. Ces différents secteurs pouvaient aussi être le fait du partage du travail entre différents artisans d'un même atelier, entre des ouvriers plus ou moins expérimentés, ou spécialisés dans tel type de représentation ou tel décor géométrique particulièrement complexe.

On peut aussi déduire, dans certaines maladresses du décor ou rattrapage de motif, à quel endroit le travail a commencé et où il s'est achevé : la planification de décors refermés sur eux-mêmes, comme les bordures, renseigne sur le degré de qualification et l'expérience des artisans. On constate que certains commencent leur travail sans le planifier, c'est-à-dire sans tracé préparatoire de détail ; les motifs se bousculent dans les angles, « tournent mal », s'étirent par endroit et s'amaigrissent à d'autres (fig. 2a). Dans d'autres cas, les artisans ont manifestement préparé leur travail soigneusement en divisant mathématiquement l'espace imparti, produisant des motifs parfaitement réguliers (fig. 2b). Il est alors plus difficile de deviner où l'artisan a démarré sa tâche.

La façon dont deux tapis sont juxtaposés, raconte fréquemment quelle mosaïque est venue se coller contre la précédente : la lisière entre deux mortiers qui ont séché à des périodes différentes est toujours vulnérable aux infiltrations. Sa dégradation presque systématique au niveau des tesselles permet souvent d'étudier le raccord entre les deux supports successifs. Il est en effet impossible de juxtaposer deux mosaïques à différentes époques sans que cela soit visible (différents vieillissements et séchages des mortiers, niveaux de surface et techniques de poses variables, cicatrices entre les parties). Ceci aide à établir une chronologie relative des sols.

3. Matériaux

L'identification physique et l'analyse pétrographique (onéreuse, donc plus rarement pratiquée) permettent de savoir si les matériaux constituant les tesselles sont extraits localement, importés ou remployés. Elle nécessite une bonne connaissance géologique de la région et des carrières antiques.

La qualité des matériaux donne une indication sur la prospérité des commanditaires et leur ambition : marbres et matériaux colorés sont généralement réservés à des emplacements privilégiés, destinés à faire l'admiration du plus grand nombre. Ainsi à Xanthos (Turquie), dans la basilique Est[12], les décors les plus soignés, - mosaïques à tableaux figurés, emploi de couleurs plus riches et de matériaux nobles (marbres verts et violets)- se situent sur un axe de circulation conduisant de l'entrée au baptistère ; cette volonté attestée de « marquer » ce cheminement n'est vraisemblablement pas fortuite. Le compartiment central du narthex, devant la triple porte ouvrant sur la nef centrale, occupe aussi une place de choix ; il se distingue par un sol en *opus sectile* soigné, très riche en plaquettes de marbres colorés de toutes provenances et la plupart du temps remployés, avec un soin évident. À Byllis, on a trouvé dans plusieurs églises l'emploi de tesselles

11 Collaboration albano-française pour la publication des fortifications et des églises de Byllis et la reprise de fouilles, sous la direction de S. Muçaj, J.-P Sodini puis P. Chevalier. Premier volume en préparation.

12 Mission française en Turquie, sous la direction actuelle de J. des Courtils. La fouille de la basilique Est a été dirigée par J.-P. Sodini. La publication de ces travaux est en cours.

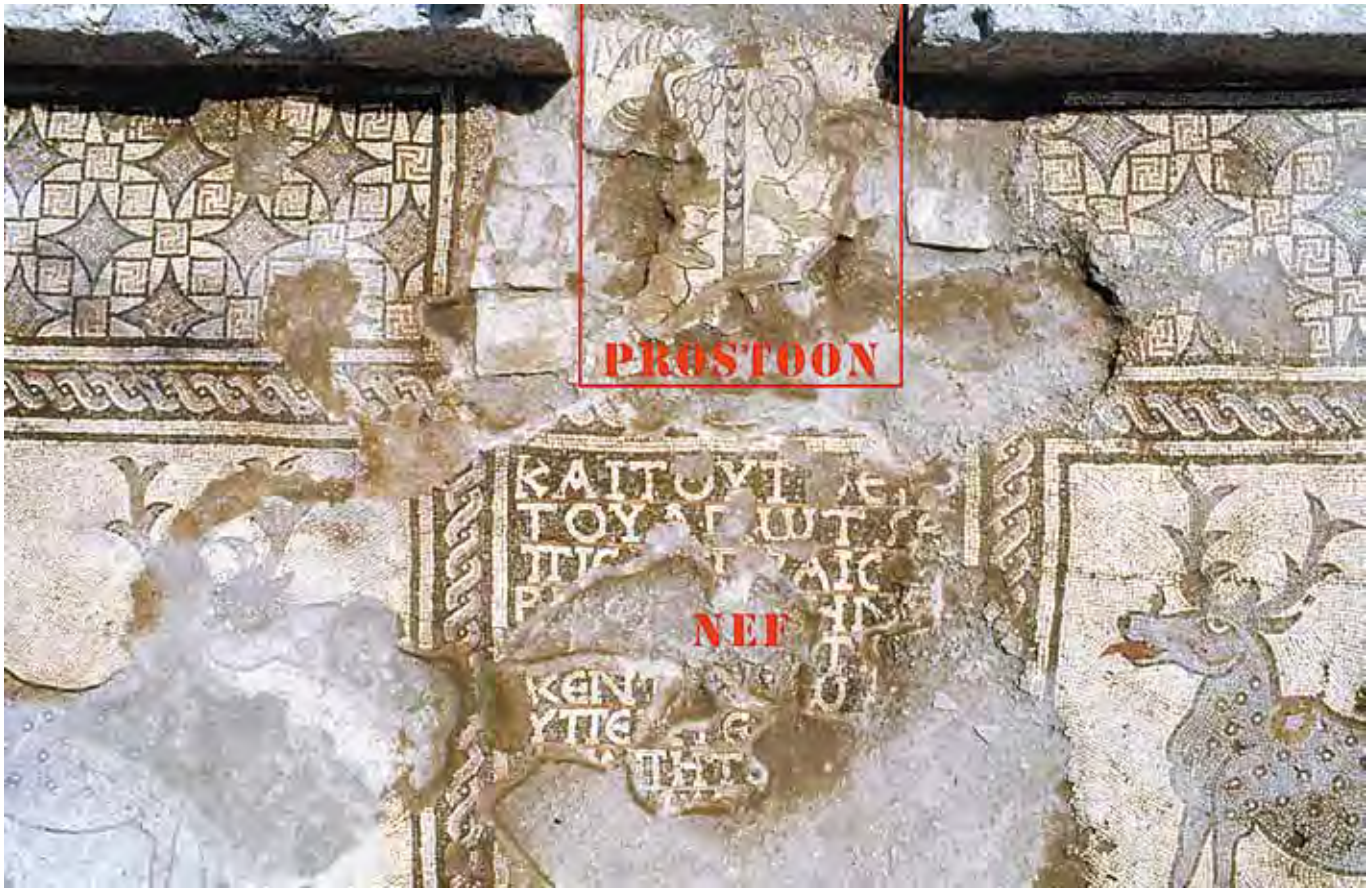

Figure 3
Byllis, basilique D, nef centrale et en haut au centre tapis du *prostoon* ; remarquer la différence de taille des tesselles (ph. CNRS-M.-P. Raynaud)

de verre dans les tapis du sanctuaire (basilique A, B et E), du *prostoon* (basilique D) ou du narthex (basiliques A et D). Les rares tapis conservés représentant des personnages sont réservés au sanctuaire ou à l'exonarthex.

Une hiérarchie tacite, attestée tant durant l'Antiquité qu'à l'époque byzantine, met les dallages en marbre (*opus sectile*) au premier plan. Les mosaïques viennent ensuite, et le choix des matériaux qu'elles mettent en œuvre, marbre, pierre, terre cuite ou verre, est assez représentatif de la richesse de la commande.

Une analyse géologique des tesselles de pierre permet dans certains cas de retrouver les carrières dont elles sont issues et de mieux connaître le réseau de circulation des matériaux dans une région. Ainsi l'identification des tesselles vertes observées dans la production d'un atelier aquitain a orienté les recherches vers les carrières de marbre des Pyrénées, dont l'exploitation était mal connue[13].

Autre exemple à Saranda (Albanie)[14], où deux fragments de mosaïque ont pu être attribués à un même atelier grâce à l'utilisation d'un matériau original et bien caractéristique : une pierre dure, rouge striée de brun, absente partout ailleurs. Cet indice a permis de faire le rapprochement entre ces deux parties de la nef éloignées l'une de l'autre (réparations ponctuelles, mais anciennes), bien que la disparité de leur décor n'ait été d'aucun secours pour témoigner d'une production unitaire.

On trouve également, surtout pendant l'Antiquité tardive et l'époque byzantine, des tesselles ou des plaques *d'opus sectile* retaillées dans des éléments de remplois

13 Ophite verte des Pyrénées, cf. Balmelle 1987: en particulier 170 et 186.

14 Mission albano-israélienne, sous la direction de E. Netzer, G. Foerster, E. Nallbani et K. Lako.

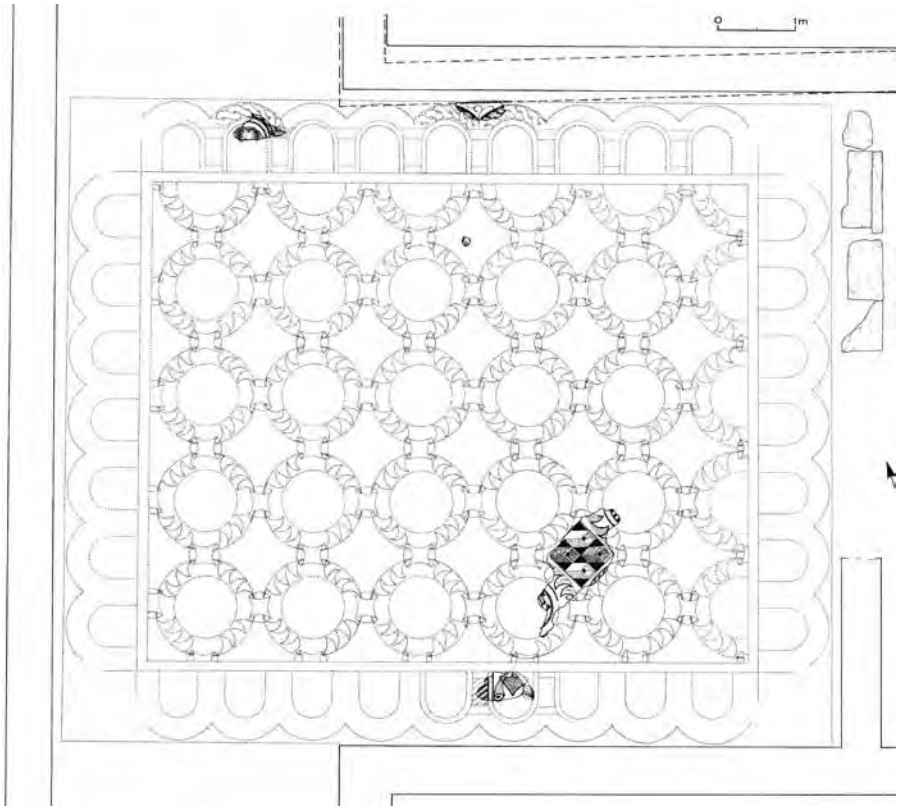

Figure 4
Séviac (Gers), restitution du décor du vestibule de la villa (del. M.-P. Raynaud)

(moulures, placages, plinthes). Le marbre, très prisé à toutes les époques, fut systématiquement remployé à partir de l'époque byzantine où l'exploitation des carrières cessa progressivement[15].

4. Dimensions et méthode de taille des tesselles

La qualité de la taille des tesselles ou des plaquettes d'un *opus sectile* est très variable et révélatrice des compétences des artisans. Son étude permet de déterminer les outils utilisés (pinces, marteline ou scie). Ces précisions sur le soin porté à la fabrication des cubes ou des plaques reflètent dans une modeste part la prospérité du commanditaire, et la qualité de l'atelier choisi. Des analogies concernant la taille des cubes sur un même site peuvent contribuer à l'identification de groupes homogènes. De la même façon, la densité des tesselles au dm^2 peut corroborer tel ou tel rapprochement. Ces mesures aident pour la comparaison de pavements physiquement éloignés les uns des autres.

Il arrive que la dimension des tesselles varie dans un même bâtiment selon l'emplacement des mosaïques[16], sans refléter l'œuvre d'ateliers différents. Ainsi à Byllis, basilique D, il est évident qu'un unique atelier a réalisé la nef centrale et le petit tapis du *prostoon*, comme l'attestent sans doute aucun le répertoire et le dessin des animaux. Cependant la densité moyenne de la première mosaïque (65 tesselles au dm^2) est nettement inférieure à celle de la seconde (120 tesselles au dm^2), dans le souci de soigner tout particulièrement l'emplacement privilégié du *prostoon*, grâce à un dessin plus fin et des matériaux précieux et chatoyants (pâtes de verre colorées) (fig. 3).

15 Sur cette question : Sodini 1994, et Sodini 2002.

16 Tapis de circulation, panneaux figurés ou situés à des emplacements privilégiés.

Figure 5
Xanthos, basilique Est, tracé préparatoire sous la mosaïque du narthex sud (ph. J.-P. Sodini)

5. Mortiers et supports

L'observation des mortiers et de la constitution stratigraphique des supports peut s'avérer très instructive.

-La dimension et l'aspect des joints entre les tesselles ainsi que la finesse du lit de pose peuvent servir de critère de distinction entre plusieurs mosaïques et contribuer à la classification en groupes homogènes.

-Il arrive que lorsque des tesselles ont disparu, totalement ou sur une surface importante, l'empreinte des cubes soit préservée, visible en lumière rasante lorsque le mortier est parfaitement nettoyé. On peut alors, aux heures propices (matin et soir), pratiquer le relevé de ces empreintes et proposer une restitution du décor disparu. Quelques maigres traces bien placées ont parfois permis de restituer la totalité d'un décor. Citons le cas du vestibule d'entrée de la *villa* gallo-romaine de Séviac (Aquitaine, France), où le décor pourtant peu banal a pu être reconstitué grâce à de petits fragments épars et quelques traces (fig. 4). Dans le cas de la Basilique de Candidus à Haïdra (Tunisie), l'étude systématique des supports des mosaïques, pourtant déposées longtemps auparavant, a permis un relevé des traces et des empreintes. Ce document a ensuite servi à retrouver les divers panneaux de l'église, conservés au Musée du Bardo - sols du musée et réserves –, en dépit d'indications de provenances très vagues et de restaurations plus ou moins abusives. Ainsi le plan presque complet des sols de l'église a pu être reconstitué[17] de façon certaine. Enfin, troisième cas, dans la Maison des Trois Grâces à Lixus, l'observation des supports laissés en place lors des déposes pratiquées dans les années soixante a permis de retrouver l'empreinte d'un des

17 Fouilles de Haïdra, Basilique de Candidus, publication en préparation sous la direction de N. Duval et F. Baratte.

pavements, exposé au Musée de Tétouan sans précision sur son emplacement d'origine[18].

Il est aussi enrichissant d'étudier les supports lors de campagnes de restauration. Plusieurs découvertes peuvent avoir lieu à cette occasion.

- La peu fréquente découverte d'un tracé préparatoire peut survenir lors d'un nettoyage ou d'une dépose soigneuse. Ce tracé est exécuté sur la couche supérieure du support, le *nucleus*. Il est destiné à être recouvert au moment de la mise en place des tesselles par le mince lit de pose dans lequel elles sont insérées. Ce tracé peut être gravé ou dessiné par des pigments ou de la craie. Dans ce dernier cas, il est très rarement préservé après recouvrement par la mosaïque. Le tracé incisé est plus durable et repérable. Deux exemples partiels existent à la basilique Est de Xanthos, l'un dans le compartiment Sud du narthex, préservé dans un angle, qui présente un quadrillage de bandes un peu sinueux correspondant plus ou moins clairement au décor de la rallonge (cercles sécants) et du champ (croix de U) (fig. 5). L'autre, plus dégradé, se trouvait dans la partie ouest de la nef Sud (tracé ferme et rectiligne). Ces tracés ont été repérés respectivement l'un après une dépose soigneuse des tesselles qui a respecté la surface du support, l'autre dans les lacunes. Dans les deux cas, le décor des mosaïques qui les recouvrait était particulièrement complexe, difficile à réaliser sans l'aide du tracé directeur. On citera pour mémoire le remarquable tracé préparatoire incisé d'une mosaïque géométrique de Stabies (Musée de l'Antiquarium de Stabie, Italie)[19].

- Les déposes permettent le démontage éventuel du support par les archéologues, ou la réalisation de sondages ponctuels. Sa structure stratigraphique peut alors être étudiée et des éléments de datation collationnés (monnaies, céramiques…). La fouille sous le sol peut en outre apporter des indices archéologiques de datation sur l'installation du pavement, et enfin sur d'éventuelles structures antérieures au sol. La repose du pavement *in situ* a lieu après le remplacement du support (mise à plat, drainage) et la restauration en atelier de la surface mosaïquée. Une documentation complète est alors effectuée en vue la publication.

- L'étude des supports peut démontrer le souci des mosaïstes de trouver des réponses adéquates aux problèmes sismiques posés localement. Ainsi à Xanthos, dans le compartiment Sud du narthex, après le premier tremblement de terre, on a essayé de donner au nouveau pavement une assise plus stable que le support pratiqué ordinairement (*statumen, rudus, nucleus*). Au-dessus d'une surface de terre nivelée, les artisans ont ici divisé l'unique couche du support en bandes parallèles séparées par des alignements de fragments de tuiles posées de chant. Les intervalles entre ces lignes ont alors été comblés par un remplissage serré de tuiles posées de chant perpendiculairement aux lignes ; l'ensemble a été recouvert par un mortier de surface permettant un bon nivellement. Ce support devait être dans une certaine mesure souple et élastique, et ainsi mieux résister aux contraintes sismiques. Ceci est attesté par l'état relativement bon de la mosaïque malgré l'ultime tremblement de terre qui a détruit l'ensemble de la basilique au 7e siècle. On a pu observer ce type de support souple dans deux exemples en Albanie (dans la basilique E Byllis, et celle de Vrina), où le sol présentait des risques d'instabilité, le premier du fait de la forte pente, le second à cause d'un sous-sol très humide[20].

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18 Il s'agit de la mosaïque du combat de coqs.

19 Une très bonne illustration de ce tracé a été publiée dans le Catalogue Madrid 2001: 103. H. Lavagne à cette occasion donne une bibliographie complète de ce pavement. E. Chantriaux, Ateliers de Restauration du Musée de Saint-Romain-en-Gal, s'est aussi intéressée aux tracés préparatoires : Evelyne Chantriaux, Tracés préparatoires sous la mosaïque de la *domus* du collège Lumière de Besançon. Lettre de l'AFEMA 2006 : 6-7.

20 Raynaud 2008 : fig. 3c.

Figure 6
détail de la restauration d'un fragment trouvé enfoncé dans une lacune
(ph. P. Blanc)

-Une étude physico-chimique du mortier peut apporter des indications précieuses sur les techniques respectives de différents ateliers et contribuer à des rapprochements. On en connaît de nombreuses illustrations lors de prélèvements de mortiers sur l'architecture et les enduits muraux.

- La restauration *in situ* peut réserver des surprises. Les restaurateurs nettoient très soigneusement les lacunes et les lisières avant de procéder à leur comblement en mortier pour renforcer la cohésion du pavement. À cette occasion peuvent apparaître des découvertes :

. La plus fréquente est le dégagement de fragments enfoncés dans le sol (sous le niveau de la mosaïque), soit par la chute d'éléments lourds sur la mosaïque, soit par des mouvements et plissements tectoniques du terrain. Le restaurateur les remet à niveau et le relevé pourra alors être complété (fig. 6).

On peut procéder à l'analyse soigneuse des supports nettoyés, sous le contrôle des restaurateurs qui consolident les lisières au fur et à mesure afin d'empêcher une dégradation supplémentaire. C'est aussi l'occasion d'observer un éventuel tracé préparatoire ou des empreintes de dalles d'un sol antérieur. Ainsi à Xanthos, dans la nef centrale de la basilique Est, la mosaïque du second état était directement posée sur le support d'un dallage du premier état, brutalement détruit : les empreintes des dalles, seules encore visibles, ont pu être relevées dans les lacunes ou à l'occasion de déposes ponctuelles. Ce travail a permis d'établir un plan restitué du premier sol, dont pourtant aucune plaque n'était restée en place (fig. 7).

-Découverte du sous-sol : dans la nef sud de Xanthos nous avions constaté, par l'observation de surface, que deux mosaïques juxtaposées appartenaient à deux phases différentes. Le nettoyage des lisières des deux tapis par les

restaurateurs[21] a apporté des enseignements décisifs pour comprendre la succession des évènements. On a pu établir la chronologie relative suivante : 1-pose de la mosaïque primitive sur toute la surface de la nef ; 2-tremblement de terre et destruction partielle des sols ; 3-récupération des débris de la mosaïque détériorée et nivellement de ces fragments pour servir de semelle à un nouveau sol; 4-installation d'une nouvelle mosaïque dans les parties détruites au-dessus de cette semelle sommaire (fig. 8).

Ceci a donc permis d'établir de façon certaine la chronologie des pavements, mais aussi de comprendre l'état d'esprit qui a présidé à la restauration de l'église en partie détruite : la hâte et l'économie. On a pu ensuite mieux saisir ce qui s'était passé ailleurs dans l'église : dans la nef centrale[22], dans l'architecture[23], dans la sculpture architecturale[24]. Le phasage des éléments et des sols de l'église s'est donc aidé des évènements observés avec les restaurateurs. Ces observations ont été immédiatement parachevées par des fouilles très poussées dans tous les secteurs lacunaires des mosaïques du secteur sud de l'église et ont occasionné de multiples découvertes (fragments ensevelis par le tremblement de terre, tombes ultérieures).

L'histoire du monument commence à apparaître clairement. Ces deux cas, dans le même édifice, de réutilisation de fondations antérieures ou de débris pour constituer un support après le séisme, s'expliquent par la nécessité de remettre très vite en état le bâtiment (cathédrale de la cité) pour le rendre au culte. La réutilisation de gravats dans la nef sud résolvait en partie le problème du déblaiement des ruines, tandis que la réutilisation du support de *l'opus sectile* détruit de la nef permettait d'épargner le temps et la mise de fonds nécessaires à l'installation de fondations traditionnelles d'une mosaïque. Hélas, ces initiatives à première vue astucieuses, mais réalisées à la hâte, ne se sont pas révélées solides à long terme.

Figure 7
Xanthos, basilique Est, nef centrale ; empreintes de dalles de l'*opus sectile* détruit (ph. CNRS-M.-P. Raynaud)

6. Restaurations anciennes des sols

Les restaurations racontent la durée d'utilisation au même titre que les usures, les occupations successives, les transformations et réaménagements des espaces ; elles témoignent de la prospérité respective des différents habitants selon l'époque de réfection et de leur sensibilité esthétique.

- La catégorie la plus sommaire des restaurations consiste en comblements de lacunes, toujours visibles (cicatrices de lisières, niveaux, matériaux, taille des cubes, couleurs ou décors différents). Ces comblements sont d'une valeur esthétique toute relative. La qualité des pièces est en effet très variable et révélatrice, depuis l'obturation « de fortune » par un mortier de chaux ou une dalle de marbre, l'empiècement en tesselles blanches jusqu'à l'imitation

21 P. Blanc et L. Krougly, Atelier de Restauration du Musée d'Arles Antique, ont pratiqué la consolidation *in situ* et la mise en place de la protection de la majeure partie des mosaïques de la basilique Est de Xanthos, travail qu'ils n'ont pu continuer récemment, faute de financement.

22 Comme on l'a vu plus haut, le dallage primitif en *opus sectile* une fois détruit, on a réutilisé son mortier pour installer une nouvelle mosaïque.

23 On avait à de multiples reprises constaté deux phases de construction proto-byzantines, proches l'une de l'autre, et leur lecture fut confortée par la preuve des manifestations d'un tremblement de terre. Le baptistère, que l'on savait construit dans un second temps très proche du premier en s'appuyant contre l'abside primitive, a pu s'intégrer dans la seconde vague de travaux qui a suivi le désastre. Il semble presque certain désormais que l'édifice a subi cette première secousse alors qu'il n'était pas achevé. La publication des fouilles, en cours sous la direction de J.-P. Sodini, développera ce point.

24 Tables d'autels et ambons successifs, chapiteaux de deux types, etc., étaient attestés.

Figure 8
Xanthos, basilique Est ; à droite, fragments de la mosaïque détruite du premier état, remployés en remblai sous la mosaïque du second état (conservée à gauche) (ph. CNRS-M.-P. Raynaud)

soigneuse du décor en continuité, en passant par une disposition dans le désordre des tesselles récupérées, le bouchage au décor simplifié, ou même le décor délibérément différent du décor d'origine (fig. 9), etc. L'aspect plus ou moins harmonieux de ces pièces témoigne de la qualité des restaurateurs, professionnels ou occasionnels, des moyens financiers du commanditaire, des matériaux dont les artisans disposent, ainsi que du respect des uns et des autres vis-à-vis du décor primitif[25].

- La réfection la plus habituelle est le recouvrement d'un sol antérieur par une nouvelle couche de mosaïque : utilisant comme assise (hérisson) le sol précédent, le nouveau sol est légèrement surélevé, mais ne nécessite pas d'importants travaux de fondations. On ne découvre la couche inférieure que dans les lacunes ou par dépose de la couche ultérieure.

- Il existe aussi des mutilations volontaires, destinées à faire disparaître des motifs jugés gênants ou hérétiques, illustrant la notion de *damnatio memoriae*. Ce pourrait être le cas à Saranda, pour certains tapis manifestement remplacés lors de la transformation de la synagogue en église[26]. En Jordanie, le cas est particulier : on constate dans nombre d'exemples d'églises l'ablation exclusive et systématique des motifs figurés (têtes, mains, pieds, pattes) au 8e siècle, tout en préservant le reste de la mosaïque. Les lacunes ainsi formées sont

25 Sur ce sujet, voir les ouvrages de W. Daszewki, entre autres Daszewki 2003: 245-254. Voir aussi la bibliographie donnée par l'auteur.

26 Les tapis antérieurs ayant disparu, ceci est une hypothèse. Cf. Raynaud et al. à paraître.

Figure 9
Xanthos, basilique Est, empiècement dans la nef sud (ph. CNRS-M.-P. Raynaud)

immédiatement et soigneusement rebouchées avec les tesselles récoltées[27], réinsérées dans le désordre, ou en dessinant un motif végétal (fig. 10). On a interprété ces destructions systématiques à une volonté aniconique, longtemps attribuée aux premiers musulmans, mais la découverte de motifs chrétiens comme des croix dans certains comblements privilégie désormais l'hypothèse d'un refus délibéré des images de la part de la communauté chrétienne, qui aurait ordonné elle-même ces destructions. Cette « iconophobie » reflète le souci de cette époque de lutter contre l'idolâtrie, état d'esprit confirmé par l'étude des textes et l'histoire de l'église en Orient et des conciles[28]. On soulignera le fait que ces destructions partielles ont de toute évidence été réalisées par des artisans mosaïstes, comme le prouve la qualité technique des « bouchages ».

- Le changement de destination et de proportions d'un espace occasionne souvent des reprises et des restaurations des sols. Leur lecture facilite la compréhension de l'évolution de l'occupation d'un bâtiment ; de nombreux exemples apparaissent lors des fouilles. On citera parmi d'autres le cas des maisons du quartier de l'Odéon à Carthage[29].

- On observe dans certains cas un respect tout particulier des occupants successifs pour les restes des mosaïques antérieures : l'exemple de l'église de Saranda (Albanie) en est une étonnante illustration. La succession des phases d'aménagement de cet édifice compliqué - synagogue transformée en église - est apparue lisible à travers l'étude des sols. Chacun des occupants a tenu à garder dans la mesure du possible les tapis antérieurs – lorsqu'ils ne choquaient pas – en les restaurant et les incluant dans les nouveaux décors, ou même en imitant dans des empiècements le décor de parties plus anciennes (fig. 11)[30].

27 Cette destruction est si précisément faite qu'il est souvent possible de deviner par la forme de la lacune l'objet ou l'animal représenté à l'origine. Malice de l'artisan chargé de cette opération ?

28 À ce sujet, voir les nombreux ouvrages de M. Piccirillo, entre autres Piccirillo-Alliata 1994: 158-164 et la bibliographie jointe ; Ognibene 2002: part. 95-130.

29 Maison du Cryptoportique, Maison de la Rotonde ; Missions franco-tunisiennes sous la direction de J.-P. Darmon et M. Ennaifer. en cours de publication.

30 On a ainsi pu discerner quatre phases de mosaïques juxtaposées dans un même bâtiment. Raynaud *et al*. à paraître.

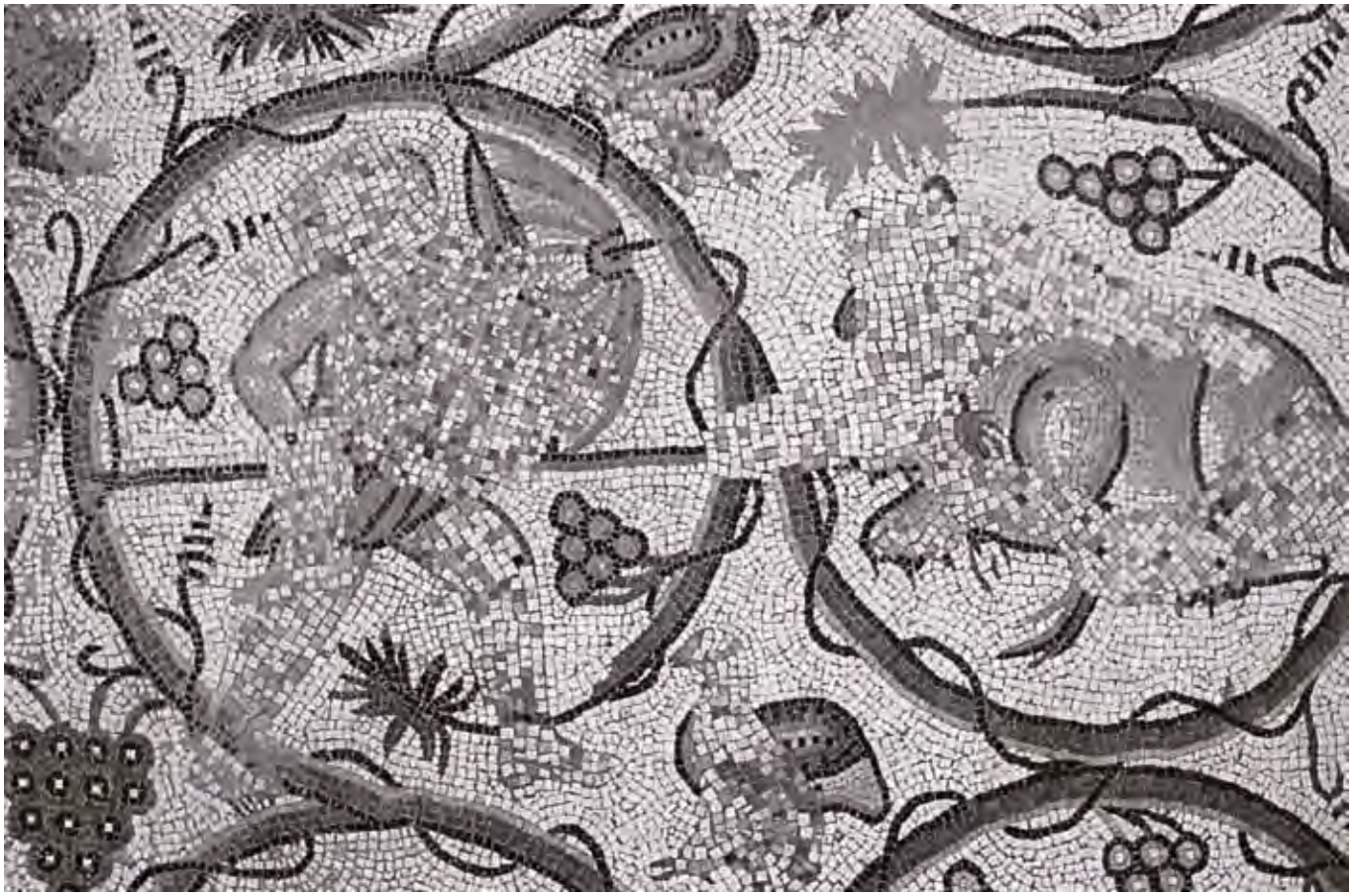

Figure 10
Saint-Etienne à Umm al-Rasas (Jordanie), destruction volontaire des motifs figurés (d'ap. Piccirillo 1994, fig. 54)

Les caractéristiques respectives de chaque intervention de restauration ancienne s'avèrent donc bavardes sur l'époque à laquelle elles se rattachent. Elles seront interprétées différemment selon qu'elles sont la production d'un atelier confirmé, témoin d'une volonté de re-décoration ou d'amélioration ambitieuses, ou selon qu'elles reflètent simplement le souci ponctuel de maintenir une mosaïque *in situ*, dans une continuité d'occupation, afin de prolonger la vie du pavement. Ces deux états d'esprit sont forts différents.

7. Recherche de la production d'ateliers

L'ancienne prééminence du « tableau figuré » et l'indifférence vis-à-vis du décor géométrique (considéré souvent en peinture comme en mosaïque comme une catégorie secondaire du décor) avaient anciennement conduit à la perte d'un nombre considérable de témoins souvent laissés sur place sans protection. Or la proportion des décors géométriques sur un site est quantitativement bien plus importante. C'est cette fréquence même qui autorise, par des comparaisons pertinentes, l'identification d'ateliers, éventuellement de mains. On repère dans les décors géométriques, plus répétitifs, des « tics de langage », des maladresses ou des manies d'artisans, autant de petits détails spécifiques à un atelier et inconsciemment répétés. On peut parfois suivre des influences diffuses d'un foyer de production à un autre, sans doute le fruit du déplacement d'ateliers, de travaux communs, du changement d'atelier ou de la mise à leur propre compte de certains artisans.

Figure 11
Saranda, synagogue-église, panneaux ouest de la nef ; le panneau de droite imite grossièrement la bordure de celui de gauche, qui lui est antérieur (ph. CNRS-M.-P. Raynaud)

- Parmi les critères servant à cerner des groupes homogènes, on a déjà cité les critères techniques, tels l'observation de la taille des cubes, leur densité au dm^2, la taille des joints et la qualité du mortier de finition, le choix des matériaux et des couleurs (reflet du choix de chaque atelier), sont autant de détails communs à chaque atelier. On décèle parfois quelques influences extérieures. Citons dans l'atrium de Xanthos (basilique Est), l'emprunt par un des deux ateliers ayant travaillé simultanément d'une tesselle de marbre violet, matériau rare exclusivement utilisé par l'autre atelier. On constate aussi l'influence mutuelle et progressive du répertoire de ces deux ateliers qui cohabitent sur le même chantier.

- On peut ajouter à ces critères distinctifs entre ateliers la façon de poser les tesselles (filets noirs d'abord par exemple, ou les raccords en pose parallèle ou perpendiculaire au mur), ou encore la façon de combler les fonds blancs : en cernant les formes sur plusieurs rangs, en lignes horizontales ou en écailles par exemple.

Ces diverses caractéristiques techniques sont nécessairement similaires dans deux œuvres d'une même main, et souvent dans la production d'un même atelier.

- La conception d'ensemble du décor d'une mosaïque et la façon dont il s'intègre dans les murs, intervient parmi les critères significatifs pour déterminer des groupes homogènes de pavements. En effet, l'organisation d'ensemble d'un

Figure 12a
Rinceaux de lauriers à Loupian (Narbonnaise, ph. H. Lavagne) et Séviac (Aquitaine, ph. CNRS-M.-P. Raynaud)

Figure 12b
Rinceaux de lauriers à Loupian (Narbonnaise, ph. H. Lavagne) et Séviac (Aquitaine, ph. CNRS-M.-P. Raynaud)

décor dépend moins du commanditaire que de l'artisan : la façon dont les tapis se juxtaposent, s'adaptent ou non au cadre architectural, la multiplication des bordures, l'organisation d'ensemble de la surface à décorer, ou au contraire le manque de planification, sont importants pour mieux évaluer l'expérience et la qualification des mosaïstes. Dans le cas des églises de Byllis, cette conception globale du décor de certaines parties à permis de clairement identifier un atelier[31]. Plus encore, la mise en comparaison avec d'autres pavements a permis de reconnaître les mêmes caractéristiques dans des pavements contemporains de la région d'Ohrid[32]. L'observation de multiples autres détails similaires (motifs, répertoire, couleurs) a par la suite confirmé cette hypothèse.

- En dernier lieu, le répertoire tient un rôle essentiel dans la classification par ateliers. Les choix du répertoire général d'une mosaïque ne dépendent pas uniquement de l'artisan ; commanditaires et modes entrent en ligne de compte.

31 Muçaj-Raynaud 2005: 383-398.

32 *Ibid*. part. 395-397, fig. 12. Cf. aussi Bitrakova-Grozdanova 2006: fig. 8-10.

Figure 13
Xanthos, basilique Est, nef sud ; tapis du premier état à droite (svastikas dessinés par un double filet blanc) ; à gauche, restauration du second état : les svastikas sont tracés en noir (ph. CNRS-M.-P. Raynaud)

Pourtant le choix de certains motifs secondaires et purement ornementaux reste à la discrétion du mosaïste. Des coïncidences de motifs, d'apparence anodine, permettent dans certains cas d'attribuer deux pavements éloignés à un même atelier de façon assurée. Ces motifs particuliers ou façon de faire spécifiques constituent une signature de l'artisan à son insu ; par exemple l'utilisation en écoinçon d'un calice trifide sur fond rouge, à Byllis et à Studençista (région d'Ohrid), a attiré l'attention sur les similitudes entre ces deux centres[33]. En Aquitaine, des pavements de Valence-sur-Baïse et Séviac, peuvent être attribués au même atelier grâce à un traitement des feuilles de vignes ou des paniers de fruits absolument similaire et original[34] ; enfin dernier exemple, à Séviac (Aquitaine) et Loupian (Narbonnaise), on a observé la même façon de traiter les couronnes d'acanthe ou les rinceaux de lauriers (fig. 12a et b)[35]. Ces détails ou « tics de langage » similaires sont plus facilement repérables dans les décors géométriques et végétaux. Ils présentent l'avantage d'être facilement comparables, contrairement aux détails figurés qui, rarement identiques, en appellent davantage à la formation esthétique de leur observateur.

33 Voir notes 28 et 29.

34 Balmelle-Lapart 1987.

35 Aragon-Launet-Balmelle 1987-88: fig. 6, 7 et 10. Ce rapprochement entre deux ateliers éloignés a été confirmé par plusieurs observations. Parmi elles, la présence dans les deux villas d'une composition d'origine orientale, inconnue ailleurs en Occident, la composition centrée en croix de U, cf. Raynaud 1996: fig. 2-4.

Il arrive que d'autres habitudes, spécifiques à telle ou telle production, aident à l'identification discriminatoire d'ateliers : ainsi à Xanthos, la propension d'un des ateliers à tracer ses compositions en « négatif » ; le dessin n'est pas réalisé par une ligne de tesselles noires mais par un double filet blanc (fig. 13).

Dans la Basilique Est de Xanthos, l'évolution du répertoire graphique de deux ateliers ayant travaillé simultanément a permis, à travers les emprunts mutuels, de déduire par quel secteur le travail avait débuté. Cela a aidé à appréhender la façon dont le chantier de construction de l'église s'est déroulé[36] et à distinguer cinq ateliers de mosaïstes. C'est à Xanthos que l'on a pu mener l'analyse la plus aboutie sur les différents ateliers de mosaïstes[37].

Il apparaît constamment, lors de cette brève approche par le terrain, que la qualité des observations *in situ* dépend d'un nettoyage extrêmement soigneux, d'une collaboration étroite entre archéologues et restaurateurs, et parfois d'une orientation de la fouille décidée conjointement. La présence des spécialistes de la mosaïque sur le terrain doit donc être soutenue et régulière, et non pas ponctuelle comme cela arrive trop souvent. L'ensemble de ces observations et analyses aboutit à l'établissement d'une chronologie relative, qui aide à la compréhension de l'histoire de l'espace et du bâtiment. L'exemple de la basilique Est de Xanthos offre un exemple de ce type de contribution qui, mis en relation avec les études archéologiques, céramologiques, de l'architecture, de la sculpture et du matériel, par convergence des données, aboutit à une meilleure connaissance de l'édifice.

Si l'étude iconographique et stylistique peut s'avérer riche en indications sur les commanditaires et l'espace que la mosaïque décore, une bonne étude technique renseigne davantage sur sa fabrication, sur les ateliers de mosaïstes, sur les vicissitudes subies par le pavement (restaurations, accidents – tremblements de terre, incendies ou reconstruction) et ainsi sur l'histoire du bâtiment et de ses occupants successifs.

36 Raynaud 2008: fig. 1a et 1b.

37 *Ibid.*, et Raynaud, *Xanthos* in press.

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Family, Death and Afterlife According to Mosaics of the Abgar Royal Period in the Region of Osroene

Barış SALMAN*

The region of Osroene is the area including Edessa (Şanluurfa), Carrhae (Harran), and Birtha (Birecik) located east of the Euphrates (Fırat) River. The Abgar Dynasty, the major power in the region, overthrew Seleukos's control and regained independence in the region in132 BCE. Family members depicted together and at ease in mosaics of the royal period symbolize the importance of peace within the family and family unity. Of the figures portrayed next to the genearch, the wife is the most striking individual with her dignified pose. Family mosaics indicate that whole family will be together after death as they were in life. A Phoenix and two Orpheus mosaics found in the region also support the pagan notion of a new life after death.

Osroene bölgesi büyük ölçüde Edessa (Şanluurfa) ile anılan, Karrhae (Harran), Birtha (Birecik), yerleşimlerini içine alan, batısından Euphrates'in (Fırat) aktığı bölgedir. Bölgede önemli bir güç olan Abgar sülalesi M.Ö. 132 yılında Seleukos idaresini sona erdirmiştir. Bu sülalenin oluşturduğu krallık idareyi M.S. 242'ye kadar sürdürmüştür. Krallık Dönemine tarihlenen mozaiklerde bir aileyi oluşturan bireylerin bir arada ve özenli bir şekilde işlenmesi aile huzurunun ve birlikteliğe verilen önemi vurgular. Aile reisi yanında yer alan bireyler içinde kadın, saygın pozisyonu ile dikkat çeker. Aile mozaikleri ölüm sonrasında da gerçek hayatta olduğu gibi bir arada olunacağını göstermektedir. Ölüm sonrası yeni bir hayata inanan bölge paganlarının mezarlarında çıkan bir adet Phoeniks mozaiği ve iki adet Orpheus mozaiği de bunu desteklemektedir.

Key Words: Osroene, Edessa, Abgar, Family, Orpheus, Phoenix

The region of Osroene is the area including Edessa (Şanlıurfa), Carrhae (Harran), and Birtha (Birecik) located east of the Euphrates (Fırat) River. The Abgar Dynasty, the major power in the region, overthrew Seleukos's control and regained independence in the region in 132 BCE. Family members depicted together and at ease in mosaics of the royal period emphasize the importance of peace and unity in the family. Of the figures portrayed next to the genearch, the wife is the most striking individual with her dignified pose. Family mosaics indicate that the whole family will be together after death as they were in life. A mosaic of a Phoenix and two Orpheus mosaics found in the region also support the pagan idea of a new life after death.

The Abgar Kingdom (132 BCE-242 CE) comprises the region between the Euphrates and Khabur Rivers and includes Carrhae, Birtha, Mesudiye and Serrin. Its capital is Edessa. The Kingdom which overthrew Seleukos's control and regained independence in the area attracts attention because of its special identity. In the period of freedom before Parthia and the Romans took control, the kingdom led an independent and traditional existence during the times mentioned and is remembered historically with this same character. The traditional characteristics of art in this region show themselves especially in mosaics[1]. Mosaics have been discovered in Mesudiye, Birtha, Serrin and especially at Edessa. Numerous mosaics were found, and some are now lost and only photos and drawings of them remain today. Others are kept in museums (see: Colledge 1994: 196, fig.114; Healey 2006: 313–327) and private collections overseas (see: Bowersock 2006: fig. 2,4; Parlasca 1984: 231; Desreumaux 2000: 212–215), while additional examples remain undocumented.

Edessa is the city where a major part of the royal period mosaics was discovered. Themes in Edessa mosaics include the family, family solidarity, and death and the afterlife, and they are products of an original local workshop(s) (Salman 2007: 242). Mosaics mentioned above whose provenance is unknown should be attributed to the site of

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1 These traditional characteristics result from Persian and Syrian influence.

Figure 1
Family Portrait Mosaic, Lost.
(Segal 2002: fig. 1)

Edessa. Edessa, which is the center of the Osroene Kingdom, created an original mosaic school for a brief time. Some of the pavements have dates on them. These mosaics which use the Seleucid calendar were made between the end of the 2nd century and middle of the 3rd century CE. In this period rulers in the kingdom were named Abgar VIII (214-240 CE), Abgar IX (177-212 CE) and Severus Bar Abgar (212-214 CE), Ma'nu Bar Abgar IX (214-240 CE) and the last king, Abgar Frahat Bar Ma'nu X. (240-242 CE) (Hayes 2005: 24–25). The reason for the manufacture of mosaics during these kings' reigns is not the kings' personal initiative but the intense interest in mosaic-making that existed both in Rome and locally. Many mosaics, dating to the 2nd and 3rd centuries CE, were found in Zeugma (Ergeç 1995: 2–10), which is west of Euphrates River, and in Antioch (Campbell 1938: 205–218), which has a similar culture to other North Syrian settlements and the Osroene Region.

Even though mosaics began to be discovered after J.B. Segal's research in the 1950's in Edessa and the neighboring region, some earlier discoveries also have been documented too (Balty 1981: 388, fig. 23; Leroy 1957: 307–315). Mosaics in which members of the family are depicted emphasize the comfort of the family which gathers around the genearch or *paterfamilias*. In some examples, members are depicted standing, while in others they are portrayed as busts in frames. Another iconographic feature also preferred in family mosaics is symposium scenes, in which the genearch lies on a kline and other members are shown serving and honoring him. Similar scenes are present on reliefs (Drijvers 1980: fig.17) in Northern Syrian settlements, and at Edessa and in the neighboring region, especially at Palmyra (Colledge 1976: fig. 61–62). The symposium scenes reflect an important funerary ritual in the region.

Figure 2
A fragment of Tripod Mosaic, Aya Irini,
Istanbul-Turkiye (Photo. B. Salman)

Figure 3
A fragment of Tripod Mosaic, Aya Irini, Istanbul-Turkiye (Photo. B. Salman)

The mosaic J.B. Segal discovered in 1952 at Edessa in the city's south necropolis, in which members of the family are portrayed standing, is lost today (Balty 1995: 15, fig. 5,1; Drijvers and Healey 1999: 170–171, fig. 49; Dunbabin 1999: fig. 182; Ross 2001: fig. 5,7; Segal 1953: 117–118, fig. 12,1; Segal 1954: 29–30; Segal 2002: fig. 1). It is called the Family Portrait Mosaic and it shows a total of seven figures. Four of them are men, two are women, and one is a little girl (Fig. 1). In the Tripod Mosaic, discovered in 1956, whose two fragments are kept in Aya Irini at Istanbul (Figs. 2-3), six figures - two men, two women and two children - are portrayed (Segal 1959: 153–155, fig. 1). An object similar to a tripod, held by the genearch – possibly an incense-burner - represents a religious ritual in the family (Fig. 4). Mosaics in which members are portrayed standing emphasize the family's unity and hierarchical structure.

Similarly, Symposium Mosaics and other pavements, in which members of the family are shown as busts, display the family and its hierarchical structure. A mosaic discovered in 1901 in Edessa and on display in Istanbul today is composed of three friezes. The mosaic, which still preserves its tessera colors, has a total of six figures depicted as busts, two in each frieze (Bossert 1951: 131, fig 415). In the top section are the genearch Aphtuha and his wife Šumu. In the middle section are two young men, and at the bottom are two young women (Fig. 5). The Abgar Mosaic which portrays family members as busts was found in 1979 in Edessa, but later the female figure was stolen and the mosaic was reburied in its original site. Today the area where the mosaic was found functions as a park. Figures are depicted in two friezes. There are a total of four men and one female figure depicted in the mosaic: in the upper register there are three bearded men, and in the lower section one man and one woman. According to the inscription, a man named Abgar stands in the middle of the upper section and has ornate clothing. He is most probably the ruling king, depicted in this mosaic to honor the family[2]. Right next to him is the genearch, who is probably holding a seal and was a high-ranking official (Nuhadra). In contrast to all of these men, most eye-catching figure in the mosaic is the woman. Although she is depicted in the lower register, her head reaches into the upper zone, and the scene is arranged accordingly. With her ornate clothing and headscarf, she is the largest figure in the imageand the closest to the viewer (Fig. 6) (Drijvers 1981: 17–20, fig. 1).

The last group of family-scene mosaics is the Funerary Symposium group. The most famous mosaic in this group is the one discovered by J.B. Segal in 1956. This pavement disappeared after a while, and fragments of it were seen in an antique dealer's shop in Beirut[3]. In the mosaic, the husband, wife and six children

2 There was a discussion between H.J.W. Drijvers and J.B. Segal on the Abgar figure and his identity in the mosaic. The titles "master and patron" used for Abgar in the mosaic may indicate he is a king. Also his different and ornate clothing supports this interpretation. Drijvers dates the mosaic to end of the 2nd century -beginning of the 3rd century CE, because of the border decoration. The mosaic roughly dates roughly to the 3rd century CE. If the Abgar figure in the mosaic is one of the Abgars living in this period then he must be either Abgar VIII (172–212 CE), Abgar IX (212–214 CE) or the last king Abgar X. (240-242 CE). Because from the end of the 2nd century to the collapse of the kingdom there were three kings named Abgar. Drijvers thinks that the Abgar on the mosaic is the Abgar VIII. The name Abgar is a common one in Edessa and similar cultures. On the other hand Segal, according to a coin depicting Abgar VIII, thinks that even if the Abgar in the mosaic is a king, he can not be Abgar VIII, because Abgar is depicted with a crown on the coin. On the crown there are crescent and star motifs, which are important symbols for Edessa. Also the king looks younger here. In the mosaic Abgar wears a common Phrygian cap that men from Edessa use. That is why the figure in the mosaic does not fit the normal Abgar VIII iconography. Segal believes if this man is a king, then he should be Abgar X; see, Drijvers 1982: 167-189; Segal 1983: 107-110.

3 In 6-8 September 1980, on his paper in a mosaic symposium in Ravenna K. Parlasca said he has seen two lost fragments of this mosaic in an antiques dealer in Beirut. These fragments show two little boys to te below of the scene. This paper is printed in 1984. See. Parlasca 1984: fig. 2

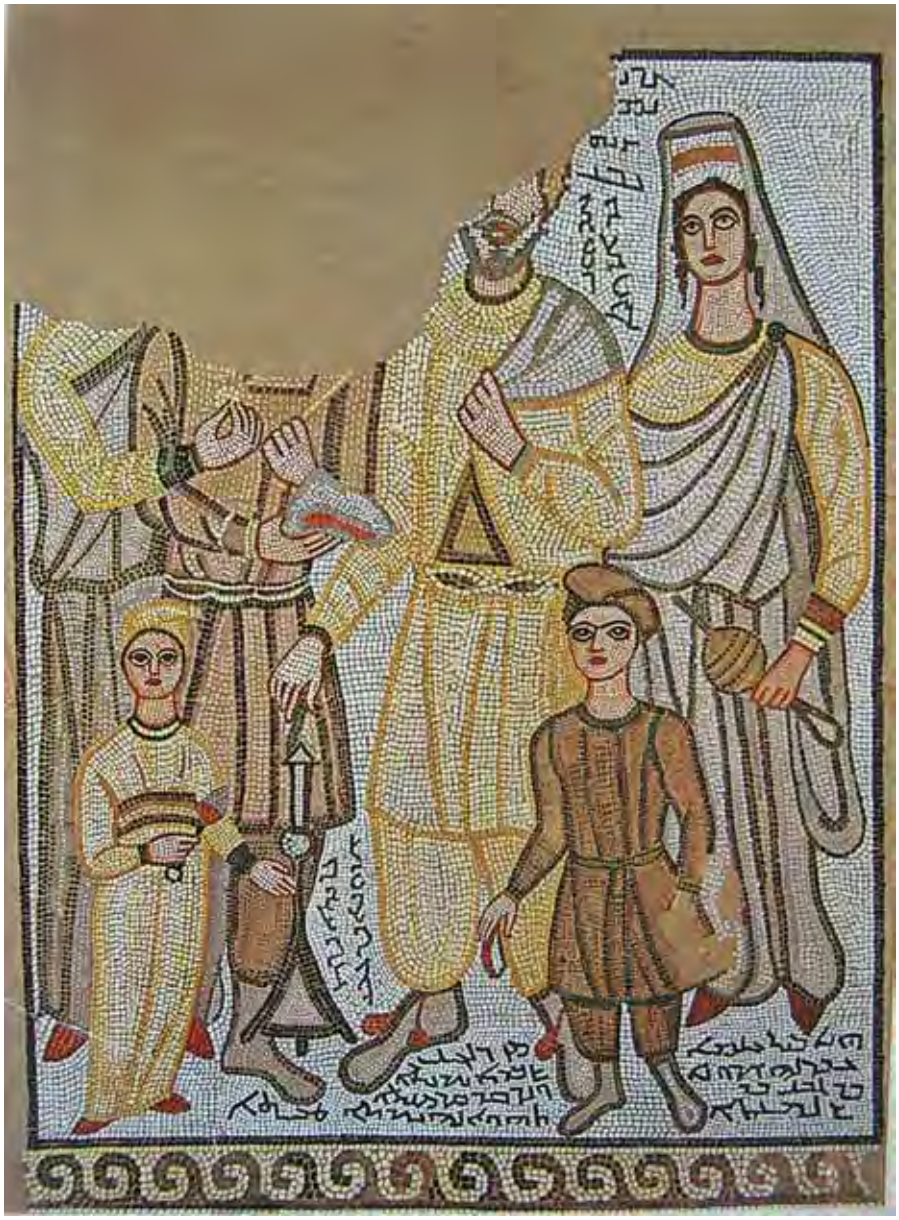

Figure 4
Tripod Mosaic. (Segal 1959: fig. 1)

were depicted. Within the scene, the deceased (named Zaydallat according to the inscription) reclines on his side on a kline or sofa. He is holding a wine glass and resting his arm on a pillow comfortably. At the same time he is leaning his back against a cushion. Right next to him is his wife with her high headscarf shown in a respectful pose. Between him and her wife are a little girl with a headscarf, and on the left three boys serving him and finally two boys portrayed as busts (Fig. 7) (Balty 1981: 388, fig. 23; Balty 1995: 15, fig. 5,2; Colledge 1994: 191–192, fig. Drijvers and Healey 1999: 180–183, fig. 54; Dunbabin 1999: fig. 183; Leroy 1961: 165–169; Parlasca 1984: 227–229, fig. 1–2; Segal 1959: 155–157, fig. 3; Segal 2002: 93, fig. 2).

Other than this lost example, there are some other preserved examples depicting this ritual of the funerary symposium. One work kept in Aya Irini in two pieces and depicting a family of four (Fig. 8) (Drijvers and Healey 1999: 216–217, fig. 69), and another kept in the Şanliurfa Museum, which is badly preserved (Fig. 9) (Salman 2007: 160–162, fig. 70–75), are examples of funerary symposium

Figure 5
Aphtuha Mosaic, Archaeological Museum, Istanbul-Turkey (Photo. B. Salman)

mosaics[4]. Scenes of a funerary symposium in mosaics are always depicted in same way: the genearch lies on a sofa holding a wine cup, and next to him are the wife in a respectful pose and the children serving him. Symposium mosaics iconographically express the funerary ritual of the symposium held after the deceased has passed away, to bid him farewell. But we can be more concrete here and come to this conclusion: on symposium mosaics family members, especially children serving their father and the wife standing or seated next to him, express respect and love for the father. The genearch lying on sofa shows how comfortable and well respected he was in his lifetime and how faithful was his wife to him.

One of the most striking characteristics of the family mosaics of the region is the realistic depiction of the figures. Mosaic artists portrayed figures as realistically as possible and reached a remarkable degree of accuracy. Figures have calm facial features (Segal 2002: 68). Figures looking around with big eyes have their mouths closed and mostly portrayed with a serious look. All men, young and old, are shown with beards. The main figure in the Abgar Mosaic, Abgar himself, is portrayed with a gray-black beard to show that he is past middle age (Drijvers 1981: 18, fig. 1). The figures in the mosaics are depicted with ornate, eastern-style dress (Dunbabin 1999: 173).

4 A mosaic from the Osroene region published by S. Brock recently shows the funerary symposium iconography. This mosaic is in the mosaic style of Edessa and belongs to the royal period. S. Brock in his publication of the inscriptions in the mosaic tells that it belongs to a private collection, but he does not say who owns the work or in which country the mosaic is located. See Brock 2007: 714-721, fig: 1-3; many mosaics from this region share the same fate, and their locations remain unknown. For similar examples see, Bowersock 2001: 411-416; Desreumaux 2000: 212-215.

Figure 6
Abgar Mosaic. (Drijvers 1982: fig.1)

The most important person among family members is the genearch, the man of the house. The royal figure honoring the family and the genearch in the Abgar Mosaic is an exception to this rule. In all mosaics in the region, all men including the genearch are portrayed with beards. Men have elaborate dress. Caps are the distinguishing features of the men. Even though the Phrygian cap is mostly used, sometimes it is possible to see other types of caps. For example, in the Family Portrait Mosaic, the deceased, the one in the center of the scene, wears a form of headgear similar to a turban. This is the only example of a man wearing a turban in this region's mosaics. One of the figures in the mosaic right next to him wears a high Phrygian cap. The presence of this bonnet and his placement on the man's right side could mean that he is the oldest son of the genearch. The other two men are portrayed without headgear and have full wavy hair (Segal 2002: 76). Another man portrayed without headgear also is present in the Abgar Mosaic. Men are portrayed with a knee-long tunic and wide trousers similar to a shalwar. Similarly, boys wear knee-length shirts as well as trousers. The trousers descend below the knee[5]. Trousers sometimes appear loose and sometimes tighter. There are two types of shoes: one with triangular clips and an open back, and another, taller shoe which is still used in the east today.

Despite the men's importance in local mosaics, the most striking figures are the women. Their positions in the mosaics, their ornate clothing and dignified poses show us how much they were esteemed. Their poses in these mosaics also show us their position of authority within the family. This also indicates to us the important status of women in the region. In local mosaics women are portrayed immediately next to the husband, and in funerary mosaics they are portrayed sitting in dignified poses with very fine dress and headscarves. One of the most important details in mosaics is the fact that each woman's face is

5 This type of trousers can be considered a Persian influence, and it was first used by them.

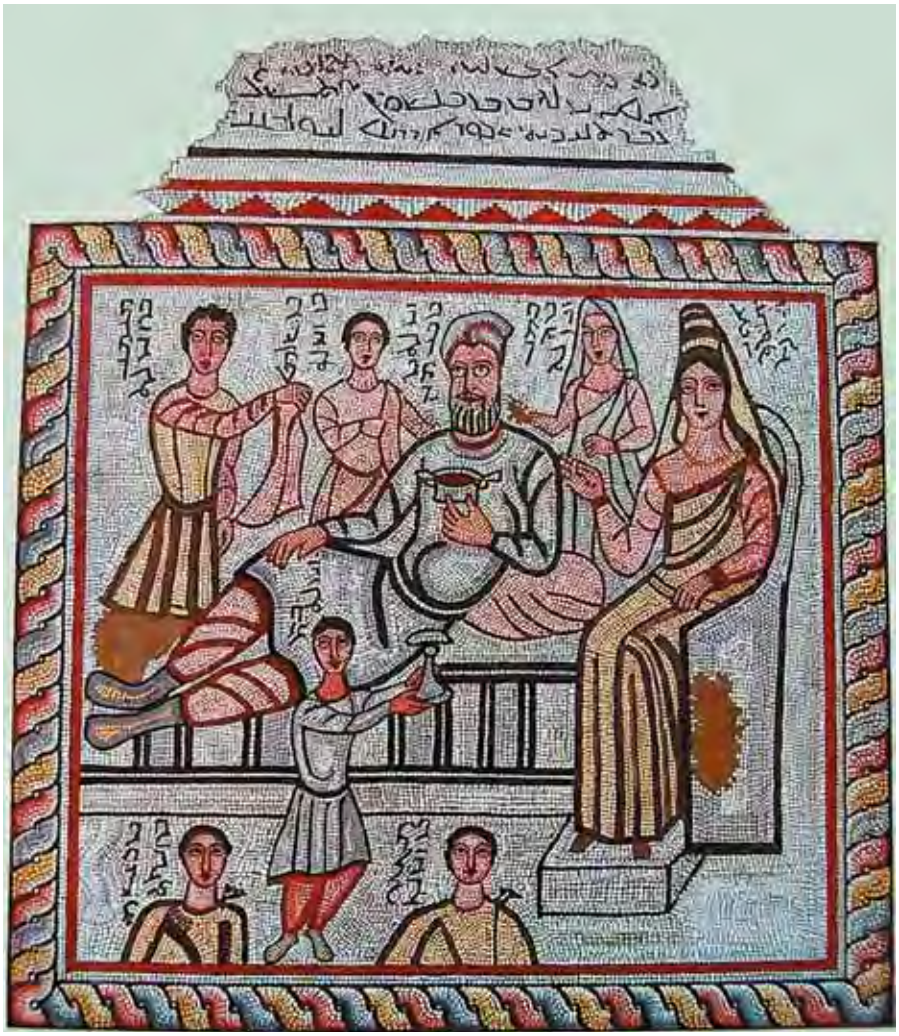

Figure 7
Funerary Couch Mosaic, Lost
(Dunbabin 1999: fig. 183)

always uncovered. Their headscarves hang down but do not cover their faces. Even though the headscarf is thought by some to be a veil (Dunbabin 1999: 173), the open faces do not support this notion. The headgear women use under their headscarf can still be seen today in the region. This headdress is called Köfü and is associated with the family's wealth (Segal 2002: 74). Accordingly, a pointed headdress with many stripes shows that the woman is rich, whereas a flatter and wider headdress with fewer stripes shows that she is from a less affluent family[6]. Women are portrayed with braided hair and long tunics with embroidery. Over their tunics they wear long caftans in different colors attached to the left shoulder with a brooch or a clip similar to a fibula (Segal 2002: 74). Little girls have plainer clothes. They do not wear caftans, and their tunics are fastened with a wide belt (Segal 2002: 74). Little girls who have not reached puberty wear their hair uncovered and fastened with hairpins in three ponytails, as we can see in the mosaics (Ross 2001: figs. 5,7).

Mosaics representing the family show us the period's family structure clearly. In the hierarchy of the family, husband, wife and children all seem attached to each other in life. In the mosaic in which every member of the family is presented, this attitude is conveyed by having each family member's name placed next to

6 This cap is also similar to the cap used in 19th-century tower shaped headgear or the "hennin". See Segal 2002: 74.

Figure 8
Funerary Couch Mosaic, Aya Irini, Istanbul-Turkiye (Photo. B. Salman)

the figure and written in Estrangelo Syriac. This devotion to each other in life can still be seen in the region. Since these mosaics were discovered in graves and bear inscriptions about death and the afterlife, including names other than family members' names, we can observe the local pagans' approach to these subjects. Family mosaics show us that people are attached to each other in death as they are in life. In other words, these scenes should be considered a reflection of the desire for togetherness in life, death and the afterlife. It seems that pagans in the region think of death as a means to bring the family together and to start a new life together after death. So an appropriate death and funerary ritual is developed in the region. From a different perspective, depiction of family members in the mosaics is the result of the solidarity of the members, alive or not. Because the grave is the place where the living and dead come together, the deceased are brought back to life in the mosaics made by their kin. Members of the family, the close kin, will remember the good old days, when they see the deceased represented in the mosaic at the time of visiting the grave.

Inscriptions in the mosaics are written in Estrangelo Syriac, which is a dialect of the Aramaic language special to this region[7]. One of the striking features of the inscriptions is the "House of Eternity" expression in the mosaics[8]. It shows us the importance of the tombs; they provide this name and indicate the importance of the grave cult for pagans. It reads: "*I, Aphtuha, son of Garmu, made for myself this tomb, for myself, for my children and for my heirs to eternity*" (Drijvers and Healey 1999: 163–164) on Aphtuha mosaic. And "*I, Barsimya, son of Ašadu, made for myself this house of eternity, for my children and for my brothers, for the life of Abgar, my lord and benefactor"* (Drijvers and Healey 1999: 185–186)

7 For the inscriptions in mosaics and graves of the region, see Brock 2007: 715–717; Drijvers 1973: 1–14; Drijvers 1993: 147–161; Healey 2006: 313–327; Segal 1954: 2–36; Segal 1957: 513–527.

8 The expression of "house of eternity" can be seen in the Zenadora Mosaic, Aphtuha Mosaic, Balay Mosaic, Tripod Mosaic, Phoenix Mosaic, lost Orpheus Mosaic, and Abgar Mosaic.

Figure 9
Funerary Couch Mosaic, Archaeological Museum, Şanlıurfa-Turkiye (Photo. B. Salman)

appears on the Abgar Mosaic. For the one who had the mosaic and the tomb made, the now deceased, the genearch proclaims the importance of the tomb, made for all of his kin. The inscription on the Tripod Mosaic shows that the local pagans believed in life after death: *"Adona, son of Gabbay son of Šelam'ata made this house of eternity for himself. Whoever removes the sorrow of* (his) *offspring and mourns for* (his) *forefathers will have a happy afterlife*" (Drijvers and Healey 1999: 172–173). This also can be considered an expression of belief in the hereafter (Yaşar 2003: 111-121). The family's wish to spend life after death together causes them to be shown happy, peaceful and calm in the mosaics.

In inscriptions other than those in mosaics, tombs are said to be under the gods' surveillance, and whoever harms them will be punished by the gods. For example, an inscription found in Sumatar (for Sumatar, see Segal 1953: 97–119) gives us information about this and life after death: *"I, Gayyu, daughter of Baršuma, made this grave for myself. Whoever comes here shall not remove my bones. Whoever does it shall not have the other world* (afterlife) *and Maralahe curses him*" (Drijvers and Healey 1999: 78). Another inscription from a tomb in Serrin[9] dated to 73 CE reads: "..*Whoever shall give praise-all gods shall bless him. Whoever comes and damages this tomb shall not have a grave and shall his children be blind"* (Yaşar 2003: 113). An inscription dated to a later period, 6th century A.D. found in Birtha reads; "...*God bless everyone come to this tomb and give praise"*(Yaşar 2003: 113). Life after death and the wish to treat the tomb and the deceased with respect are clearly expressed in the tomb inscriptions.

Besides the inscriptions, other visual evidence expressing life after death occurs in some mosaics found in Edessa. They include two Orpheus mosaics and another pavement representing a Phoenix (Balty 1981: 389; Drijvers and Healey 1999: 176–177, fig. 52; Ross 2001: 111–113, fig. 5.3; Segal 1959: 155; Segal 2002: 93, fig. 67), which is not commonly portrayed in mosaics. The mosaic examples with Orpheus, discovered by Segal in 1956 in the city, are lost today. In one mosaic Orpheus is portrayed leaning against a tree and sitting on a rock

9 Serrin is south of Edessa and northeast of Herapolis (Mabbug).

holding a lyre with horn-shaped tips. Animals are portrayed above each other in a vertical plane; a lion appears at the bottom and three birds occur above each other to Orpheus's left. At the bottom of the scene two draped figures, similar to a little girl and boy, represent the spirit and hold ontoa *tabula ansata*[10]. The inscription on the *tabula ansata* reads: *"I, Aphtuha, son of Barnay, on July of the year 39* (227-228 CE)*[11], made for myself this house of eternity, for my children and for my heirs"* ((Fig. 10) (Drijvers and Healey 1999: 178–179).

Figure 10
Orpheus Mosaic, Lost (Segal 2002: fig. 68)

The other Orpheus mosaic was found recently but then smuggled abroad. Today this mosaic is in the Dallas Art Museum. Orpheus sits in the middle but the chair or rock on which he sits is not visible. His head and upper body are seen from the front, but his lower body is turned to the right. He wears a typical Phrygian cap. Animals are arranged in two groups: an aggressive group consisting of a lion, tiger, leopard and a wild boar can be seen on the right, and a calm group of two birds, two wild goats and a colt or mule is on the left. We are used to seeing only calm animals in Orpheus groups so this example is different. The animals in the aggressive group all have the same pose, running and jumping up as if they were attacking Orpheus. We can see the shallow perspective in the animals being placed one above the other. In the mosaic there is a short inscription next to Orpheus's head: "*Bargased, mosaic-maker, laid the mosaic"* (Healey 2006: 319). This is the only artist's signature in a mosaic found in the region. On the calm animals' side, above the resting wild goat is the tomb inscription in a frame: *In the month of Nisan in the year five hundred five* (M.S. 194) *I, Pāpā, son of Pāpā, made for myself this chamber of repose, for myself and for my children and for my heirs. Blessed be Whoever sees and gives blessing"* (Fig. 11) (Healey 2006: 316–319).

The Phoenix Mosaic was found in the south necropolis by J.B. Segal in 1956 and disappeared a short time later. In the mosaic as the main feature is an *arcosolium* tomb, which is special to the city. In the background, a column – or maybe a stele - can be seen. On the coloumn there is a bird standing. Next to the bird there is a four-letter inscription which reads "Phoenix". This Phoenix represents the regeneration of life. The inscription in one corner of the mosaic reads: *"I, Baršamaš, son of Barga, on the year 547 made this house of eternity for myself and for my children for all times*" (Fig. 12) (Drijvers and Healey 1999: 176–177).

Belief about death is different in each culture. This belief is another aspect of the local religion. Art representing funerary rituals is also connected to this belief (Ross 2001: 96). In Greek and Roman society, the spirit was believed to return to the body[12]. Eastern Mediterranean Jews believe that the deceased goes

10 Even though some believe these figures are Eros and Psyche, that is not possible because the boy is draped, which is uncharacteristic of Eros. These figures resemble angels who will be very important in Christian art later. Angel or Greek Angelos (Αγγελος) is a very controversial term. The biggest problem is to identify which features belong to polytheism and which to monotheism. According to one idea, Angelos, a Greek creation, is associated with the underworld. Another idea says they are from the Near East. What we are sure of is the existence of angels in both polytheistic and monotheistic religions. In polytheistic religions, angels get their revenge from sinners by punishing them in the underworld. Angels with protective features are spirits wandering in trees and groves and in the sky. At this point we can talk about a Persian influence. The sky association and the Persian influence lead us to the conclusion that pagans in the region believed in angels. They represent the spirit and protect the grave. Their existence in local religion confirms belief in life after death in this religion. See Özdemiroğlu 2004: 71-75; Sokolowski 1960: 226; Şahin 2001: 19-20.

11 A. Luther dates the mosaic to 252 CE. See Luther 1999: 137.

12 On white lekhytoi, scenes about Greek funerary rituals can be seen. According to these, the Greeks saw the dead as immortal and as a hero, and they also represent the relatives of the deceased in funerary scenes. See Şahin 1996: 143–144.

Figure 11
Orpheus Mosaic, Art Museum, Dallas-U.S.A
(Healey 2006: fig.1)

to the underworld, which is the last phase of life. But for Christians, death is joyful, for it brings a better life than the previous existence. It brings another way of life after death, eternity and eternal life (Akyürek 1996: 94). This belief of Christians and those of the pagans in the same region overlap each other. The Orpheus mosaics represent this best. Traditional and moral elements of the Orpheus cult, maybe under the influence of Christianity, attracted attention, and pagans respecting this cult practiced the rules of the cult. That is why they refrained from eating animals and other possible contaminants, since pureness of the spirit could only be attained by avoiding contaminants (Segal 2002: 93). In this context, Christianity and the beliefs of pagans in the region complement each other. The happy and pure spirit of the deceased will ascend to heaven in a joyful event; namely, death.

The phoenix represents the human spirit, its eternity and immortality. A phoenix standing on a grave stele and the grave in front of it suggest the notion of life after death (Yaşar 2003: 116). So looking at these features from an iconographic point of view, it seems that local pagans believed that, if the funerary rituals were performed properly, the deceased would come back to life, and regeneration.

Figure 12
Phoenix Mosaic, Lost (Segal 2002: fig. 67)

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Bookreview

Patricia WITTS*

Mustafa Şahin (editor), ***III Uluslararasi Türkiye Mozaik Korpusu Sempozyumu Bildirileri – The Proceeding of III International Symposium of the Mosaic of Turkey***, Uludağ University, Bursa, 2007, 222 pages including 64 pages of plates in colour and black and white. ISBN 978-975-6149-32-4.

Mustafa Şahin (editor), ***IV Uluslararasi Türkiye Mozaik Korpusu Sempozyum Bildirileri, "Geçmişten Günümüze Mozaik Köprüsü" – The Proceedings of IV International Mosaic Corpus of Türkiye, "The Mosaic Bridge from Past to Present"***, Uludağ University, Bursa, 2008, 247 pages including 448 plates in colour and black and white and 57 figures. ISBN 978-975-6149-43-0.

These two books represent the first volumes in the Uludağ University Mosaic Research Center Series 1. They publish the papers given at two symposia held in Turkey but with an international attendance: the first took place at Bursa in June 2006, and the second was held at Gaziantep in June 2007.

These symposia owe their origins to a small gathering of Turkish and international scholars who met in Istanbul in 2004. They came together again the following year at Altinoluk, and later that year the creation of AIEMA Turkey was announced. The formation of a Turkish branch of AIEMA (*l'Association internationale pour l'étude de la mosaïque antique*) is welcome evidence of the commitment to Turkish mosaic studies. The President of AIEMA Turkey is Prof. Dr Mustafa Şahin, the driving force behind the Mosaic Research Center at Uludağ University and the editor of these volumes.

By the time of its 2006 meeting, the Turkish mosaic symposium had attracted 27 archaeologists and conservators from seven countries. The 2007 conference exceeded all expectations, being attended by 178 participants from 12 countries (including Turkey). This level of attendance attests to the great interest in Turkish mosaics and is well served by these publications which have appeared with impressive and commendable speed.

The volume of the 2006 proceedings is of smaller dimensions than its later counterpart, which has an A4-sized format. It contains 104 colour illustrations and 69 illustrations in black and white, while the volume devoted to the 2007 proceedings contains 406 colour illustrations plus 42 illustrations in black and white, supplemented by 57 figures, many of them in colour. For publications appealing to an international, multi-lingual audience, the generous provision of illustrations is exceptionally helpful. Many of the plates in the earlier volume are of small size, and while some of the plates in the later volume are also small it is pleasing to note that many are much larger: this adds considerably to the usefulness and attractiveness of the books.

The volume of the 2006 proceedings contains 18 papers, of which nine are in English, eight in Turkish and one in German. With two exceptions, all the non-Turkish papers have an abstract in Turkish, and with only one exception all the Turkish papers have an English abstract. The volume of the 2007 proceedings, reflecting the increased scale of the symposium, contains 31 papers, of which 13 are in English and 18 in Turkish. Each paper has an abstract in the other language. Both volumes start with an introduction by Prof. Dr. Mustafa Yurtkuran, the Rector of Uludağ University, which appears both in Turkish and English. They also contain a foreword in Turkish by Prof. Dr Mustafa

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Şahin and Prof. Dr Selçuk Kirli; the later volume contains an English translation of its foreword.

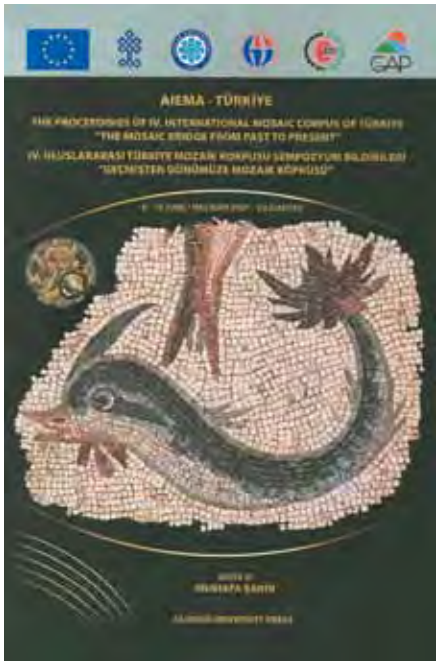
The volume of the 2006 proceedings begins with a text in English of the opening speech of the symposium, given by the Vice-Rector of Uludağ University, Prof. Dr Erdal Emel, in which he stressed the importance of conservation and explained the university's interest in this topic, which has culminated among other measures in the establishment of its Mosaic Research Center. The main papers begin with Mustafa Şahin's review of the history of the foundation of the Center. This is illustrated by photographs of the participants at the previous meetings, showing that the commitment to history extends to recording the history of these symposia – something that should prove fascinating to scholars in years to come. There then follows a summary of the general state of mosaic research in Turkey in 2005 by David Parrish of Purdue University in the USA, one of the distinguished international scholars who have been involved with these symposia from the outset. He explains that new discoveries, especially from Zeugma but also from Çiftlik, Antandros and Metropolis, have led to an acceleration of interest in the mosaics of Turkey. He outlines the project to create a bilingual corpus to further that interest and to disseminate material, and he sets out the detailed form the corpus will take.

There follow papers by Derya Şahin on mosaic terminology, Yusuf Oğuzoğlu on the history of the Bursa region, and Anne-Marie Manière-Lévêque and Marie-Pat Raynaud on the Corpus of the mosaics of Xanthos, which will be the first new publication in the corpus project.

Subsequent papers deal with new discoveries: at a basilica of the late fifth-century at Büyük Orhan in the borough of Bursa by Recep Okçu, and the distinctive mosaics of Edessa (Urfa), many of them from funerary contexts, by Bariş Salman. Emine Tok discusses early Byzantine mosaics at Gara Church near Bodrum, Veronika Scheibelreiter traces stylistic developments in the mosaics of western Asia Minor, and Emel Aksoy addresses stylistic considerations in the Severan mosaics of Antioch. Ayşe F Erol looks at the relationship between the Muses and the technique called *opus musivum*.

There follow a number of papers relating to the protection and conservation of mosaics: Birol Can on an early church at Altintepe/Erzincan, and Mustafa H Sayar and Şehrigül Yeşil on the mosaics of Cilicia. Celal Küçük and N Mine Yar analyse four different lifting methods used for the mosaics of Zeugma and list the advantages/disadvantages and implications of each. They make the point that photographs taken of mosaics before lifting may not be sufficient for the precise demands of conservation even if they are adequate for archaeological research.

Papers concerning national corpora follow. A paper by Maria de Jesus Duran Kremer, Miguel Pessoa and Fátima Abraços on the inventory, risk map and corpus of the Roman mosaics of Portugal urges that conservation and study should be followed by diffusion of information. Sophie Delbarre, Michel Fuchs and Claude-Alain Paratte stress the need for a corpus to be updated regularly, arguing that V von Gonzenbach's 1961 publication of Swiss mosaics (*Die römischen Mosaiken der Schweiz,* Basel) is no longer sufficient. They pose some problems concerning the concept of a corpus, while demonstrating the varied uses to which it can be put, such as comparing patterns within corpora for neighbouring countries and reflecting on figurative mosaics. Hande Kökten explains how the mosaic corpus of Turkey will be distinctive from other corpora in that



the information about each mosaic will include the state of its preservation. Hélène Morlier and Marie-Patricia Raynaud address editorial questions concerning the Turkish corpus and remind us of the many practical issues relating to publication that need to be considered.

The volume of the 2007 proceedings follows the theme of the conference, 'The Mosaic Bridge from Past to Present', and groups the papers under three categories: ancient mosaics (with nine papers in Turkish and 10 in English), restoration (with five papers all in Turkish), and modern mosaics (with four papers in Turkish and three in English).

In the ancient mosaics section, Nurten Aydemir, Seçil Çokoğullu and Nedim Dervişoğlu describe the rescue excavations that took place between late 2006 and early 2007 at Halepli Bahçe in Urfa. Among the discoveries were fragments with charming depictions of ducks, and a spectacular panel showing a number of Amazons on foot and on horseback hunting wild beasts. Christophe Bailly, Hélène Morlier and Michèle Tahri describe plans to make the bibliographies contained in the AIEMA Bulletins available online and discuss the considerations involved in this project. Fatima Bulgan explains how the 1,500 square metres of mosaic found at Zeugma necessitated the construction of a new museum to display these finds. She outlines how the museum in Gaziantep was created, and she evaluates the project from the perspective of museology. Rescue excavations by the Hatay Museum in 2006 at the ancient site of Issos and in the Harbiye district of Antakya are described by Ömer Çelik. At the former, a large mosaic was found in a tepidarium depicting Artemis engaged in a hunt, while at the latter busts of Okeanos and Anosis were uncovered.

Sophie Delbarre, Michel Fuchs and Claude-Alain Paratte adopt a thematic approach, evaluating depictions of Achilles on Skyros in mosaics throughout the Roman empire. They examine the architectural contexts and consider reasons why this subject proved so popular. Rifat Ergeç reflects on the excavation and lifting of mosaics at Zeugma in the period from 1992 to 1999. Zaraza Friedman gives an exposition of ship iconography in mosaics, explaining how the depictions aid our understanding not just of different types of vessel but also of the sailing environment – river, lake, delta, harbour or open sea – and of sea-borne trade.

Werner Jobst outlines the conservation work undertaken during the Istanbul Great Palace Mosaic Project. He has been heavily involved in this project, and he stresses the need for ongoing care and maintenance. Maria de Jesus Duran Kremer highlights the plight of the Roman villa at Abicada in Portugal. Mehmet Önal of Gaziantep Museum describes the excavation in 2000 of the Euphrates House at Zeugma, which produced a number of figured mosaics that are now on display in the museum. He draws attention to ancient repairs, and remarks that some fragments of mosaic had fallen from an upper storey, demonstrating that the use of mosaics was not confined to the ground floor.

David Parrish discusses genre imagery of children's games and of labouring peasants in the Great Palace mosaic at Istanbul. Among the comparative material he cites are two other mosaics from that site that are now stored elsewhere. The focus of Birte Poulsen's paper is a geometric design found in a late-antique house at Halikarnassos which has been called a 'signature pattern' of a mosaic workshop based on the island of Kos.

Miguel Pessoa outlines the considerations being taken into account in the construction of protective covers for the mosaics at the Roman villa of Rabaçal in Portugal. Marie-Patricia Raynaud explains how a study of the mosaics of the East Basilica at Xanthos has provided a better knowledge of the chronology of the Basilica and of the vicissitudes to which it was subjected. Bariş Salman's paper on the Edessa mosaics describes how the funerary mosaics were an early equivalent of a family photograph and also highlights a group of Orpheus mosaics.

Inspired by the discovery of the use of gold-glass tesserae in the crown worn by Dionysos in a mosaic at Ephesus, Veronika Scheibelreiter considers the use of gold tesserae throughout the Roman empire. Derya Şahin reviews the popular figure of Tethys, aiming to eliminate the confusion that often exists between Tethys and Thetis.

The ancient mosaics section ends with Emine Tok's discussion of the mosaics in a church at Çağlayanköy near Manisa and Turgut H. Zeyrek's presentation of the mosaics discovered in 2006 at Besni in the region known as Kommagene.

In the restoration section, the paper by Ali Akin Akyol and Yusuf Kağan Kadioğlu on the mosaics of the Torba Monastery complex near Bodrum emphasises the importance of analysing the materials used in a mosaic in order to find a reliable, long-lasting method of conservation. Stressing the importance of using a common language, Hande Kökten outlines the criteria to be used when creating the database of the condition of Turkish mosaics, dividing them into three main categories: mosaics in situ, exhibited in museums, and those to be lifted and stored. The different methods of exhibiting the Zeugma mosaics in the Gaziantep Museum are explained by Celal Küçük. Y. Selçuk Şener sounds a cautionary note in his review of conserved mosaics from various sites throughout Turkey, emphasising that approaches to conservation that are thought appropriate at the time might later prove to be deleterious. Mine Yar's paper ends the restoration section by discussing the Gaziantep Mosaic School within the context of increasing the region's tourism potential.

The section devoted to modern mosaics opens with a paper by Asker Ali Abiyev, Rifat Ergeç and Münteha Şahan in which mathematical methods are used to analyse geometric designs. This is followed by a description of ethnomathematics by Meltem Ceylan Alibeyoğlu and Yelda Şişman Gökalp. This discipline examines the relation between mathematics and culture. It is being applied to the Zeugma mosaics to help school pupils with their studies and to give them an understanding of their cultural heritage. Gülten Akyan adopts a philosophical approach in a paper entitled 'Being a Patented Country in Mosaic'.

Mosaic artist Elaine M. Goodwin discusses how a profound understanding of the Roman use of materials can inspire contemporary artists. Ayşegül Güvenir compares the work of two modern masters, the Russian artist Boris Anrep who worked in London, and the Turkish artist Bedri Rahmi Eyüboğlu who worked in Istanbul. Luciana Notturni explains how artists who have a deep knowledge of ancient mosaic technique can go on to break the rules and open themselves to fresh artistic expression. Finally, Hakan Pehlivan outlines a project by pupils to create mosaic panels for their school, decorating them with images of wildlife that the pupils had seen in Roman mosaics.

All too often, mosaic studies focus either on scholarly evaluation of the figures and patterns on the pavements or on their conservation. It is particularly admirable that these volumes, as did the original symposia, bring together both

aspects. Indeed, they go further, for they contain thoughtful critiques of how to record and present information in corpora, how best to display mosaics to the public in museums, and how mosaics can be used in tourism and education as well as being a vibrant and enduring medium for modern art.

These two volumes are ambitious in their attempt to communicate with a multilingual audience, and it has been a wise decision to use a large number of illustrations. Even without reading the text, there is much to enjoy in the pictures of new discoveries and to appreciate in the photographs showing the mosaics as they were in situ and as they now are in museums. It is unlikely that many readers will be fluent in both Turkish and English, but the spread of papers between the two languages ensures a good balance. This reviewer is not qualified to comment on the Turkish abstracts of the English-language papers, but the information contained in the English abstracts of the Turkish papers varies greatly in its usefulness, as does the clarity of expression. But the achievement in making little-known or newly-discovered Turkish mosaics available to a wide readership and in bridging many gaps – between ancient and modern mosaics, archaeology and conservation, professionals and enthusiasts – outweighs the difficulties inherent in a project such as this. This new series represents a significant contribution to mosaic studies and deserves to be warmly welcomed.

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Article

Barringer, Judith M. 1991 "Europa and the Nereids: Wedding or Funeral?, American Journal of Archaeology 95: 657-667.

Book

Dunbabin, Katherine M.D. 1999 Mosaics of the Greek and Roman World, Cambridge: Cambridge University Press.

Unpublished Dissertation or Thesis

DePuma, Richard 1969 "The Roman Fish Mosaic", unpublished Ph.D. dissertation, Bryn Mawr College, Pennsylvania

Published Dissertation or Thesis

Reitz, Elizabeth J. 1979 Spanish and British Subsistence Strategies at St. Augustine, Florida, and Frederica, Georgia, between 1563--1783. Ph.D. dissertation, University of Florida, Gainesville. Ann Arbor: University Microfilms.

Monograph in a Series

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Mosaics of Turkey and Parallel Developments in the Rest of the Ancient and Medieval World: Questions of Iconography, Style and Technique, as well as New Discoveries, from the Beginning of Mosaic until the Late Byzantine Era

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KÜLTÜR VE TURİZM
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Zodiac Mosaic from Tophane - Bursa, Türkiye. The central panel was stolen.

JMR

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AIEMA - TURKEY

EDITED

BY

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AIEMA – Turkey is a research center that aims to study, introduce and constitude a data bank of the mosaics from the ancient times to the Byzantine period. The best presentation of the mosaics of Turkey is the ultimate goal of this center functioning depending on AIEMA. A data bank of Turkey mosaics and a corpus including Turkey mosaics are some of the practices of the center. Additionally, this center also equips a peiodical including the art of ancient mosaics and original studies namely JMR.

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PREFACE

Mosaic Research in Anatolia initially began in the beginning of the 20th century and it gained more interest through the activities of Association internationale pour l'étude de la mosaïque antique (AIEMA) which was established under the French Science Academy. The contributions of scientists in this respect such as Jean Pier Darmon, Werner Fuchs and David Parrish are noteworthy. AIEMA has continued its contributions in the field of mosaics of Turkey, supported the establishment of the Uludağ University Mosaic Research Center and included our center (AIEMA-Turkey) in this large mosaic family as well as Spain (l'AEM), France (l'AFEMA), Italy (l'AISCOM), England (l'ASPROM), Tunisia (CTEMA) and North America and Canada (North American Branch of AIEMA) branches.

Despite the fact that Turkey is one of the richest and most important places in the world in terms of mosaic cultural heritage, the necessary care has not been taken in creating databases in a certain format and in their dissemination. Thus they have remained among our neglected cultural assets. One of the aims of our center is to start a project called Mosaic Corpus of Turkey and collect them within series. This will eventually lead to a corpus in the near future covering all mosaics of our country. The first book of this series, "The Mosaic Corpus of Turkey – Xanthos: The East Basilica", will be published in a short time.

AIEMA played a leading role in mosaic research especially under the administration of J.P. Darmon. "Le Decor Geometrique de la Mosaique Romaine" consisting of two volumes which was prepared under the presidency of Darmon is still the basic source of reference.

One of the most significant encouragements of AIEMA in mosaic research is the colloquium held every four years. The first one was held in Paris in 1963, and then in Wien (1971), Ravenna (1980), Trier (1984), Bath (England) (1987), Palencia-Mérida (Spain) (1990), Tunis (1994), Lausanne (1997), Rome (2001) and Conimbriga (2005). We feel very excited to be the host of the 11th Meeting in 2009.

The index called "*Bulletin de l'Association international pour l'Etude de la Mosaïque antique*" organized by AIEMA is one of the most important works in mosaic research in which all the mosaic related study worldwide every two years are available.

Prof. Dr. Henri Lavagne, member of the editorial board of our journal, is still the president of AIEMA. The previous president was Jean Pier Darmon. Prof. David Parrish (USA) and Prof. Dr. Werner Jobst (Austria) are among the executive board of AIEMA.

Although the mosaic studies have been neglected so far in our country, it can be seen that they have recently gained momentum with the efforts of Mosaic Research Center. Turkish scientists have also made efforts to protect and publicize the mosaic heritage of their country. However, it is noted that they cannot publish their studies in a fast and quality print. We would like to present a new media organ to eliminate this unfavorable condition and provide opportunity to publish them in a quality manner as much as themselves. Our aim with our journal, planned to be published twice a year, is not only to publish studies in Turkey but also all studies qualified by the board of referees. We therefore hope to fill a large void in the field of mosaics. We invite all local and foreign scientists in the field of mosaics to cooperate with our center.

We owe the realization of our new media organ "Journal of Mosaic Research" to the kind favors of AIEMA.

Uludağ University is proud to take part in this international initiative. Mosaic Research Center considers the invaluable mosaic and cultural assets of Anatolia not only its own heritage but that of all humanity. Thus, the articles in our journal will cover not only mosaics from our country but those from other countries, hopefully making it a mixture where the global mosaic heritage is blended just like the history of mankind. We hope to succeed in our initiatives with this respect.

Bursa – 2009

Prof. Dr. Mete Cengiz
Rector

JMR 1-2, 2008 7-31

Der Einfluss der Mosaiken des vorderen Orients auf hispanische Mosaiken am Ende der Antike

José María Blázquez*

Object of this study are the mosaics in Hispania at the end of the Antique that have an influx of oriental mosaics. These mosaics are those of Eros and Psyche in Fraga (Huesca), who have an influx from Antioch and Syria; of Daragoleja (Granada), of Puerta Oscura (Málaga), with an influx from Greece and Syria-Palestine; of Baños de Valdearados (Burgos), with Dionysus; of Dulcitius the hunter, el Ramalete (Navarra). The abundance of mosaics decorated with geometric themes and representations of abstract ideas have an oriental influx. A Syrian mosaist from the later Antoninian period made the cosmogonic mosaic of Augusta Emerita, that is full of abstract personifications and that reminds of one in Gaza and of the mosaic with the birth of Venus in Italica, also of Syrian origin. The Augusta Emerita mosaic with the poets from the 2nd century is the work of Selecus and Anthus. The mosaics with the Seven Wisemen of Greece in Augusta Emerita and with homeric themes in Cabezón del Pisuerga (Valladolid) are owed to Greek artists. Several paleochristian mosaics in the Balearic Islands owe their influx to Palestinian synagogues, probably coming through artists from Orient or copy-books.

Bu çalışmanın konusu oryantal mozaiklerden etkilenmiş olan Hispania'daki Antik Çağ'ın sonuna ait mozaiklerdir. Bunlar, Fraga (Huesca), Daragoleja (Granada) ve Puerta Oscura'da (Málaga) bulunan Antakya ve Suriye akımından etkilenmiş olan Eros ve Psyche figürlü mozaiklerdir ile Yunan ve Suriye-Filistin akımından etkilenmiş olan Baños de Valdearados (Burgos)'da bulunan Dionysos figürlü mozaik, Avcı Dulcitius mozaiği, el Ramalete (Navara) mozaikleridir. Geometrik bezemeli mozaiklerin bolluğu ve soyut fikirlerin sunumu doğu akımı etkilerinin belgeleridir. Geç Antoninus döneminden Suriyeli bir mozaik ustası tarafından yapılan Augusta Emerita'nın kozmogonik mozaiği 'soyut' kişileştirmelerle doludur ve bu Gazze'dekini ve yine Suriye kökenli Italica'daki Venus'ün doğumu mozaiğini andırır. 2. yüzyıldan, üzerinde şairler olan Augusta Emerita mozaiği Selecus ve Anthus'un eseridir. Augusta Emerita'daki Yunanistanın yedi bilgeleri mozaikleri ve Cabezon del Pisuerga (Valladolid)'daki homerik konulu mozaikler varlıklarını Grek sanatçılara borçludurlar. Baleares adalarındaki muhtelif eskihıristiyan mozaikleri stillerini muhtemelen doğulu sanatçılar ve patron kitapları yoluyla Filistin sinagoglarına borçludurlar.

Key words: myths, geometric, Augusta Emerita, paleochristian, copy-books

Hispanien hatte in der Spätantike intensive Beziehungen mit dem Nahen Orient. Ein Aspekt innerhalb dieser Beziehungen ist der Einfluss der orientalischen Mosaiken auf die hispanischen. Es genügen einige Angaben als Einführung zu diesem Thema.

Hispanier waren der Kaiser Theodosius und seine Gattin Flacilla. Er war der letzte Kaiser, der das Imperium ungeteilt regierte; und auch die Gruppe der Hispanier, wie Flavius Timaisus, Nebridius, Maternus Cygnelius und Nummius Aemilianus Dexter (Chastagnol 1965: 289-290) hatten hohe Verwaltungsposten inne.

D. Fernández Galiano (1983: 411-430) weist auf den starken Einfluss der Mosaiken des Orients am Ende der Antike auf einige hispanische hin. Diese Einflüsse sind folgende: seit der Mitte des IV Jh. zeigt sich deutlicher Einfluss auf hispanische Mosaiken. Er umfasst die Technik und neue Entwicklungen, neue Beiträge und neue Betrachtungsweisen der figürlichen Thematik, neue Kompositionsschemen, unveröffentlichte geometrische Motive und verschiedene Behandlungsarten schon vorhandener. Die orientalischen Einflüsse können zwei Ursachen haben: die Ankunft orientalischer Künstler, die in Hispanien arbeiteten, oder das Erscheinen von *copy-books*.

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Abbildung 1
Mosaik mit Eros und Psyche

Zwei Motive mit griechischen Mythen zeigen die Mosaiken aus Fraga (Huesca), aus der zweiten Hälfte des IV. Jh. Der Künstler wurde vermutlich im "Zentrum der Mosaiken" des Orients ausgebildet, in dem der Einfluss der hellenischtischen Welt sehr stark war bis zum Anfang des IV. Jh.; er dauerte sogar bis zum Anfang des VIII. Jh. Diese Mosaiken stellen Eros und Psyche dar (Abb. 1) und Eros und Venus (Abb. 2). Die rein malerischen Szenen, der Kanon der Gestalten und die Starrheit ihrer Tátigkeiten führen uns zu den Mosaiken von Antiochia des IV. Jh. und zu denen von Syrien. Die geometrsichen und pflanzlichen Motive erinnern uns an diese Gebiete.

Es erscheinen neue Techniken auf den hispanischen Mosaiken, seit der Mitte des IV. Jh., wie die Anordnung der Mosaiksteinchen in Fächerform für ein Untergrund mit Figuren ab der zweiten Hälfte des IV. Jh. bis zum V. Jh. Diese Technik erscheint auf Mosaiken in Antiochia und in Kilikien im V. Jh.

Auf einem Mosaik der Villa Daragoleja (Granada), aus der Spätantike, erscheint das Thema zweier gegenüberstehender Truthähne auf einem Krug (Abb. 3), eine häufige Komposition auf den Mosaiken des Orients. Die Anordnung eines

Abbildung 2
Mosaik mit Eros und Psyche

Abbildung 3
Detail des Mosaiks von der Villa Daragoleja (Granada)

figürlichen Themas in einem geometrischen Feld, ohne Trennung noch Rahmen, ist charakteristisch bei den Mosaiken in Syrien, wie z.B. auf dem Mosaik von Phoenix aus Daphne, aus dem Ende des V. Jh. Es gibt auch Beispiele aus Antiochia und Apamea.

Die Mosaiken von Bellerophon und der Chimäre aus Puerta Oscura (Málaga) (Abb. 4) und aus Córdoba (Abb. 5) mit den vier Jahreszeiten, werden wegen ihres Stils mit den späten Mosaiken aus Griechenland unf Syrien-Palästina in Verbindung gesetzt. Einige Schemen reflektieren ein neues Empfinden, begründet in den Verflechtungen.

Die Mosaiken der Villa in Baños de Valdearados (Burgos) (Abb. 6) zeigen starken orientalischen Einfluss. Ein Mosaik aus dem V. Jh. ist mit acht spitz auslaufenden Schildern in Kreisform geschmückt (Abb. 7). Diese Dekoration ist weder in Hispanien noch im gesamten westlichen Mittelmeerraum zu finden, aber sie ist eine vereinfachte Form eines Mosaiks in der Basilika von Misis-Mopsuhestia (Kilikien) (Abb .8). Ein vereinfachtes Schema wiederholt sich auf einem Mosaik in Saloniki, in dem Palast des Galerius.

Abbildung 4
Mosaik mit Bellerophon und Chimäre aus Puerta Oscura (Málaga): Blázquez 1981: 77-78 Abb. 61

Ein Mosaik aus Almunia de Doña Godina (Zaragoza) (Abb. 9), aus dem V. Jh., zeigt ein in Hispanien und im Okzident unbekanntes Schema, aber es ist bekannt aus der Basilika von Ermione (Abb. 10) und aus Betlehem (Abb. 11).

Das Schema des Dulcitius-Mosaiks (Abb. 12), das aus einem zentralen Kreis besteht, der von acht kleinen umgeben ist, die unter sich und mit den inneren Kreisen verflochten sind, steht in Beziehung zu orientalischen und Beispielen aus Italica aus dem V. und VI. Jh. Es erscheint im Odeus in Saloniki und im Palast des Galerius, ähnlich und identisch in der Kirche con Herbet-Muqa, aus den Jahren 378 und 385. Die italischen Mosaiken (Basilika von Santa Maria delle Grazie in Grado, VI. Jh., die Basilika Santa Eufemia, zwischen 571-586, und die Basilika von Canzian d'Isonzo), aus der zweiten Hälfte des V. Jh., etc., sind später entstanden als in El Ramalet, am Ende des IV. oder Anfang des V. Jh.

Eine Tendenz zur Verminderung der Figuren tritt auf den Mosaiken ein und wird abgelöst durch eine vermehrte Entwicklung geometrischer Elemente, und allegorische Darstellungen, von denen später gesprochen wird, bestätigen den starken Einfluss orientalischer Mosaiken auf die hispanischen.

Es erscheinen nun neue geometrische Themen auf den hispanischen Mosaiken. Die Blumenrahmen mit Göttergestalten schmücken die Mosaiken der Villa von Fraga und sind praktisch einmalig in Hispanien, aber zahlreich in Syrien-Palästina.

In der Spätantike gibt es überaus zahlreiche Mosaiken, geschmückt mit geometrischn Themen (Fernández Castro-Blázquez 1982: 61-75, Abb. 27-42). Es genügt an einige Beispiele zu erinnern: alle sechzehn Mosaiken (Blázquez-Mezquiriz 1985: 31-52, Abb. 19-32), ausser einem, in der Villa von Rielves in Toledo; in der Villa von Lieden in Navarra, ausser einem bacchantischen und einem mit Vögeln und kantharoi; ebenso die Mosaiken der Villa in Villafranca (Blázquez-Mezquiriz 1985: 74-84, Abb. 45-49) und auch in Navarra; alle Mosaiken, ausser zwei, mit den Büsten der Abundantia, in Cuevas de Soria (Fernández Castro 1983, in Blázquez-Ortego 1983: 53-79, Abb. 6-22, 25); in

Abbildung 5
Mosaik mit Bellerophon und Chimäre aus Córdoba: Blázquez 1981: 36-38 Abb. 22

Quintanares (Blázquez-Ortego 1983: 16-38, Abb. 1-12, 26-36) und Santervás del Burgo (Blázquez-Ortego 1983: 40-49, Abb. 13-22); in der Villa von Almenara de Adaja (Neira-Mañanes 1988: 16-29, Abb. 1-12, 25-31, Fig. 2-4); in Valladolid, ausser zwei Mosaiken, eins mit Fischen und das andere mit der Toilette von Pegasus; auch in der Villa del Prado (Neira-Mañanes 1988: 53-62, Abb. 18-24, 37-40, Fig. 8-10), ausser einem Emblem mit Diana. Alle diese Mosaiken, geschmückt mit geometrischen Themen, stammen aus der späten Kaiserzeit.

Die vier Efeublätter auf dem Mosaik der Villa in Baños de Valdearados wiederholen sich in Antiochia, Soria, Jericho, Gaza, Gerasa und Saloniki. Die in Kreisen gebildeten Bänder, eines über das andere, sind im Okzident unbekannt, aber dagegen häufig im Orient zu finden, z.B. in den Basiliken in Khalde, im Libanon und in Nea Paphos, in Zypern. Die Dekoration zweier parallelen, ineinanderverschlungenen Stäbe mit einer wellenförmigen Linie, in der Villa von Albadalejo (Ciudad Real), ohne Parallelen im Okzident, aber wohl bekannt auf Mosaiken in Griechenland, wie in den Basiliken von Ermione, von Theben und Ephesos.

D. Fernández Galiano denkt an die Anwesenheit orientalischer Künstler in Hispanien, ausgebildet in den Werkstätten des Orients.

Personifizierte Allegorien auf hispanischen Mosaiken

Es ist ein dekoratives Motiv, das mit Sicherheit aus dem Orient kam. Das Thema ist von G. López Monteagudo (1997: 335-361) gründlich studiert worden. Die Personifizierungen sind folgende:

Auf den Mosaiken des Orients wurden häufig abstrakte Ideen mit allegorischen Bildern gezeigt, hauptsächlich die Tugenden in Verbindung mit der politischen Macht, und erhielten Kultbedeutung. Es gab viele allegorische Darstellungen mit abstrakten Ideen, die in Beziehung zum Kosmos standen (Aion, Annus, die Jahreszeiten, Aeternitas, Kronos, etc.), mit geographischen Orten (Mons, Gé, Thalassa, Caellus), mit der Kultur, wie den Museen, und mit Ideen und philosophischen Konzepten (Philosophie, Weisheit, Wohlergehen, Schönheit, Edelmut, Glückseligkeit, Gerechtigkeit, Anmut, etc.). Einige dieser abstrakten Ideen wurden zu Göttern erhoben.

Diese Tendenz der Personifikation wurzelt in der Götterlehre des Hesiod, und sie teilt sich in zwei grosse Kategorien: eine ist die Personifizierung der Abstraktionen; die zweite umfasst die Personifizierung der Elemente mir archaischen Religionen. Zeitweise vermischen sich beide Kategorien oder sie überdecken sich.

Die allegorischen Personifizierungen der Tugenden und Laster der Seele erscheinen bald in Griechenland, nicht nur in der Philosophie und Literatur, sondern auch in der Mythologie. Die Tendenz zur Abstraktion ist Zeuge in der Kunst und in der Dichtung Griechenlands ab dem VI. Jh. v.C., und motiviert die Erschaffung neuer mythischer Personen, entstanden aus den Konzepten. In der klassischen und hellenistischen Kunst entstehen Ilias und Odysee, die Weisheit und andere Abstraktionen.

Abbildung 6
Mosaik von der Villa in Baños de Valdearados (Burgos): López Monteagudo-Rosario de Palol, 1998: 13-20 Abb. 1-5

Abbildung 7

Die römische Kunst empfing dieses Erbe der Personifizierung abstrakter Ideen der griechischen Kunst auf vier grossen Gebieten: dem Mythos, der Kunst, der Poesie und dem Kult. In der byzantinischen Kunst waren die Personifizierungen der abstrakten Konzepte weit verbreitet. Die allegorischen Darstellungen der klassischen Kunst neigen mehr zu metaphysischen Wesenheiten und haben einen mehr unpersönlichen Charakter; in der byzantinischen Kunst dagegen einen konkreten Charakter, und sind konventioneller und abstrakter. Mit der Zeit verlieren die Personifizierungen der abstrakten Konzepte ihre Persönlichkeit und verwandeln sich in allgemeine Symbole; sie identifizieren sich durch die Inschriften, die sie begleiten.

In Griechenland und Rom war die Vergöttlichung der abstrakten Ideen in Beziehung zu den Tugenden der politischen Macht: Themis, Nike, Eirene, Eukleia, Eumonia in Griechenland, und Virtus, Victoria, Concordia, Pax und Fides in Rom. Die Griechen waren die ersten, welche die Abstraktionen zum Kult erhoben. Zuerst waren es Gottheiten, und danach Abstraktionen. Man denkt, dass jede Personifikation aus einer Gottheit entstand. Es bestehen Zweifel, ob zuerst die Abstraktion oder die Gottheit da war. Bei Homer und den archaischen Poeten erscheinen Abstraktion und Gottheit zusammen, und die Gottheit wird als Personifikation angesehen. Oft ist es schwierig eine Gottheit von einer allegorischen Gestalt zu unterscheiden. Die Personifizierungen sind weniger individualisiert als die Gottheiten und die anderen mythologischen Gestalten. Man glaubt, dass in der römischen Kunst dieser Prozess umgekehrt verlaufen ist. Die Gottheiten waren einfache Abstraktion und später verwandelten sie sich in Götter.

Am Ende des Hellenismus spielten die Tugenden eine wichtige Rolle im Orphizismus, im Neuplatonismus und im Gnostizismus, und sie waren die Erschaffer der grossen kosmologischen Schemen, und bildeten die vorhandene Einheit zwischen den Göttern, dem Universum und der Menschheit, wie die Stoiker annehmen. In Rom waren die Tugenden politische Begriffe, sie erhielten Kult durch den römischen Staat und die einzelnen Personen. Der Tugendkult ging von der

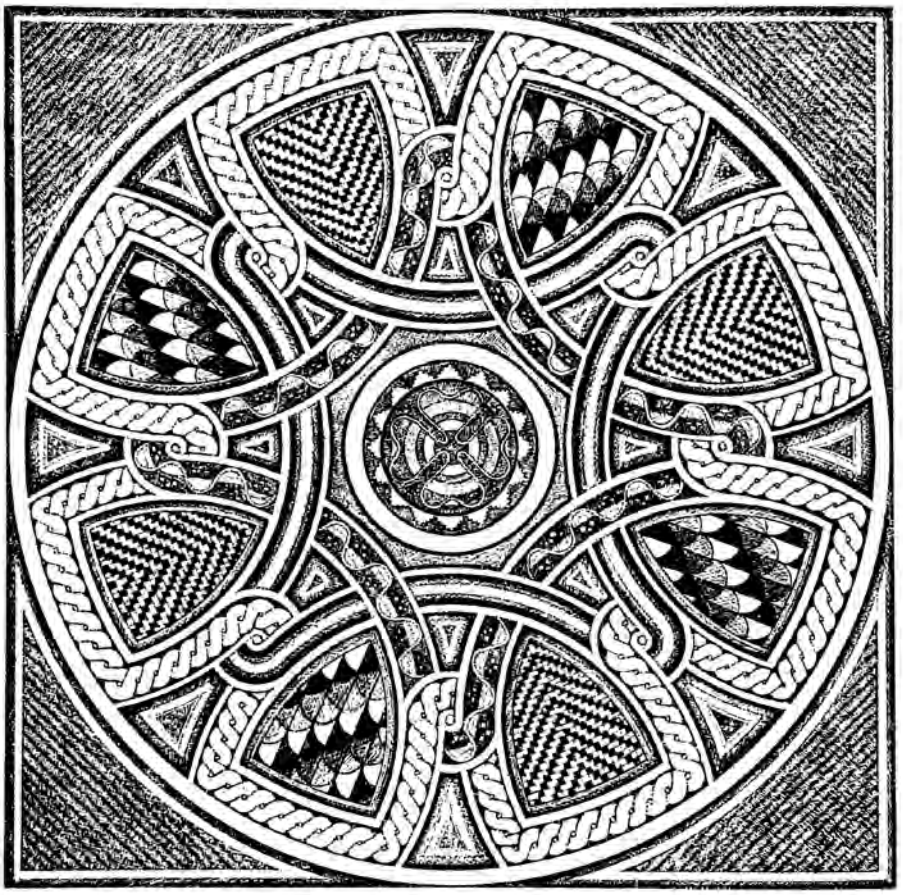

Abbildung 8
Mosaik in der Basilika von Misis-Mopsuhestia (Kilikien)

klassischen Epoche bis zum Ende der Antike und durch das Christentum bis zum Mittelalter in der Theologie und in der christlichen Ikonographie. Die Sophia verwandelte sich auf diese Weise in das Symbol der Weisheit Gottes. Diese Personifizierungen verallgemeinern sich erheblich nach Konstantin I.

Zum Studium der abstrakten Ideen und Allegorien auf hispanischen Mosaiken eignet sich am besten Syrien und besonders die Hauptstadt Antiochia, wo sich die abstrakten Ideen oder die Allegorien ausbreiteten, als zentrales Emblem dargestellt. Die Mehrheit der auf syrischen Mosaiken dargestellten Themen

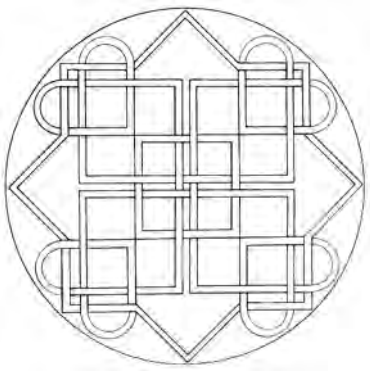

Abbildung 9
Detail des Mosaiks aus Almunia de Doña Godina (Zaragoza)

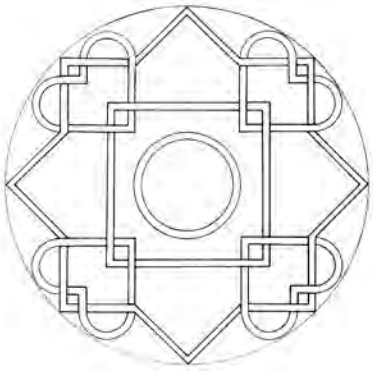

Abbildung 10
Detail des Mosaiks aus der Basilika von Ermione

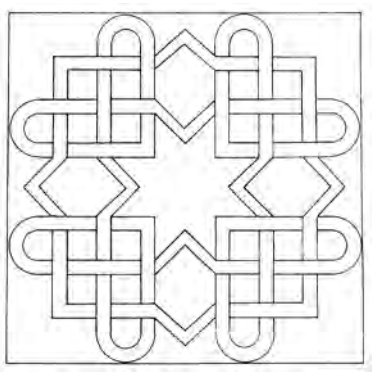

Abbildung 11
Detail des Mosaiks aus Betlehem

Abbildung 12
Das Dulcitius-Mosaik: Blázquez-Mezquiriz 1985: 63-69 Abb. 39-40

gehorchen der klassischen Tradition und beweisen das Überleben des Hellenismus bis in die späte Antike; hauptsächlich die symbolischen und abstrakten Darstellungen, die Mythen und die Bildnisse der Weisen und Philosophen. Die Abstraktionen auf den syrischen Mosaiken stehen in Beziehung zu den philosophischen oder auch religiösen Ideen aus den Anfängen des Hellenismus. Diese Allegorien sind: Ambrosia, Amerinnia, Ananeosis, Apolausis, Athanasia, Bios, Chresis, Dynamis, Eukarpia, Euphrasia, Euprepeia, Eutekneia, Evandria, Ktiosis, Megalopsychia, Philosophia, Sophia, Typhe. Zuerst ist der gesamte Körper dargestellt, begleitet von der Inschrift. Diese Allegorien stellen die Tugenden oder die philosophischen Konzpete dar. In Syrien beginnen die Darstellungen der abstrakten Ideen am Anfang des III. Jh. in Shahba Philippolis. Ab dem IV. Jh. allgemein auch in grossen Städten, wie Apamea und Antiocha, bedeutende Kulturzentren.

Das Mosaik von Shahba Philippolis mit den drei Grazien, zusammen mit den vier Jahreszeiten, gehört in die zweite Hälfte des III. Jh. Euphrasia, Symbol der Fröhlichkeit, befindet sich zwischen dem Frühling und dem Universum, und Pannuchis, eine Anspielung auf nächtliche Feste, zwischen dem Sommer und dem Herbst.

Euphrasia erscheint erneut auf einem Mosaik in Sarachanelasi, von einem Mann begleitet, auf ihrer rechten Schulter einen vollen Korb mit Früchten und in der linken Hand einen Hahn.

An das Ende des III. Jh. oder an den Anfang des folgenden gehört das Mosaik von Shahba Philippolis, mit Eutekneia, Symbol der Fruchtbarkeit, auf einem Thron sitzend, zwischen Dikaiosyne, Allegorie der Justiz und Philosophie.

Abbildung 13
Mosaik von der Villa Los Quintanares:
Blázquez-Ortego 1983: 16-19 Abb. 1

Auf dem Mosaik der Hochzeit des Ares und Aphrodite in Shahba Phillipopolis, aus dem zweiten Viertel des IV. Jh., begleiten das Ehepaar Euprepeia, der Wohlstand, Charis, die Anmut, und Skope. Euprepeia in Gesellschaft von Eirene und dem Frieden, befinden sich auf einem Mosaik aus dem IV. Jh., im Museum von Antalya, als weibliche Büsten in inneren Kreisen dargestellt. Auf einem Mosaik in Byblos, aus der Mitte des III. Jh., erscheint Charis, die Perfektion; rechts befindet sich Eros oder Theros. Akmé erscheint hier zum letzten Mal.

Akmé ist nur einmal in Nea Paphos, Zypern, im Haus des Dionysyos, dargestellt, in Begleitung des Weingottes und des Ikarus. Die Szene ist eine Allegorie der Glückseligkeit, die den mässigen Weingenuss empfiehlt.

Auf einem Mosaik in Apamea, mit dem Thema das Urteil der Nereiden, nehmen Peitho, die Überzeugung, die Krisis, das Urteil, und die Apotheose teil. Dieses Mosaik und verschiedene andere aus der zweiten Hälfte des IV. Jh. erscheinen vermutlich in der von Julianus gegründeten neoplatonischen Schule. Die Krisis ist aus früherer Zeit bekannt, aus der zweiten Hälfte des III. Jh., mit dem gleichen Thema in Palmyra und in dem Haus des Aion von Nea Paphos, auch mit dem Urteil der Nereiden, in Begleitung von Kairos, der Gelegenheit; das Mosaik stammt aus der zweiten Hälfte des IV. Jh. Auf Mosaiken aus Shahba Philippopolis erscheinen weitere Allegorien mit symbolischem Inhalt in mythologischen Szenen: Pothos, der Wunsch, auf der Hochzeit von Dionysos und Ariadne, aus dem zweiten Viertel des IV. Jh., bezugnehmend auf die

Abbildung 14
Mosaik von der Villa Santervás del Burgo, Soria: Blázquez-Ortego 1983: 42-44
Abb. 18

Erzählung von Nonnos (XLVII.443); Theros, die Fruchtbarkeit, und Plutos, der Reichtum, bei der Ehrung der Gottheiten der Erde, Agros und Opora, oder bei der Hochzeit von Dionysos und Ariadne, aus der Mitte des III. Jh., zur Zeit im Museum in Souweida. Die Konzeptionen werden durch die Gestalten der Götter oder ihrer Bezugspersonen dargestellt, wie Dionysos und Ariadne; die Allegorien von Agros und Opora, und Eros und Psyche; Eros, der Wunsch, die Harmonie, Beschützer des sozialen Lebens in den städtischen Einrichtungen; die Wesiheit, symbolisiert durch Odysseus, Silen oder Herkules, etc.

Auf Mosaiken in Nea Paphos wird der philosophische Inhalt der Komposition verstärkt, wie zum Beispiel auf den Mosaiken im Haus des Aion, mit Darstellungen der Theogonia, Symbol der Geburt der Götter, von Nektar und Ambrosia, die Unsterblichkeit verleihen, und in in der Villa von These, mit der Darstellung der Ambrosia im ersten Bad des Achill, aus dem IV. Jh. Ambrosia weist darauf hin, das Achill seit seiner Geburt göttlich ist.

In der Villa von Homs erschien ein Mosaik aus dem III. Jh. in vier Tafeln aufgeteilt, welche graphisch verschiedene Episoden aus dem Leben des Herkules beschreiben. Sie beginnen mit der Kindheit und enden mit der Apotheose. Auf der ersten Tafel erwürgt Herkules als Kind die Schlangen. Er wird von seiner Mutter Almene und seinem Bruder Ifikles begleitet. Amphytrion und die Therapenides sind in dieser Szene anwesend. Auf der zweiten Tafel sitzt Alkmene nachdenklich in einem Sessel. Hinter ihr steht Agucia, die Unwissenheit. In der letzten Szene thront Zeus Olympos und empfängt Herkules in Begleitung der Athanasia, der Unsterblichkeit, und die Apotheose erreicht für den Helden ihren

Abbildung 15
Mosaik aus Emerita Augusta: Blanco 1976: 35-38 Abb. 28-39 Fig. 1; Quet 1981; Dunbabin 1999: 147-150; Lancha 1997: 223-230

Höhepunkt. Ab dem Ende des III. Jh. zeigt sich die Tendenz Personifizierungen der abstrakten Ideen und die symbolischen Interpretationen der Mythen im gesamten Orient und in Syrien darzustellen. Die Hypothese wurde vorgeschlagen, dass die Mosaiken mit Inschriften pädagogischen Zwecken dienen, und die ohne Legenden einen allegorischen Sinn in Verbindung mit philosopischen Ideen haben, und sich an die kultivierte Menschheit wenden. So bilden die Mosaiken mit Odysseus und dem Therapenides aus Apmea ein philosophisches Manifest hellenistischer Werte und eine Ablehnung der vom Christentum gebrachten Ideen. Diese beiden Mosaiken und zwei Nereiden, der gleichen Herkunft, feiern, nach Balty, höchste Autorität syrischer Mosaiken, den Sieg der Weisheit, der der Seele des Weisen erlaubt, die Unsterbichkeit zu erreichen. M.H. Quet schlägt als Interpretation der Allegorie vor, dass jeder Mensch Odysseus nachahmen kann, Model der menschlichen Kondition, und die Kenntnisse (Therapenides) erreichen und zur Philosophie (Penelope) Zutritt erlangen, und von dort die Weisheit erreichen könnte.

Auf den Mosaiken in Antiochia ist eine grosse Zahl allegorischer Gestalten. Die Personifizierung der abstrakten Ideen auf den Mosaiken in Antiochia steht in

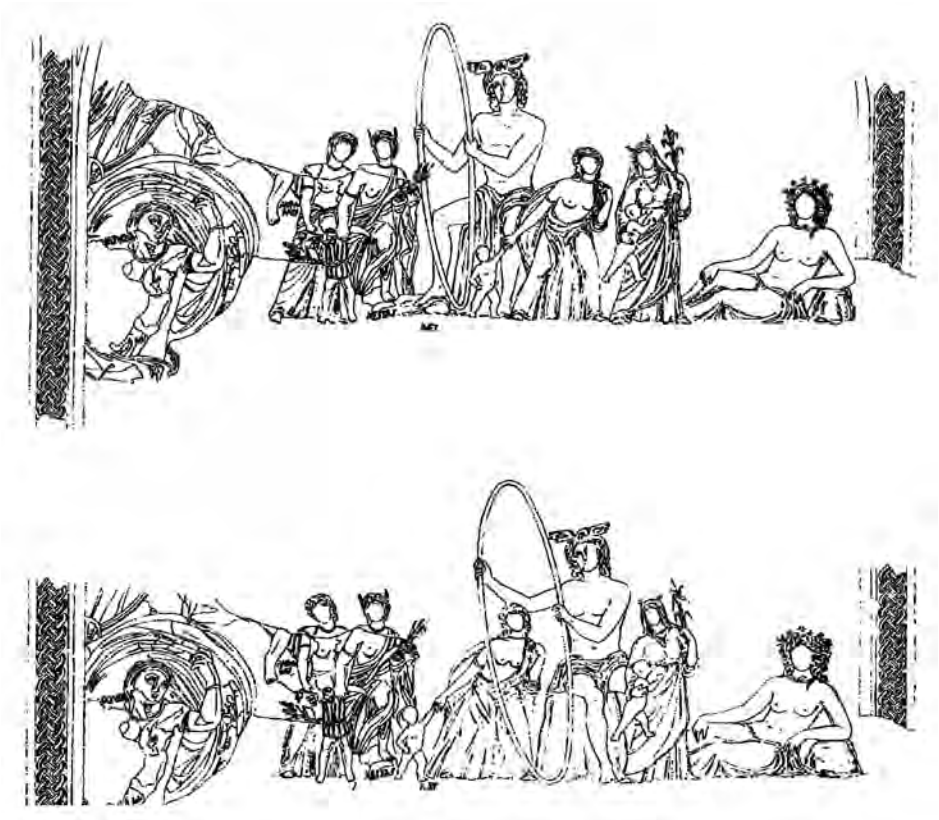

Abbildung 16
Nach der Rekonstruktion von M.L. Musso

Beziehung zu den philosophischen Konzpeten. Amerinnia, der Friede der Toten, befindet sich in einem Grab. Er ist dargestellt wie eine thronende Matrone. Amerinnia ist dem lateinischen Ausdruck Seguritas gleichwertig, eine vergöttlichte Personifizierung der Sicherheit des Staates. Diese Bennenung passt nicht gut in die der Mosaiken von Antiochia, sondern, wie Tryphe, Vergnügen und Musse, Bios, das Leben, im House of the Drunken Dionysos, stehen in Beziehung mit der gefälligen Lebensführung, im Gegensatz zu den von der Philosophie gepredigten Tugenden. Tryphe wird als sitzende Matrone dargestellt, und Bios auf dem Boden ruhend. Sie ist auf einem Mosaik als Frauenbüste im House of the Peddler of Erotes dargestellt, aus der Mitte des III. Jh. Tryphe ist im House of Menander als Büste dargestellt. Chresis, die Verwendung des Reichtums, befindet sich als sitzende Matrone mit cornucopia im House of the Triumph of Dionysos. Ktisis, Besitz oder Stiftung, ist auf einem Mosaik in Antiochia sehr gut abgebildet. Im Haus mit ihrem Nahmen, befindet sie sich als weibliche Büste in einem Kreis, aus der Zeit etwas vor 500. Im Haus der Gé und der Vier Jahreszeiten wiederholt sich die weibliche Büste gegenüber der Ktisis.

Im House of the Sea Goddes, befinden sich die Büsten der Ktisis, der Anneosis (Erneurung), der Evadria (Männlichkeit oder Reife) und der Dinamis (Charakterstärke oder kreative Macht). Sie könnten die Personifizierung der Vier Jahreszeiten sein, oder die Lebensabschnitte des Mannes. Die vier und zwei verlorene Figuren wiederholen sich in der Villa Constantiniana. D. Levi stellt klar, dass in dieser Villa die Personifizierung der abstrakten Ideen den gleichen Charakter hat wie die Allegorien aus byzantinischer Zeit.

Ktisis erscheint häufig auf den Mosaiken des Orients und in Zypern. Ihre Büste befindet sich in den Thermen im Haus von Eustolios, aus dem IV. Jh. Ktisis leitet sich von Dynamis ab und ist ein philosophischer Terminus der stoischen Philosophie, mit der Bedeutung schöpferischer Macht. Auch Dynamis bezieht

Abbildung 17
Mosaik aus Gaza

sich auf die kosmischen Anfänge. Sophia ist eine der am häufigsten dargestellten Allegorien in der byzantinischen Welt. In einer byzantinischen Kirche in Petra, wird Sophia von den personifizierten Jahreszeiten begleitet. Gé, Thalassa, Evandria stehen in Beziehung zu Dynamis, eine bewunderte Tugend der Stoiker. Die drei Abstraktionen Ktisis, Dynamis und Evandris stehen unter sisch in Bezug, vielleicht auch Ananeosis, die Erneurung, die in der Halle von Philia als gekrönte Büste mit Früchten dargestellt ist. Sie stammt aus dem letzten Viertel des V. Jh. D. Levi nimmt an, dass das Mosaik von Ananeosis, von 450-457, eine heidnische Version des synkretischen Konzeptes aus dem Ende der Antike ist. Sie hat die gleiche biblische Form, die auf dem Mosaik von Philia steht. Diese Personifikationen wurden vom Christentum übernommen. Agora, der Überfluss, und Eukarpia, die Fruchtbarkeit, befinden sich bei einem Begräbnisbankett, in

Abbildung 18
Mosaik von Shahhba Philippopolis

Geselsschaft der Jahreszeiten, als weibliche Büsten in dem Grab der Mnemosyne, aus den Jahren 350-400. Im oberen Teil erwähnen zwei Inschriften Mnemosyne, das Gedächtnis, und die Aioxia, das Bankett. Im Bad der Apolausis befinden sich im innern der Medaillons zwei Figuren mit ihren Schriften; sie stellen Soteria, das Wohlergehen, und Apolausis, das Vergnügen, dar. Beide Damen personifizieren abstrakte Ideen. Es sind Anspielungen auf die Beschreibungen, die Libanis über die Quellen von Antiochia macht. Apolausis ist erneut in einer Blumenkrone auf einem Mosaik von Argos dargestellt, aus der Zeit um 500, und auf einem zweiten Mosaik unbekannter Herkunft, möglicherweise aus dem Libanon, aus dem VI. Jh. Beide gleichen dem erwähnten Mosaik von Byblos, mit Akme und Charis. Apolausis ist sitzend im ganzen dargestellt, mit einer Blumenkrone geschmückt. Ihre linke Hand liegt auf der Schulter Plutos, dem Reichtum. Im Bad D in Antiochia, befindet sich die Büste Gethosynas, mit ihren Inschriften. Dieses Mosaik datiert aus den Jahren 300-325. Die letzte Personifizierung der philosophischen Gedanken auf Mosaiken in Antiochia ist Megalopsychia, der Edelmut. Ihre Büste, in einem Medaillon, beherrscht ein Mosaik aus dem V. Jh. im Yakto Complex, mit Jagdszenen auf denen die Jäger mit Namen aus der griechischen Mythologie bennant sind: Adonis, Aktos, Meleagros, Tiresias, Hippolytos und Narziss, die auf die Grosszügigkeit des Grundbesitzers anspielen, der die Jagd veranstaltet.

Abbildung 19
Detail des Mosaiks aus Aranjuez, Madrid

Auf hispanischen und nordafrikanischen Mosaiken befinden sich zahlreiche Personifizierungen, die auf das Wetter oder den Kosmos anspielen, auf Aion, Annus, die Jahreszeiten, die Monate und die Musen. Die Personifikationen der

Abbildung 20
Mosaik aus Augusta Emerita

abstrakten Ideen auf hispanischen Mosaiken, ausser dem kosmogonischen in Augusta Emerita, tragen keine Inschriften. Sie werden nur durch ihre Attribute identifiziert. In der Villa Los Quintanares (Abb. 13), hält die weibliche Büste der Abundantia eine cornucopia, Symbol des Reichtums. Die Büste von Los Quintanares weist stilistische Parallelen mit den Büsten von Soteria, Apolausis, Ananeosis und Megalopsychia auf, Mosaiken aus Antiochia. Chresis, in dem erwähnten House of the Triumph of Dionysos, hält auch eine cornucopia. Eine weitere Büste der Abundantia, auch mit cornucopia, befindet sich auf einem Emblem der Villa Santervás del Burgo, Soria, aus dem IV. Jh. (Abb. 14).

Die Abundantia, als sitzende Matrone, ist vermutlich auch auf dem Mosaik in Lusitania in einer Villa von Rabaçal, aus dem IV. Jh. Auf einem Mosaik der Villa von Tarazona de la Mancha, Albacete, ist Virtus oder Salus zu lesen, begleitet von einer Menade.

Abbildung 21
Mosaik aus Cabezón de Pisuerga: Neira-Mañanes 1988: 36-46 Abb. 13-17 35-36; Lancha 1997: 184-187

In einer zweiten Arbeit hat G. López Monteagudo (2000: 35-153) die Darstellungen der Zeit auf den römischen Mosaiken Hispaniens und die im Norden Afrikas studiert. Aion befindet sich auf wenigen hispanischen Mosaiken, im Gegensatz zu Nordafrika, wo er häufig dargestellt ist, wie z.B in Haidra, Hippo Regius, Karthago, Dougga, El Djem und Hippona.

Auf hispanischen Mosaiken ist er auf dem kosmogonischen in Emerita Augusta (Abb. 15), aus antoninischer Zeit, zu finden. Genauer gesagt, gab es zwei Skulpturen des Aion in dem Mithras-Heiligtum in Augusta Emerita, aus der Mitte des II. Jh.

Die Inschrift Aet(ernitas) unter der Gestalt eines nackten Jünglings, die Anwesenheit der Jahreszeiten, Aestas und Auntumnus, nach der Rekonstruktion von M.L. Musso (Abb. 16), sind dabei den Tierkreis zu durchschreiten, und lassen diesen als Aion erkennen.

Auf dem kosmogonischen Mosaik gibt es Darstellungen der Elemente und geographischer Orte. Diesem Mosaik wird ein mithraischer Charakter (Blázquez 1993: 380-385) zugesprochen, durch die Darstellung von Himmel, Erde und Luft. Die Figuren sind mit Inschriften versehen; dadurch ist die Identifizierung gesichert. Nach der Interpretation von A. Blanco, wird die Komposition von einer Triade angeführt, bestehend aus der Zeit (Saeculum) und seinen Söhnen, dem Himmel (Caelum) und dem Chaos. In ihrer Gesellschaft befinden sich die Titanen, Söhne des Himmels und der Erde: der Pol (Polum), der Donner (Tonitrum) und, um sie herum, die grössten Gestirne: die Sonne (Oriens), der Mond (Occasus), die Winde (Boreas, Zephyrus, Notus und Eurus) und die Wolken (Nubs und Nebula).

In der Mitte des Bildes, das am meisten zerstört ist, sieht man die Natur (Natura), die Jahreszeiten (Aestas, Autumnus), einen Berg (Mons), möglicherweise der

Abbildung 22
Mosaik der Villa von Hinojal: Blanco 1976: 52 Abb. 95-96

Olymp; er hält in seinen Armen ein schlafendes Mädchen, mit dem Namen Nix (der Schnee). Inmittten der gennanten Figuren befindet sich eine männliche Person mit Flügeln an den Schläfen. Sein Name beginnt mit den Buchstaben AET und entspricht Aether oder Aeternitas, gleichwertig mit dem griechischen Aion.

Auf dem inneren Drittel, auf grünem und blauem Grund, herrschen die Personifizierungen des Wassers vor: die grossen Flüsse der zivilisierten Welt, der Nil (Nilus) und der Euphrat (Euphrates); der Hafen (Portus), vielleicht der Portus Ostiensis von Rom, und sein Leuchtturm (Pharus), welcher auch der von Alexandria sein könnte, und schliesslich der Ozean (Oceanus), das Meer (Pontus), der Wind, welcher die Schiffahrt begünstigt (Tranquilitas), die Navigation (Navigia) und die Früchte der Erde (Copiae), welche die Schiffe von einem Hafen zum andern transportieren. Diese Beschreibung des Firmamentes und der Welt, stammt aus der Beschreibung des Achillesschildes durch Homer (Il. XVIII. 483-489), und der von Euripides im Ion (1141 und folgende).

Johannes aus Gaza (Abb. 17), zu justinianischer Zeit, beschreibt ein Bild oder Mosaik aus Gaza oder Antiochia, das sich in Winterthermen befand, und das er „kosmisches Bild“ nennt. Es befand sich auf einer Wand oder in einem Gewölbe. Das Datum dieser Komposition ist ungewiss. Die Mehrzahl dieser Figuren waren mit Wörtern zur Identifizierung versehen. Es sind folgende: Kreuz. Uran. Gé mit Karpoi und Angelos. Helios mit Atlas. Areté und Sophia. Thálatta mit Angelos. Okéanos mit Bythós und Angelos. Aion. Hésperos. Cheimón. Hámaxa. Bronté und Angelos. Cheimón mit Ombroi. Astrapé und Angelos. Selene. Iris. Notos. Euros. Zéphyros. Boreas. Phoenix. Euphóriai. Eos mit zwölf Horai. Orthros. Anatolé. Nyx. Vier Horai Aithér mit Kosmos unf Physis.

Abbildung 23
Mosaik aus Augusta Emerita: Nogales 2000: 65 Abb. XIII; Álvarez-Nogales 2005: 1228 Fig. 1

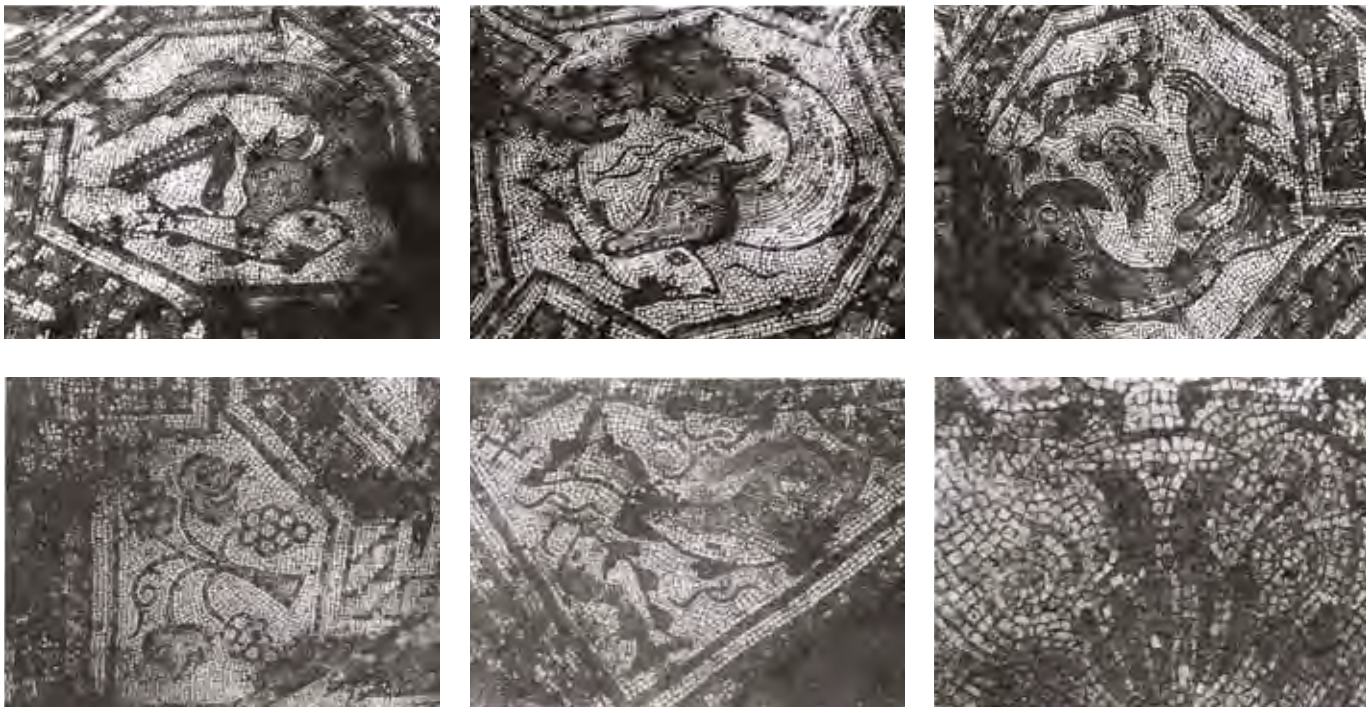

Abbildung 24
Mosaik von der Villa von San Martín de Losa (Burgos): López Monteagudo-Navarro 1998: 31 Abb. 17-18

Abbildung 25
Mosaik in Cardeñajimeno, Burgos: López Monteagudo-Navarro 1998: 27 Abb. 9

Die Übereinstimmung des kosmogonischen Mosaikes aus Augusta Emerita mit der von Johannes von Gaza geschriebenen Komposition, ist erstaunlich, und ebenso mit der Gesamtheit des syrischen Mosaikes von Shahhba Philippopolis (Abb. 18), aus der zweiten Hälfte des III. Jh. Zusammenfassend ergibt sich folgende Tabelle:

Mosaiken aus Merida	Johannes aus Gaza	Mosaiken von Chehba
Saeculum	Ouranos	
Caelum	Aither	
Nox (?)	Nyx	
(Ton)itrum	Bronté, Astrapé	
Nubs und Nebula	Cheimon. Ombroi	Drósoi
Notus	Nótos	Nótos
Zephyrus	Zéphyros	Zéphyros
Eurus	Eûros	Eûros
Boreas	Boréas	Boréas
Oriens	Anatolé	
Occasus	Seléne	
Polum Mons	Atlas	
Natura	Physis (in Gestalt eines Löwen, am Fuss des Kosmos)	
Autumnus Aestas, etc.	4 Horai	Tropai
Aet(ernitas)	Aión	Aión
Tellus (?)	Gaîa	Gê
Copiae	Karpoi	Karpoi
Oceanus	Okéanos	
Pontus	Thálatta	

Abbildung 26
Mosaik mit der Hochzeit von Gadmos und Harmonia: Fernández Galiano 1992: 162-177: Royo 1992: 148-161; Balty 2005: 1307-1323; Canto 1976: 293-338; Blázquez 2003: 45-142; Bowersock 1992

Die Beschreibung aus Shahba Philippopolis, nach J. Balty, erweckt die philosophischen Diskussionen der neuplatonischen Schule in der Zeit Plotins, bezüglich der Relation zwischen der absoluten Zeit, Aion, und der relativen Zeit, Chronos.

Das Mosaik in Augusta Emerita ist voller abstrakter Personifizierungen. K.M.D. Dunbabin glaubt, dass es zur malerischen Tradition aus dem II. und III. Jh. gehört. Der Künstler könnte Syrier gewesen sein, aber das Mosaik wurde in Hispanien angefertigt.

Ein vielfarbiges Emblem aus Aranjuez, Madrid (Abb. 19), zeigt die Büste eines mit einer Krone aus Früchten und Blättern gekrönten Jünglings. Er hält eine cornucopia. Diese Attribute sind für Aion und Annus bezeichnend. Die Krone aus Früchten und Blättern ist auf den Mosaiken von El Djem und von Volubilis zu finden, aus der Zeit der Severer und von Dougga, aus der ersten Hälfte des IV. Jh. Ein Jüngling mit cornucopia befindet sich auf den Mosaiken von El Djem, aus dem Ende der Antoninen Periode; in Hadra, aus dem Ende des III. Jh. oder dem Anfang des IV. Jh.; auf dem in Karthago und Hippo Regius, aus der ersten Hälfte des IV. Jh. Diese Büste ist eine abstrakte Personifizierung der Fruchtbarkeit.

Eine gekrönte weibliche Büste mit Weizenähren, Blumen und Früchten wurde als Aion oder Tellus ausgelegt, oder wie eine Personifizierung des Jahresgenius.

In diese Gruppe der Personifikationen der abstrakten Ideen gehören die Darstellungen der Musen, die in Hispanien auf den Mosaiken von Arróniz, Mérida,

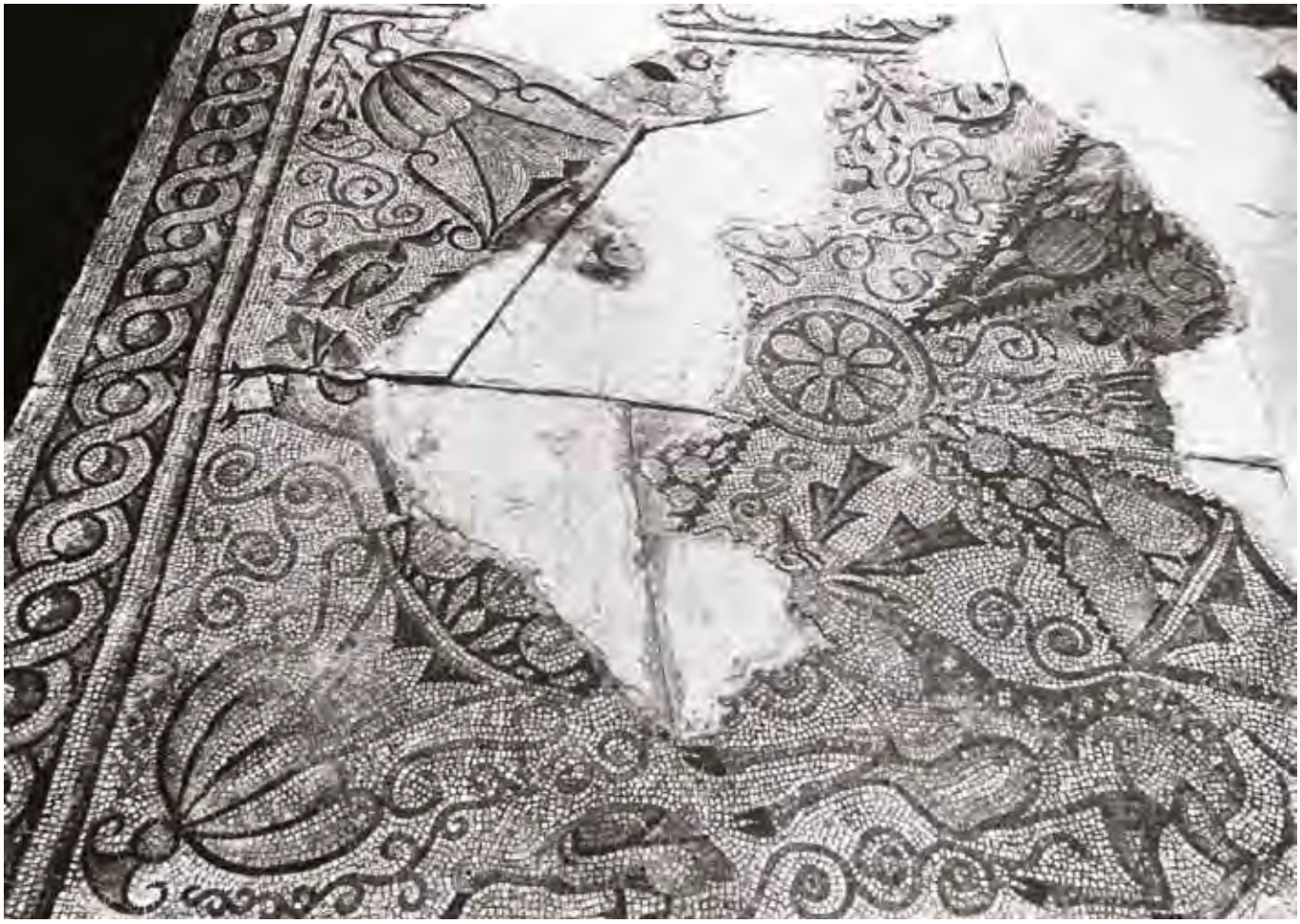

Abbildung 27
Mosaik von La Illeta del Rei:
Schlunk-Hausduld 1978: 184-186

Italica, Torre de Palma, Moncada und Montemayor (Blázquez 1993: 411-412) abgebildet sind.

Auf den Mosaiken in Hispanien fehlen aber die Personifizierungen der abstrakten Ideen, die in Beziehung zu der Philosophie und dem Neuplatonismus stehen, und im allgemeinen, mit den Konzepten, die auf den Mosaiken des Orients häufig zu finden sind und vorher erwähnt wurden. Im Orient waren diese Ideen im Umlauf, aber nicht im Okzident (Fontaine 1980: 241-330; Blázquez 1998: 463-490; Id. 1989: 307-322: Id. 1993: 99, 137: Id. 2004: 179-185). Ohne Zweifel war die mythologische Kultur bei der besitzenden Klasse in Hispanien erstaunlich. Einige Mythen sind äusserst selten und auf den Mosaiken der späten Kaiserzeit kaum dokumentiert (Blázquez 1993: 275-317, 386-444).

Im IV. Jh. hatte das Christentum nur geringe Fortschritte gemacht, ausser in dem Tal der Betis; das übrige Land war gröstenteils heidnisch.

Weitere hispanische Mosaiken mit vermutlich orientalischem Einfluss

Eine bedeutende Gruppe hispanischer Mosaiken haben auch vermutlich orientalischen Einfluss, da die Mosaikkünstler aus dem Orient kamen, oder copybooks hatten, oder von hispanischen Künstlern stammten, die in orientalischen Werkstätten ausgebildet waren.

Das Mosaik in Augusta Emerita mit den Sieben Weisen aus Griechenland (Älvarez 1990: 69-79, Abb. 32-38: Lancha 1997: 184-187), die im unteren Teil die griechischen Namen Agamemnon, Achill, Odysseus und Briseida aufweisen, wurde vermutlich von einem orientalischen Künstler hergestellt, der in Augusta Emerita (Abb. 20) arbeitete.

Auf einem Mosaik aus Cabezón de Pisuerga (Abb. 21) in Valladolid, mit dem Kampf zweier Paare griechischer Krieger, eines mit griechischen Buchstaben, das andere in Latein, bewahren nur die Endungen der Verse aus den Liedern der Iliade (VI.120; XX.159; XXIII.814). Sie erwähnen den Kampf zwischen Glaukos und Diomedes, Aienas und Achill, una Ayax und Diomedes. Mit höchster Wahrscheinlichkeit handelt es sich um das erste Paar. Die zweite Inschrift in Latein, bezieht sich auf das zweite Paar und sagt aus, dass die Krieger nach dem Kampf sich die Hände reichten und die Waffen austauschten, was auch in der Iliade erwähnt wird (IV.119-236). Die Krieger sind Glaukos und Diomedes. Der herstellende Künstler stammte vermutlich aus dem Orient.

In der Villa von Hinojal (Abb. 22), nahe Augusta Emerita, sticht ein Jäger mit einer Lanze auf ein Wildschwein. Eine ähnliche Szene ist auf einem Mosaik von Antiochia dargestellt, das Haus der Megalopsychia (Levi 1947: Abb LXXVII b), mit einer Aufschrift die zeigt, dass es sich um Adonis handelt, der ein Wildschwein jagt. Der Künstler könnte aus dem Orient stammen.

Auf einem in Augusta Emerita gefundenen Bild, sticht eine Person mit einer Lanze auf eine Löwin (Abb. 23). Eine ähnliche Parallele, sogar in Details, befindet sich auf einem Mosaik mit einer ähnlichen Szene in dem Grossen Palast von Istambul (Cimok 1997: 12-13; Blázquez-García Gelabert 1989: 29-37; Jobst 2005: 1083-1011; Parrish 2005: 1103-1117).

Auf einem Mosaik der Villa von San Martín de Losa (Burgos), sind die achteckigen Felder mit Fischen, Delphinen, Seeungeheuern und Vögeln geschmückt. Sie sind einzeln oder bilden Paare, oder fressen sich auf (Abb. 24). Ein dekoratives Motiv, das auch auf einem Mosaik von Antiochia dargestellt ist; ein Mosaik das „The striding Lion“ (Levi 1947: 321-323, Abb. LXXIV a) gennant wird, innerhalb rechteckiger Tafeln aus der späten zweiten Hälfte des V. Jh. Die gleichen Themen und aus späterer Zeit, gegen 575, wiederholen sich in Madaba, Jordanien (Piccirillo 2002: 153).

Auf einem Mosaik in Cardeñajimeno, Burgos (Abb. 25), ist die äussere Einfassung mit Köpfen von bärtigen, alten Männern geschmückt, eine Dekoration die dem Geschmack des Orients auf Mosaiken entsprach, wie in der Villa Constantiniana in Antiochia (Levi 1947: 16-21, Abb. I b), in Bichapour und Shahba Philippopolis (Balty 1981: 396-404, Abb. XXXIV, 12) und in der Kirche von Al-Khadir in Jordanien (Piccirillo 1993: 131). Der Wechsel von menschlichen Köpfen und von Tieren wird in der Villa des Falkners in Argos und in Hagios Taxiarchis belegt, aus dem Anfang des VI. Jh. (Akerstrion-Hougen 1974: 59-69, Abb. I-V, X) Alle diese Mosaiken sind aus der Spätantike.

Das Mosaik mit den Hochzeiten con Gadmos und Harmonia (Abb. 26), in Begleitung der Götter des Olymps, ist unter den hispanischen Mosaiken einzigartig, auch in der hohen Qualität seines Stiles. Vermutlich war der Künstler ein Syrier.

Einige orientalische Künstler fertigten in Hispanien Mosaike an und hinterliessen ihre Namen. Seleucus und Anthus stellten in Augusta Emerita auf den Mosaiken am Ende des III Jh. Dichter und Musen dar, und in der Umrandung, den Kampf der Pygmäen und der Kraniche (Blanco 1978: 30-32, Abb. 12-19).

Auf einem Mosaik mit dionysischem Thema in Andelos, Navarra, liest man nur die Endung des Künstlernamens in griechischer Sprache (Mezquíriz 1987: 59-62). Diese orientalischen Künstler arbeiteten an den Stätten, wo die Mosaiken sich befanden. Die Mosaiken der Sieben Weisen aus Griechenland und die beiden Krieger aus Cabezón del Pisuerga, sind Arbeiten orientalischer Künstler, die In Hispanien lebten.

Die Namen der Künstler, welche die Mosaiken in Hispanien anfertigten, sind ausser zweien, keine griechischen (Lancha 1984: 46-61; Id. 2000: 130; Id. 1997: 167, Abb. LXX; Blázquez 1996: 49, Fig. 8), sondern scheinen afrikanischen Ursprungs zu sein.

Orientalischer Einfluss auf den Balearen

Abbildung 28
Detail des Mosaiks von Es Formás de Torello: Schlunk-Hausduld 1978: 182-184 Abb. 78-79

Verschiedene Basiliken auf den Balearen (Blázquez 1978: 163-177), wie Son Bou, La Illeta del Rei (Abb. 27), Es Formás de Torello (Abb. 28) und Puerto de Fornelló, weisen jüdischen Einfluss des Orients auf. Die Fussböden der Basilika von La Illeta del Rei ähneln denen von Es Formás de Torello, die mit dem Mosaik der Synagoge von Hamman Lif verglichen wurden. Die längliche Halle des Tempels von Es Formás de Torello zeigt einige Dekorationsmotive ähnlich mit denen des Diaconicon des Tempels der Propylala, in Gerasa. Man hat Ähnlichkeiten zwischen den beiden Böden in Menorca und denen der Synagoge von Palästina festgestellt. Die Mosaiken auf Menorca geben ein Beispiel des frühchristlichen Einflusses des Westens.

Die Mosaiken von Es Formás de Torello und von La Illeta del Rei sind mit zwei symmetrisch angeordneten Löwen auf dem Lebensbaum geschmückt, wie in der Synagoge von Ma'on (Nirim), nahe Gaza, aus der Zeit um 238, wo die beiden gegenüberstehenden Löwen die *menorah* umgehen. Ähnliche, sich gegenüberstehende Löwen, erscheinen in der Synagoge von El Hammeh; in der Synagoge von Na'aran; auf dem Mosaik von Beter Alpha, aus dem Ende des V. Jh. oder aus den Anfängen des VI. Jh.; in der Synagoge von Tiberias, aus dem VI. Jh., und in der Synagoge von Jalfa. Auf dem Boden von Santa María del Camí, auf Mallorca, wird auf sechs Tafeln eine Szene im Paradies beschrieben: ein Löwe und einige Hirsche, Adam und Eva, und Josef, der von seinen Brüdern verkauft wird. Der Einfluss der jüdischen Kunst in Hispanien betrifft die Jahre zwischen 540 und 500.

Die Mosaiken des Orients hatten grossen Einfluss auf die hispanischen Mosaiken, wie aus dem Studium hervorgeht.

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Etude de la dégradation des mosaïques romaines de Volubilis (Maroc)

Abdelilah Dekayir*

Roman mosaics in Volubilis are opus tessellatum *type. They show different deterioration features represented by the lacunae formation (lack of tesserae) and break down of mosaic pavements by fracturing. The deterioration of the* tessellatum *and the formation of cracks are related to the swelling of soil supporting these mosaics. Furthermore, the* tessellatum *is also damaged by chemical dissolution of the fine grained-mortar between (lime and quartz fine grain) and under tesserae, giving an important porosity and making the* tessellatum *very easy to collapse. A part from limestone tesserae, which show formation of vesicles by chemical dissolution, other ones such as marble and glass tesserae appear to be resistant to the weathering action.*

Volublis'deki Roma mozaikleri opus tessellatum *tipindedir. Bu mozaikler, Lacunae düzeninde (tesserae eksikliği) belirtilenden farklı bir bozulma özelliği göstermekte olup mozaik döşemeleri çatlaklarla ve kırılmalarla bozulur.* Tessellatum*'un bozulması ve çatlakların düzeni mozaiği taşıyan topraktaki kabarmalarla ilişkilidir. Ayrıca, döşeme tesserae aralarında ve altında bulunan ve onlara önemli derecede gözeneklilik veren ve* tessellatum*un kolayca çökmesine sebep olan ince taneli harçtaki (ince taneli kireç ve kuvars) kimyasal bozulmalar nedeniyle de zarar görebilir. Kimyasal çözünmeden dolayı kabarcık oluşumu gösteren kireçtaşı tesseranın dışında, mermer ve cam tesseralar kötü havadan aşınmalara karşı direnç göstermektedir.*

Keywords : Volubilis / Roman mosaics / Degradation / Mineralogy / Tesserae / Soil

1. Introduction

Au Maroc, le site archéologique de Volubilis est classé patrimoine mondial de l'UNESCO depuis 1997. Ce site est connu pour ses belles mosaïques qui datent de l'époque romaine (fig.1).

Les mosaïques romaines du pourtour méditerranéen montrent souvent des figures d'altération dues à l'action d'agents météoriques (eau, gel-dégel, thermoclastie) ; de végétaux, d'interventions antérieures et du comportement mécanique du sol (Boschetti *et al*. 2005). A Volubilis, malgré l'exposition très prolongée de ces mosaïques aux différents agents d'altération, quelques unes demeurent bien conservées (Capedri *et al*. 2001 : 7-22, Panetier 2002). Par contre, d'autres mosaïques montrent des figures d'altération représentées par des arrachements localisés de tesselles (mosaïque du Cavalier) ou généralisés, comme dans le cas de la mosaïque de Flavius Germanus. En plus de ces figures d'altération, certaines mosaïques sont traversées par des fractures, les débitant en blocs décimétriques à métriques, difficiles à restaurer et touchant au design artistique de ces mosaïques (ex. mosaïque de la Citerne). Dans les parties humides et non exposées, certaines mosaïques sont colonisées par des lichens.

Le but de ce travail est d'étudier les mécanismes qui sont à l'origine de l'altération de ces mosaïques. Cette étude servira de base pour les travaux de restauration futurs.

2. Matériel & méthodes

Le site archéologique de Volubilis est situé prés de la ville sainte de Moulay Idriss Zerhoun (30 km au NW de Meknès). Cette région est caractérisée par un climat continental ave une précipitation de 650 mm/an comportant des fluctuations importantes à l'échelle saisonnier et annuel. D'un point de vue géologique, Volubilis est construite sur des dépôts de graviers Plio-Villafranchien et de marnes Miocènes.

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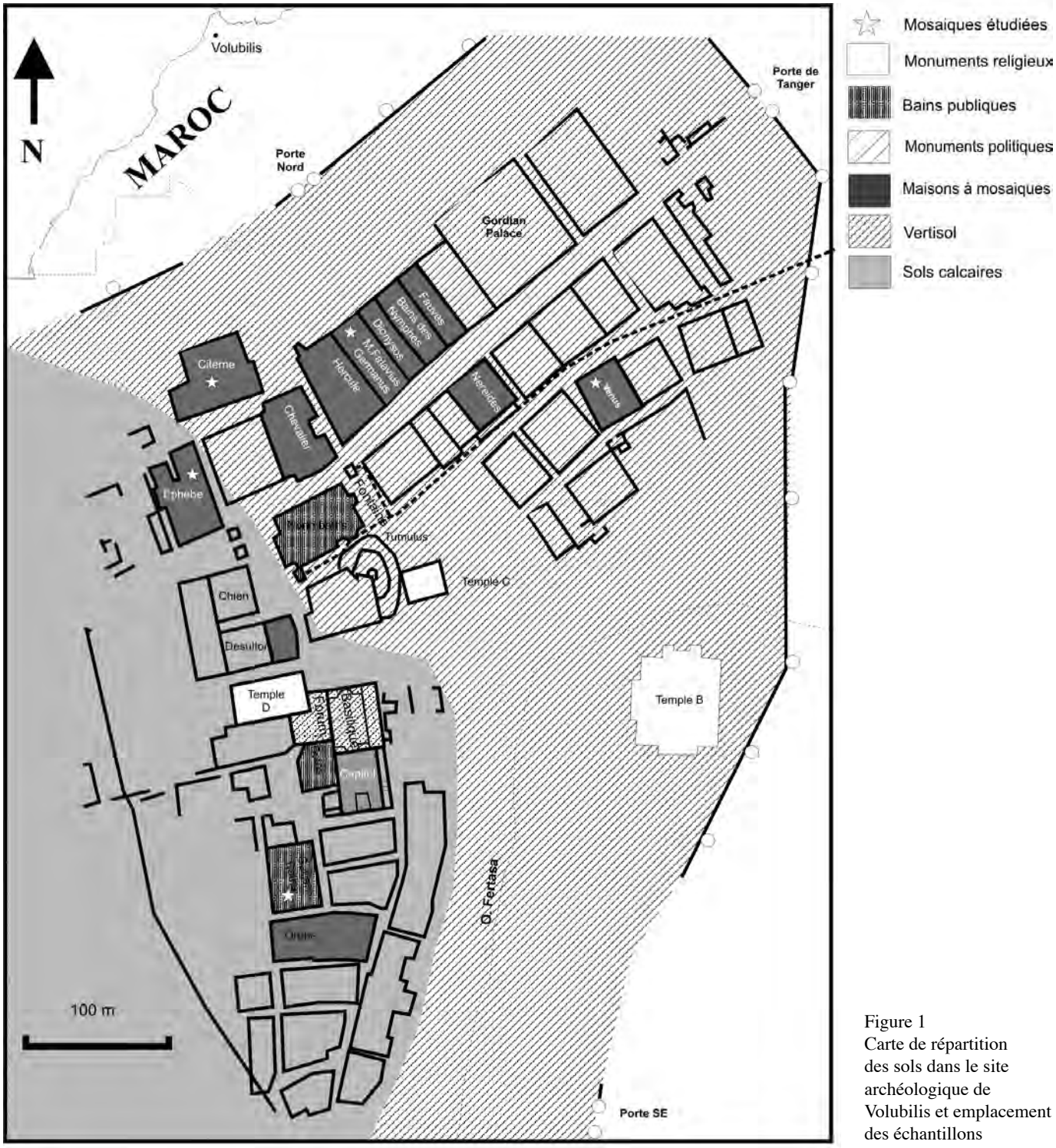

Figure 1
Carte de répartition des sols dans le site archéologique de Volubilis et emplacement des échantillons

Les mosaïques romaines de Volubilis sont de type opus tessellatum. Elles sont formées de petits cubes, taillés dans des roches (2 cm^3) ou à base de verre (mm^3) de différentes couleurs connus sous le nom de tesselles. Elles montrent des couleurs : noir, marron, rose, rouge brique. Les autres couleurs telles que le bleu, le vert et le jaune sont assurées par des pâtes de verres artificielles (Dekayir A. & Nadiri 2005, Dekayir *et al*. 2004 :1061-1070 , Limane *et al*. 2001, Dominguez-Bella et al. 2005).

Figure 2
Exemple de figures de dégradation des mosaïques romaines à Volubilis :
a-b) dissolution du bain de pose entre tesselles ;
c) formation de lacune avec détérioration du bain de pose;
d) action de végétaux ;
e) disparition du tessellatum et exposition du nucleus ;
f) fissuration

Diagnostic des mosaïques: les surfaces de nombreuses mosaïques ont été analysées dans le but d'évaluer l'action de l'altération. Les mosaïques étudiées (Ephèbe, Orphée et thermes de Gallien) (fig. 1) sont construites sur des sols calcaires et ont été détachées et redéposées. En revanche, les mosaïques de Flavius Germanus (FG), la Citerne et Vénus sont construites sur vertisol (sol gonflant) (fig.1). Les figures d'altération relevées sur les mosaïques romaines sont attribuées à l'action de l'eau et à la nature du matériau (exfoliation, érosion, fracturation, décoloration des tesselles, détachement de tesselles, détérioration des mortiers de restauration etc.) (fig. 2).

Au laboratoire, les tesselles ont été préparées et montées sur lames minces et observées au microscope optique. Les fragments de *tessellatum* (pavement et tesselles) ont été observés au microscope électronique à balayage, équipé d'un spectromètre EDX. La caractérisation minéralogique des différents composants des mosaïques a été réalisée par diffraction de rayons X (Philips PW 1729).

3. Résultats

3.1. Détérioration du tessellatum *par dissolution chimique*

Le *tessellatum* est composé de tesselles de différentes couleurs (blanc, marron, rose), taillées dans des roches calcaires ainsi que des marbres de couleur blanche et noire. Les autres couleurs ont été apportées par des pâtes de verre artificiel. Observées au MEB, les tesselles à base de calcaire montrent des vides de dissolution. Par contre, celles à base de marbre montrent une bonne résistance aux agents d'altération. Quant aux tesselles à base de verre artificiel, elles montrent une perte de coloration.

Entre les tesselles : les tesselles sont cimentées par un mortier à base de chaux et de sable, de granulométrie très fine (Dominguez-Bella *et al*. 2005, Dekayir & Nadiri 2005). Les joints entre tesselles représentent des chemins préférentiels aux solutions d'altération chimique. Localement, ce mortier montre des vides de

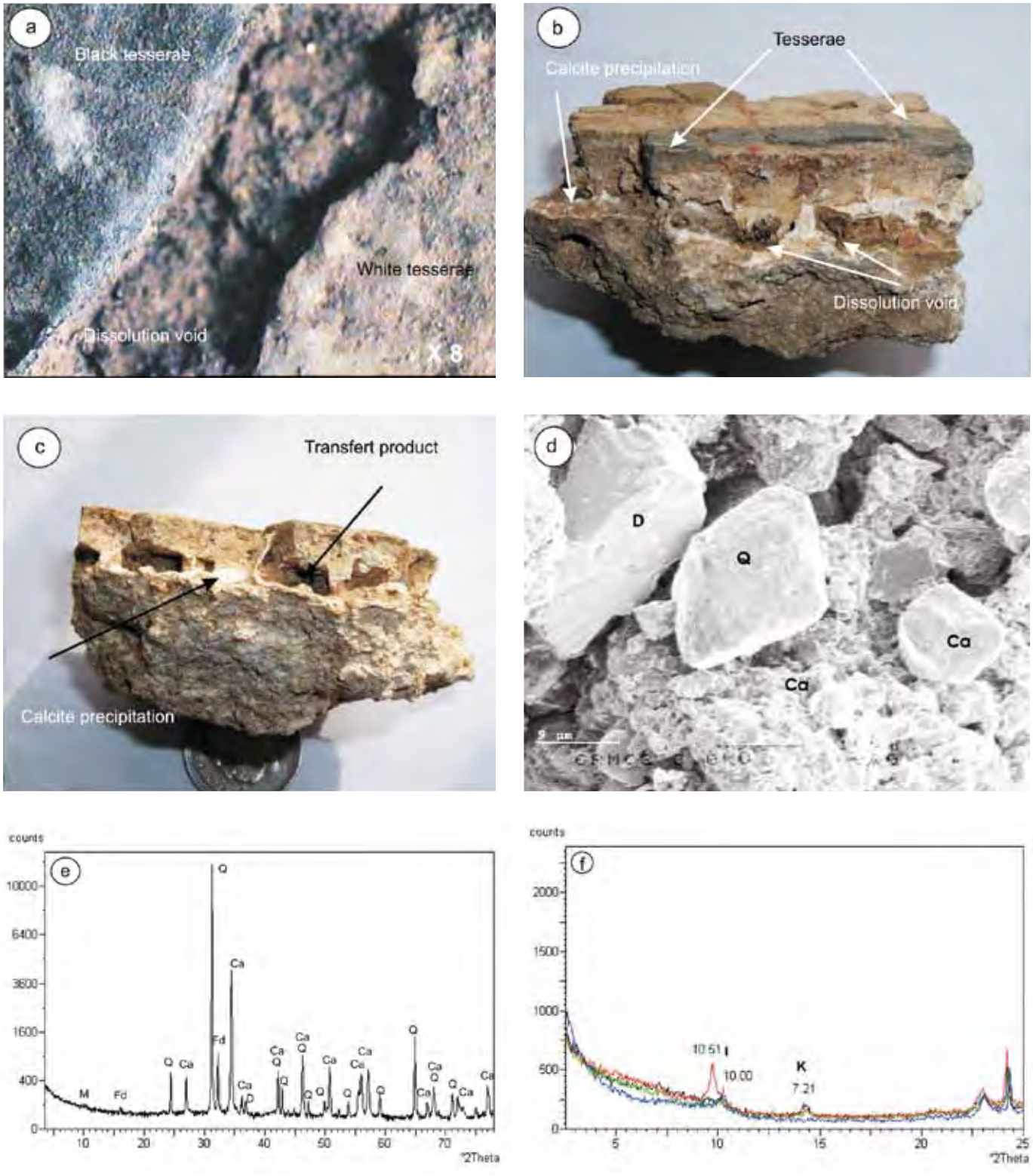

Figure 3
Détérioration du tessellatum de la mosaïque de Flavius Germanus :
a) figures de dissolution du liant fin entre les tesselles ;
b) figures de dissolution du liant fin sous les tesselles et formation des pores (cm) à remplissage argileux ;
c) détails de la couche calcitique ;
d-f) observation MEB et analyses XRD du produit de remplissage des pores
(I-M : illite, K : kaolinite, Q : quartz, Fd : feldspath, D : dolomie, Ca : calcite)

dissolution de différentes tailles, qui fragilisent la structure du mortier et facilite le détachement des tesselles et la formation de lacunes (fig. 2a).

Sous les tesselles : une grande porosité s'ouvre, représentée par des pores de quelques millimètres à 1 centimètre, remplis de produits argileux (fig. 3b, d). Les analyses XRD et les observations réalisées sur ce produit au MEB montrent qu'il est constitué de grains de quartz, de calcite et de dolomite de quelques microns. Les analyses XRD des minéraux argileux montrent la présence de kaolinite et d'illite (fig. 3e, f).

4. Discussion et conclusion

Les mosaïques romaines de Volubilis sont de type *opus tessellatum*. Elles sont formées de la base vers le sommet par i) le *rudus*, ii) le *nucleus* et iii) le *tessellatum* (Dominguez-Bella *et al*. 2005, Dekayir & Nadiri 2005). Généralement, ces mosaïques sont décorées par des tesselles de couleur rose, marron et blanche à base de calcaire oolitique, par des tesselles rouge brique à base de terre cuite et de grès calcaire et à base de marbre noir et onyx. Les tesselles à base de verre ont une couleur bleue, verte et jaune. En effet, la mosaïque romaine représente un système pétrographique très complexe. Les tesselles à base de roches ont été taillées dans des formations calcaires avoisinantes d'âges Aalénien et Bajocien (Capedri et al. 2001 : 7-22, Faugères 1978).

Après diagnostic de plusieurs mosaïques, l'action des phénomènes d'altération est traduite par une destruction par dissolution chimique du bain de pose à la base et entre les tesselles, aboutissant à la formation de pores remplis de produit argileux. Ce processus est contrôlé par des réactions chimiques de type dissolution précipitation (Stumm & Morgan 2005). Les solutions d'altération qui s'infiltrent le long des pores existants, provoquent une dissolution et un élargissement de ces pores, comme en témoigne la présence de produits de transfert formé de dolomie, quartz et calcite

$$CaCO_3\,(s) + CO_2 + H_2O = Ca^{2} + + 2HCO_3^{-}$$

En conclusion, les mosaïques romaines de Volubilis sont construites en partie sur des sols calcaires qui jouissent d'une bonne stabilité mécanique. En revanche, celles qui sont construites sur des vertisols (sols gonflants) montrent plus de dégradation (par ex. la mosaïque de Vénus). A l'échelle de la mosaïque, les tesselles résistent mieux à l'altération en fonction de leurs caractéristiques pétrographiques. En revanche, la composition très calcitique du bain de pose le rend très fragile et très exposé à la dissolution chimique aboutissant à la formation de pores et à la destruction du *tessellatum*.

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The Port Illustration on the floor mosaic of the Yakto Villa

Ayse F. EROL*

The most important materials that can shed light on the historical atmosphere of Antiocheia on Orontes are mosaic panels. The floor mosaic obtained from the Daphne Yakto villa provides valuable information by showing the topography, the architecture and the daily life of Daphne and Antiocheia on Orontes. While a part of the academic research labelled the U-shaped, colonnaded structure filled with water as a reservoir, certain details of the depiction give us clues to the possibility that this could actually be a port. Records provided by antique writers on the city and comparisons made with architecturally similar material seem to yield data that support the idea that this structure functioned as a commercial port.

Günümüzde Antiocheia on Orontes antik kentinin tarihsel dokusuna ışık tutan en önemli malzeme mozaik panolarıdır. Daphne Yakto villasından ele geçen taban mozaiği, Daphne ve Antiocheia on Orontes kentlerinin antik dönem topografyası, yapıları ve günlük yaşamına ait tasvirler içermesi açısından önemli bir buluntu grubunu oluşturmaktadır. Mozaik tasvirinde gözlenen U planlı, kolonadlı ve ortası suyla dolu olan yapı, araştırmacılar tarafından su rezervuarı olarak tanımlanırken, tasvirde gözlenen detaylar liman yapısı olabileceği yönünde ipuçları vermektedir. Kentle ilgili antik yazarların kayıtları ve mimari yönden benzer malzeme ile yapılan karşılaştırmalar, yapının bir liman yapısı işlevinde olabileceği şeklindeki değerlendirmemizi destekleyen veriler sunmaktadır.

Keywords: Antiocheia on Orontes, border mosaic, water reservoir, port.

The floor mosaic that was revealed by the excavations carried out in the Daphne Yakto villa in 1932 provides a lively depiction of the topography, architecture and daily life of Daphne and Antiocheia (Fig.1). The villa, which was a countryside residence for Daphne, is also known as the Ardaburius villa. He was magister milutum of Antiocheia during 450-457 A.D., thus dating the mosaic to the mid-5th century (Campbell 1934: 202).

The buildings illustrated on the border that frames the central panel of the floor mosaic have no spatial relationship with each other. Generally being frontally depicted, they are identified by inscriptions or by scenes pointing to their function. Among them, there is an interesting U-shaped structure with a roof supported by a colonnade (Fig. 2). Its middle is filled with water and there is an illustration reminiscent of a boat. Making use of records of antique writers and comparisons made with architecturally similar materials, our interpretation of the function of this building is presented below.

There are certain suggestions that have been put forward by previous scholars on the nature and function of this structure. To quote from Malalas (Jeffreys 1963:147), after building an aqueduct extending from Daphne to Antiocheia, Emperor Hadrianus erected a spectacular reservoir to store and control water flowing from Daphne's Saramanna source and named it as "theatre of source of Daphne". Based on that, R. Chowen and D. Levi suggested that this building could be the reservoir mentioned by Malalas (Chowen 1956: 275-277; Levi 1947: 326). However, if one compares it to architecturally similar formations, one gets the impression that this structure was meant to be a port. The aim of this article is to demonstrate this by reference to some similar architectural material. The fact is that in his piece "Antioch Mosaic Pavements", while Levi declares the building is a water reservoir, he also asserts that there is a boat-like depiction on the water-filled area of the illustration, which appears to support our hypothesis (Levi 1947: 329).

On the other hand, Chowen believed that this building presented a public scene for those who sat on the theatron and watched the water go by (Chowen 1956: 275). He then backs his assertion by stating that on his visit to Africa in 128 A.D., Emperor Hadrianus had built an aqueduct extending from Carthage to Zaghouan Mountain, after which

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Figure 1
Levi, 1947, Fig. LXXIX/a
The mosaic of Yakto villa, topographical border

he also ordered a reservoir to be constructed by the water source on the mountain (Chowen 1956: 277). As mentioned above, Levi suggested that the building on the depiction could be a storage area from where the water coming from Daphne's Kastalia and Pallas sources was to be distributed (Levi 1947: 326). However, to the right of the U-shaped structure, there is another formation illustrated in the mosaic that might be a water reservoir. Furthermore, water flowing into this second structure is clearly indicated with two separate white lines which symbolize the Pallas and Kastalia sources whose names are inscribed in the upper part of the mosaic border (Fig. 3). Within this context, the reservoir which Malalas referred to as storing water coming from sources of Daphne must be this second building located to the right of the U-shaped structure on the mosaic.

On the basis of Libanios's remarks about a dock by the River Orontes for ships to manage their loads (Downey 1959: 652), the same U-shaped structure can be thought of as a port building. The following comparisons with architecturally similar material present information that confirms this assertion.

The building on the mosaic includes a colonnaded area consisting of columns designed in Ionian style. This colonnaded part, behind which stairs are placed in a U-shape, encircles the water in the middle. While there is the image of a boat in this water-area, a sort of platform to which the boat approaches is observed to be attached to a stair that is placed in front of the colonnaded area (See Fig. 2).

The city of Antiocheia was situated in a very important and fertile area by virtue of its being founded at an intersection point between the roads to the east and west. The River Orontes, and the canals joining it, facilitated the transfer of goods to Seleucia Pieria, Antiocheia's port settlement through the river. From there, they could further be sent to the Mediterranean (Downey 1962:27). A similar design was realized during the reign of Emperor Claudius who connected Rome, first to the port of Ostia through the canals he built on the River Tiber, and then to the sea (Sear 1982:123; Savile 1941:231). By virtue of the remaining ruins, it is widely known that in the antiquity there were many docks that ships could resort to across the River Tiber (Blackman 1982:187 Fig. 2). Libanios, from the 4th century A.D., offers us the most comprehensive information on Antiocheia. While describing the town, he wrote that ships carrying wheat approached the city and discharged their load to a stone-made dock, from where their goods were taken to the agora by the river. (Downey 1959: 652, Downey 1959: 652)[1]. This statement also supports the observation that the description on the mosaic shows a boat on the water-filled area of the U-shaped structure approaching a sort of a platform. The goods that were unloaded on this platform

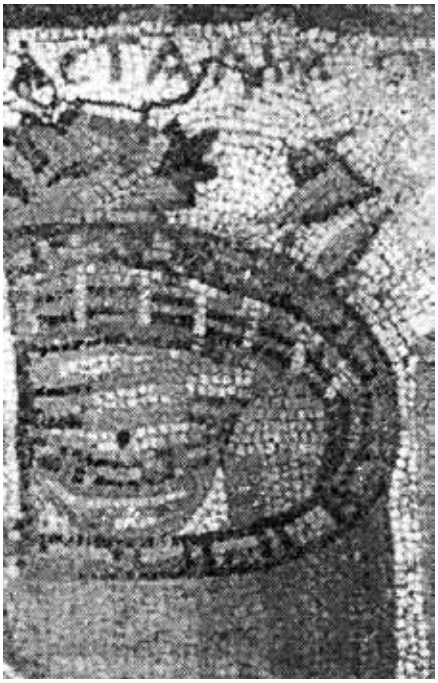

Figure 2
Campbell, 1934, Fig. XXII/A
The mosaic of the Yakto villa, topographical border, U-shaped structure

1 For one of the oldest examples of the complex allowing ships to approach cities through rivers, please see Lothal dock and its canals from the Harapan region, India (J. W. Shaw., Greek and Roman Harbourworks, A History of Seafaring Based on Underwater Archaeology (ed. G. F. Bass), 1972, 88-89), please see a harbour settlement possibly situated on the Nile, Egypt in 3rd millenium B.C. (N. M. Flamming., Cities in the Sea, London, 1972, 40).

Figure 3
Levi, 1947, Fig. LXXIX/a
The mosaic of the Yakto villa, topographical border, U-shaped structure and water reservoir

were first taken to the frontal staired area of the colonnade that was painted in black in the mosaic. From there, they were carried to the agora by the river. Farther on, a man is seen walking to the left of the U-shaped building, carrying a basket in his outstretched right hand and a package under his left arm. Even though it is not really possible to make a precise point, the presence of this man can be evaluated as if he is carrying goods unloaded from the port. This colonnaded part and the black stairs behind it must have been designed to offer the public a recreation area where they could relax and enjoy the breeze[2].

Moreover, architectural similarities between the U-shaped structure and the harbour descriptions on a Pompeiopolis city coin (Fig. 4) and on the Kelenderis mosaic (Fig. 5) further present evidence in line with the idea that this structure was a port rather than a water reservoir.

Excavations that were carried out in Kelenderis revealed a floor mosaic in which a city scene presenting the harbour and some surrounding buildings was described (Zoroğlu 1994: 31, fig. 15) (See Fig. 5). What is interesting in this depiction is a U-shaped structure, with a tiled roof supported by a colonnaded part consisting of arched-columns extending throughout the harbour (Zoroğlu 1995: 265). The depiction of the city-port in the mosaic is highly important since it provides valuable information on the location and plan of the Kelenderis harbour. On the water-filled area of the structure, there are again portrayed a sailboat and a simple boat. Zoroğlu believed this building to function as an entreport or shops for the harbour. (Zoroğlu 1993: 195, fig. 13; Zoroğlu 1994: 32, fig. 15). The structure next to it, with its high windows and dome, looks similar to the port baths whose remains we find today and whose current location coincides with the plan suggested in the mosaic (Zoroğlu 1995: 265). Because the stylistic characteristics of both the geometric adornments and the lotus buds placed in the border framing the mosaic are dated to either the second half of the 5th century or the beginning of the 6th century A.D, the mosaic itself should be traced back to the same dates (Zoroğlu 1993:196; Zoroğlu 1999:519).

Figure 4
Boyce, 1958, Fig. 10/1
Harbour Illustration on a coin from the Antoninus Pius period of Pompeiopolis

In Soli Pompeiopolis, a coin dated to the reign of Emperor Antoninus Pius was found (See Fig. 4). The harbour depiction on that coin displays similarities with the architectural features of the structure shown in the mosaic (Boyce 1958:68 Fig. 10) since the U-shaped structure with a roof supported by a colonnade is also present on that coin. In the water-filled part, there is an illustration of a water-god. According to the information provided by Beaufort in his piece Karamania, the Pompeiopolis harbour looks like a basin surrounded by semi-circular walls or breakwaters (Beaufort 1818: 249, 259). The structure depicted on the Pompeiopolis coin and the research conducted by Vann's team which validated the presence of breakwaters (Vann 1994:530-534), confirmed Beaufort's descriptions and his city plan (Beaufort 1818: 249, 259). The closest example to the form and location of the water-god in the middle of the water-filled area of the building is a figure of a god that was placed at the entrance of the Ostia port that was depicted on a sestertius from the reign of Emperor Nero (Boyce 1958: Fig. 10/2). Several suggestions have been put forward as regards the identification of this port god shown on the coin (Boyce 1958: 71; van Buren 1911: 194, footnote 2.). The similarity observed in both illustrations led to a conclusion that the god depiction in Pompeiopolis, which is a province, must have been adopted by the capital Rome (Boyce 1958:77). Port structures with similar plans have already been observed in depictions placed on coins from the Imperial period at Ostia (Savile 1941: 231, Fig. 9), Corinth and Mothone (Boyce 1958: Fig. 13) (Fig. 6).

2 For portico examples encircling the harbour in the ancient Anatolian cities of Miletos and Elaiussa Sebaste, please see Akurgal, 1988, 451, Schneider, 2008, 101-102.

Figure 5
Zoroğlu, 1999, Fig. 2
Harbour illustration on Kelenderis mosaic

As the capital of the Seleucian Kingdom, Antiocheia was the administrative centre of the Syrian province during the Roman period. Situated between the River Orontes and the Silpius Hill on a crossroads for trade routes extending from east to west, the city was strategically very important. With its fertile lowlands and abundant water resources, Antiocheia produced grain, oil and wine. Its agricultural appeal and strategic significance made the city a very important trade centre across the eastern and Greco-Roman world. The River Orontes and its canals into the city provided a route for the Persian, Indian and Chinese goods to be first transported to Seleucia Pieria from Antiocheia and then to the Mediterranean ports (Downey 1962: 11).

The mosaics displaying scenes from the city life shed light on the settlement from the antique period and its structural features. Currently exhibited in the Museum of Archaeology of Hatay, the floor mosaics of the Yakto villa are particularly remarkable since they provide indispensible information on the city life and the architecture of Antiocheia, whose structural characteristics were heavily damaged by earthquakes. The fact that the River Orontes was appropriate for small ships to sail along and that Antiocheia's canals offered an easy route into the port of Seleucia Pieria and thus to the Mediterranean enable us to imagine the idea of a port, connected to the city, into which ships would approach to load and unload.

In his piece "Antioch Mosaic Pavements", Levi's theory that the U-shaped building constituted a water reservoir is refuted by his remarks about a boat-like illustration placed in the middle of the water-filled area of the same building (Levi 1947: 329), while this testifies to the point made in this article. There is no evidence accommodating a setting in water reservoirs of the antique period that

Figure 6
Boyce, 1958, Fig. 13/ 4, 13/5
13/4- Harbour Illustration on a coin from the Antoninus Pius period of Corinth
13/5- Harbour Illustration on a coin from the Emperor Caralla period of Mothone

allowed ships or boats to enter. However, Libanios's remarks on ships unloading wheat by the river in Antiocheia (Downey 1959: 652), confirms the existence of a port by the River Orontes. The fact that in the mosaic, the boat was depicted as approaching a platform-like area[3] reminds us of the presence of a setting where ships could use as a dock to unload their trade goods. Furthermore, it is also plausible to deduce that, since the city agora was situated by the river, trade goods were first unloaded in this port from where they were then taken to the agora. Because the U-shaped structure on the mosaic is colonnaded, it also recalls Vitrivius's statements that porticos and shipyards that accessed the commercial centre of cities were constructed at ports that enjoyed a natural curve or U-shape (Vitruvius. V. XII.1). Architectural similarities between our U-shaped structure and the ports of Pompeiopolis and Kelenderis[4] remain as further evidence for the hypothesis that this was a port. Because the mosaic illustrations of Yakto and Kelenderis are dated to the mid-5th century A.D, they also chronologically overlap with each other. Although the Pompeiopolis coin is an earlier example, ports with similar plan were built in the capital and in provinces during the entire Roman Imperial period (Boyce 1958: Fig. 13).

3 For boats that were used for transportation on the river, please refer to Lionel Casson, "Harbour and River Boats of Ancient Rome", JRS 55 I/2, 1965, 31-39

4 For an illustration of a port with similar plan, please see the portico of the Kenchreai port of Corinth, dated to the end of 4th centuty A.D., in L. İbrahim et. al. Kenchreai. Eastern Port of Corinth, Leiden, 1976, Fig. 94; for the circular port observed on late-period coins of Side, please see A. M. Mansel, Side. 1947-1966 Yılları Kazıları ve Araştırmalarının Sonuçları, Ankara, 1978, Fig. 76.

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The Ship Depicted in a Mosaic from Migdal, ISRAEL*

Zaraza FREIDMAN**

Iconography of ships in mosaics comprises two fields: ancient ships and shipping, along with mosaic art and techniques. This theme is very complex and however it has been paid insufficient attention in the past. Due to this durable art form, the ships depicted in mosaics may be referred as actual images of vessels concurrent to the period when such surfaces were made. The research started with my MA dissertation (1999, unpublished), which encompassed the eastern Mediterranean, Israel and Jordan. Throughout my PhD dissertation (2003, unpublished), this theme dealt with the entire Mediterranean world. It relates to shipbuilding materials, types of ships, sailing environments, as well with the propulsion and steering rig. The following paper describes one of the earliest mosaics with ship depiction that was found in Israel, at Migdal, located on the western shore of the Sea of Galilee (in Hebrew: Yam Kinneret) (fig. 1). Although some reddish-brown tesserae were used for some distinct parts in the objects depicted in the mosaic, it follows the black-and-white technique (rare example in the eastern Mediterranean). The mosaic reflects tight art connections with the early Roman Empire of the 1st centuries BCE – CE. The Migdal mosaic is no longer found at it original location. Today it is mounted into a metal frame and placed among other artifacts in the courtyard of the "Church of the Multiple Loaves and Fish", at Capernaum (Tabgha).

Mozaiklerdeki gemi ikonografisi mozaik sanatı ve tekniğinin, yanında antik gemiler ve gemicilik alanlarını da kapsamaktadır. Bu konu oldukça kompleks olmasına rağmen geçmişte yeterince ilgi görmemiştir. Mozaiklerin kalıcı sanat formu olması sayesinde, betimlenen gemiler yapıldığı periodla eşzamanlı gerçek görüntülerine kaynak olarak gösterilebilir. Araştırma, Doğu Akdeniz'i, İsrail'i ve Ürdün'ü kapsayan yüksek lisans tezimle (1999-basılmamıştır) başlamıştır. Doktora tezim boyunca (2003-basılmamıştır), bu konunun kapsamı tüm Akdeniz Bölgesini içine alır. Tez, gemi yapı malzemeleri, gemi çeşitleri, deniz yolculuğu şartları ve gemilerin yürütücü güç ve dümen aksamları ile ilgilidir. Bu makale, bulunmuş olan en erken gemi betimli mozaiklerden biri olan İsrail, Migdal'daki Galilee Denizi'nin (İbranice: Yam Kinneret) (fig. 1) batı kıyılarında bulunan mozaiktir. Mozaiğin bazı farklı bölümlerinde kızıl-kahverengi tesseraeların kullanılmış olmasına rağmen, genel olarak siyah-beyaz teknik uygulanmıştır (Akdeniz'deki nadir bulunan örneklerden). Mozaik, M.Ö. ve M.S. ki 1. yüzyılların erken Roma İmparatorluk Dönemi ile sıkı sanatsal bağlar yansıtır. Migdal mozaiği artık orjinal konumunda bulunmamaktadır. Günümüzde, metal bir çerçeceye monte edilmiş halde Capernaum'daki (Tabgha) Katmerli Somun ve Balık Klisesi'nin (Church of the Multiple Loaves and Fish) avlusundaki diğer eserlerin yanında yeralmaktadır.

Location of Migdal

Migdal (Israel map ref. 1988.2488), is situated on the western coast of the Sea of Galilee, about 5-km north of Tiberias (fig. 1). The town was established in the Hellenistic period (300 BCE), and was known as Migdal Nunaya/ Nunia (in Aramaic) – "*Tower of Fish*"[1]. The town is also known as Magdala (in the Christian world), as being the hometown of Mary Magdalena[2]. According to the writings of Josephus, Migdal/Taricheae had many ships, shipyard workers and wood supply.[3] He also wrote that Taricheae had a population of forty thousand inhabitants.[4] Josephus gives a detailed account on the nautical activities at Migdal and on the Sea of Galilee, during the time when he was

* *This paper is an extension and updated data of the Migdal mosaic chapter from the writer's MA dissertation, 1999, unpublished. I would like to dedicate this paper to the memory to Prof. Michele Piccirillo, my advisor for both MA and PhD Dissertations, a close and a very good friend, who just passed away before his time, 26.10.2008, and left all of us with an enormous sorrow and emptiness.*

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1 Raban, 1988, p. 323.

2 he Synoptic Gospels describes Mary of Magdala as one of the women from the Galilee who gave financial help and domestic service to Jesus and his disciples. The Fourth Gospel gives Mary of Magdala the pride of being the first witness of the resurrection and the risen Christ; Comay and Brownrigg, 1980, pp. 299-301. Luke: 8.2, informs that a certain women which had been healed by evil spirits was called Mary Magdalena.

3 Nun, 1992, p. 34.

4 Josephus, Wars, II.21.4.

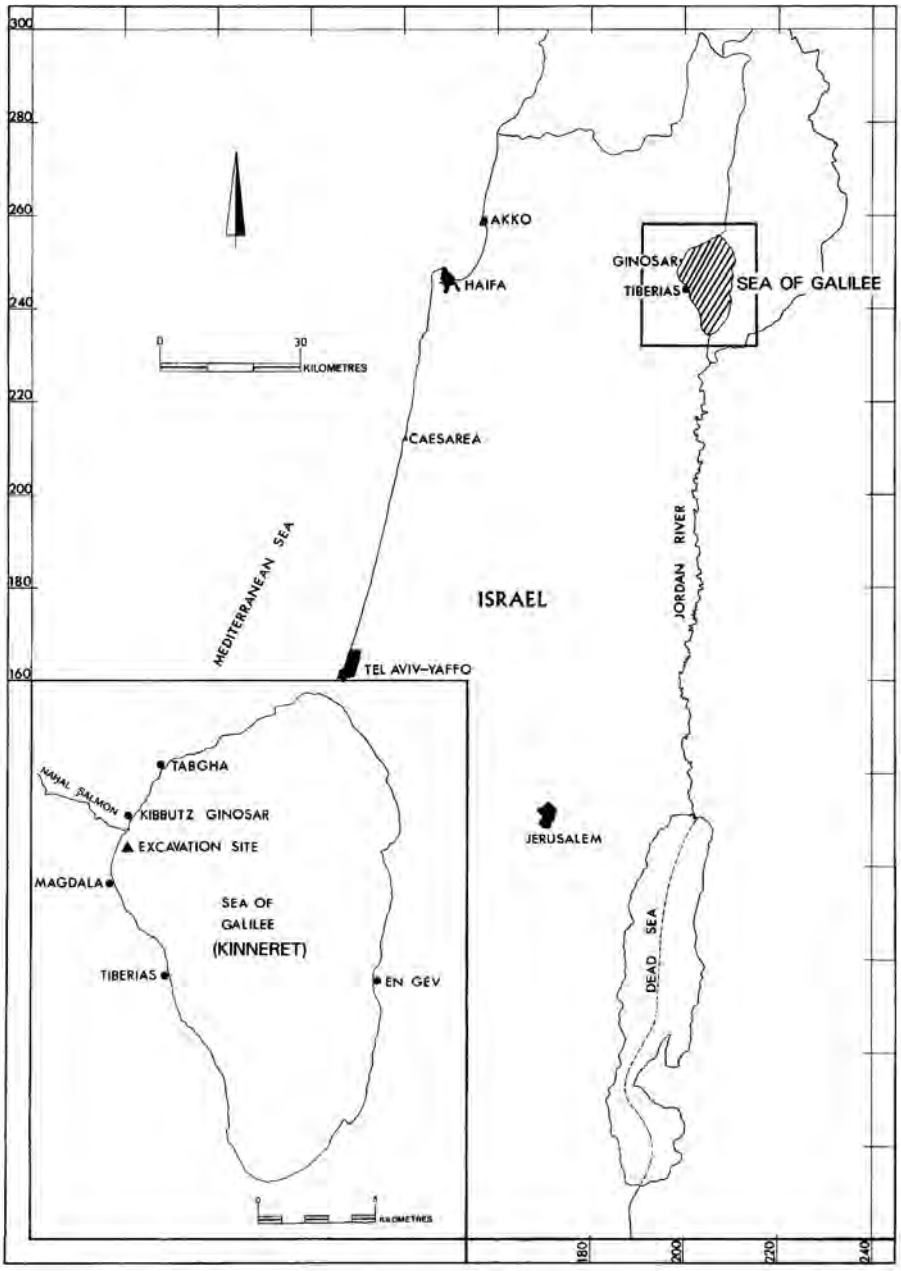

Figure 1
Location Map (after: Wachsmann, 1990, p. 2)

appointed as military governor.[5] He also mentions that many Jews from Tiberias sought refugee at Migdal/Taricheae at the outbreak of the Jewish Revolt in 67 CE.[6] During the Revolt, the combat that took place on the Sea of Galilee (Kinnerer) and its shores was a very cruel one. The Romans attacked Migdal and massacred a large part of its population. Though that many Jews sought to escape by boats were caught by the Romans and slaughtered.[7]

5 Life 12; 18; 32; 59; 73; Wars II.21.4; III.10.1; III.10.9.

6 In order to show his authority, Josephus sailed in 230 bots from Migdal to Tiberias as an act against opposition of the inhabitants; Wars, II.21.8.

7 Wars, III.10.9.

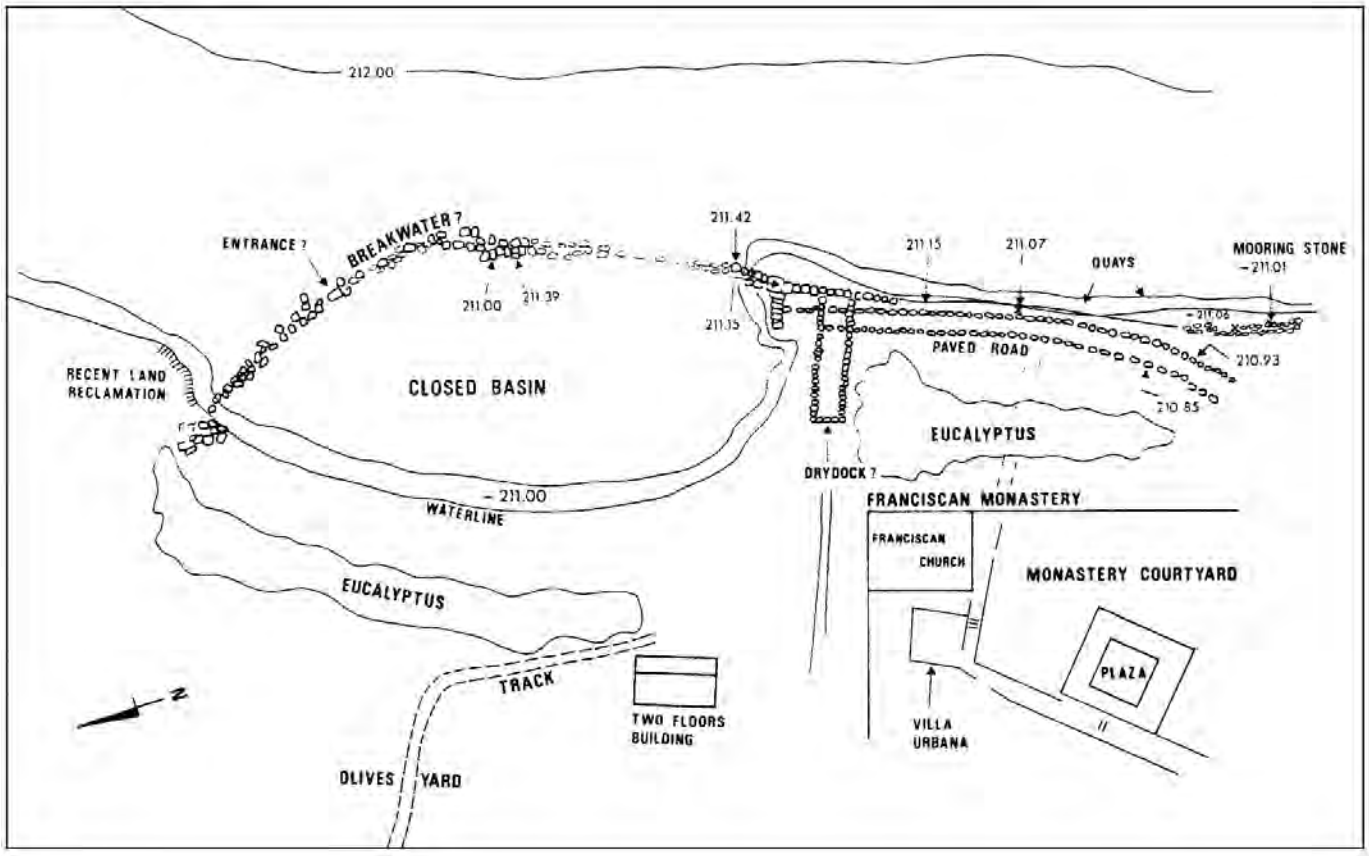

Figure 2
Migdal Harbor (after: Raban, 1988, p. 53, Fig. 4)

Archaeological Context of the Mosaic

Taricheae or Migdal Nunia (the ancient name of Migdal) attests for its maritime character. Strabo mentions that "*…at the place called Taricheae the lake supplies excellent fish for pickling*".[8] During the survey carried out in 1970, by Prof. Avner Raban, from the Institute of Maritime Studies, University of Haifa, remains of a harbor were found in the vicinity of the courtyard belonging to the Franciscan church (fig. 2). The harbor basin was formed within the natural bay that was enclosed by a breakwater to the north-east; its area extended for one hundred acre.[9] A wharf built with basalt stones, ran parallel to the shore at a length of *c*.100 m. At its eastern end protruded a mooring stone where the mooring lines of ships were tight in antiquity.[10] Vessels of medium size could be moored along the quay.

The excavations carried out at Migdal, from 1971 to 1977, and conducted by Dr. Virgilio Corbo from the Franciscan Institute, in Jerusalem, revealed the Town Square, some streets, various buildings and the water system (fig. 3). During the excavations carried out in 1977 at the villa, to the northeast of the "Water Tower" (Area C), the work mostly concentrated on the mosaic pavements.[11] The mosaic floor of Room C6 (figs. 3, 4), the purpose of this paper, belonged to the original phase of the villa. The room led to a patio that in its center a plastered pool was built.

8 Starbo, *Geo*. XVI.2.45. Probably Strabo referred to Migdal fish industry, where was produced of *oxygarum* a very prized condiment for the Roman culinary. The main production center was in North Africa. The finished product was exported to Greece, Italy and Gaul; Avi-Yonah, 1976, p. 24.

9 Nun, p. 35.

10 Raban, 1988, p. 53, Pl. VII.5.

11 Corbo, 1978, p. 236.

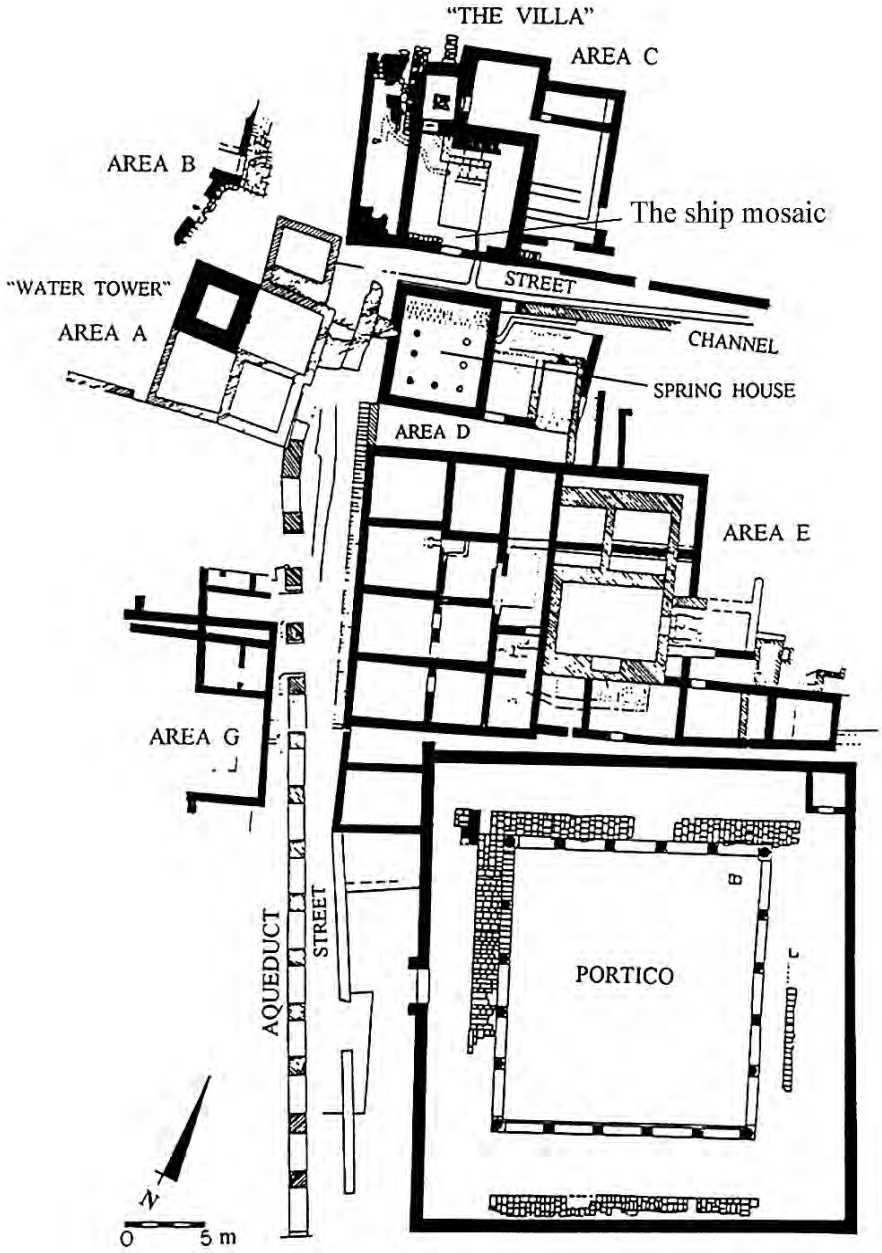

Figure 3
Plan of the excavations
(after: Corbo, 1978, p. 72)

The Mosaic Floor in Room C6

Room C6 was virtually the most central part of the villa (fig. 3). It almost formed a square of 2.80 x 2.60 m, and its floor was entirely paved with mosaics. The southern wall of this room is adjacent to the *Cardo*. The mosaic mostly made with black-and-white tesserae and depicting the maritime scene was found underneath a later mosaic that had been removed in order to allow the excavators a better study of this pavement. The style of the mosaic work and the shreds found with this context indicates that the complex was built during the 1st century CE.[12] The mosaic pavement consists of two parts:

1. A short Greek inscription found on the southern doorstep reads "*KAI CY*" (you too). It was made with black tesserae and set on white background.[13] The length

12 Corbo, p. 237; Two such inscriptions found in villas at Antioch were dated to the 1st century CE.

13 This inscription was removed from its original location. It also was mounted into a metal frame and today it is found in the closed yard at Capernaum Church.

Figure 4
Migdal Mosaic (photo: Z. Friedman)

of the inscription is 33 cm, while the width is 7.5 cm. Such inscriptions had not been found in Palestine before, but are mostly known from private houses in Antioch.[14] They are associated with invocations against the "evil-eye".

2. The main part of the floor consists of a large mosaic rectangle (1.10 x 1.12 m), which formed the pavement of this room (fig. 4). A double black frame borders the maritime scene.[15] The outer black frame (5 cm wide) is made of three rows of tesserae. The black stones are basaltic, originating in the area of the Kinneret, the Galilee or the Golan Heights. The wide space between the black borders is made of five rows of white tesserae, while the second border is made of two rows of black stone cubes. The inner field comprising the figurative decorations measures 0.78 x 0.81 m. The background is white and the objects depicted within this field are made with black, while some details are made with brownish-red tesserae. The mosaic depicts a sailing ship, a ring with *strigili* and *aryballos*, two grounding-mills?, one *cantharus* with two handles, and a partly preserved fish.[16]

The Ship

The ship is depicted from its port side and occupies about 1/4 of the entire field.[17] It had been placed close to the lower left corner of the mosaic. The prow almost touches the frame. The hull, mast and rigging lines are depicted with black tesserae, while the oars and the sail are depicted with brownish-red stones (fig. 5a). The Migdal Ship has an elongated hull with a broad pointed stem and narrowing raised stern. This depiction may have resulted from the mosaicist's lack of nautical knowledge and therefore not understanding the shape of the hull, or he intended to give some perspective view to the ship. What appears to be a pointed stem probably indicates a pointed cutwater or ram, which in a proper depiction should end at the water-level.[18] The shape of the stem resembles the head of the fish depicted to the right of the ship, below the stern (fig. 4). The gunwale is almost horizontal, or it may indicate the top edge of the protective screen, whereas the heads of the rowers project above (figs. 5a, b). The left-hand end extends forward, and appears to be supported by an angled spar. This element may indicate the sprit-bow, used to tight around the fore-lines of the sail. The horizontal white strip that extends at about 2/3 of the ship's length may represent the wale above the water-level. It reinforced the outer hull and also protected the ship when it was moored long-side (parallel) the quay or pier. In the middle of the port stem is depicted a single brownish-red tesserae, probably indicating the *oculus*. We assume that the same decoration was true on the starboard stem. The stern is raised and ends in an inverted sternpost above the deck. At the point where the stern curves is depicted a single brownish-red tesserae (fig. 5a). This cube doesn't have a specific function. The artist who produced the mosaic may have inserted it by mistake, or the stone was assumed to indicate the ship's trade mark, or other decoration.

Figure 5a
The Ship (photo: Z. Friedman)

14 Corbo, p. 237.

15 The writer took the measurements of the mosaic in May 1996, at Capernaum. Prof. Michele Piccirillo from the Franciscan Institute in Jerusalem granted me the permit to take the measurements of the displayed mosaic in the fenced yard of the church.

16 For a detailed description of the patterns depicted in the mosaic: Corbo, 1978, p. 237-8; Raban, 1988, p. 313. Reich identified all the objects depicted in the mosaic: 1991, pp. 455-458, Pls. 53-54.

17 Overall length of the ship 32 cm; height at amidships 9 cm; mast height (from the tip of the masthead to the gunwale) 26 cm; length of the yard 27 cm; length of row-oars 15 - 17 cm; steering oar (with the blade) 20 cm; Friedman, 1999, Table 2.I.1, p. 12.

18 Vessels of the Greco – Roman periods are depicted with pointed cutwater or ram; Basch, 1987, figs. 329, 334, 351, 353, 363 A, 677-78, 739, 804/14, 804/28, 1055, 1057-59, 1073, 1076, 1106, 1108.

The ship is depicted with both means of propulsion: sailing rig and row-oars (figs. 5a, b). The mast is represented by a vertical spar made with one row of black tesserae. It is stepped 1/3 fore amidships and secured by the forestay, which extends between the joint of the yard with the masthead and the fore tip of the sprit-bow. The yard (depicted with one row of black tesserae) is set perpendicular to the masthead. The furled sail beneath the yard is depicted with one strip of brownish-red tesserae; it is slightly shorter than the yard. The vertical hanging line attached to the tip of the right-yardarm indicates the right-hand brace. It worked the yard and sail to be adjusted to the optimal wind direction (figs. 5a, b). The row-oars indicated by two shafts (depicted with brownish-red tesserae) are mounted on the port gunwale with backward slanting. The missing blades probably are submerged in the water. The steering oar is depicted with a short rectangular blade with rounded shoulders. The same oars arrangement was true on the starboard side. We may suggest that the mosaicist intended to distinct the row-oars from the steering-oars and therefore he depicted the blade on the aft oar. Four protrusions above the gunwale are the heads of the rowers seated on lower thwarts, or behind the protection screen set above the gunwale (figs. 5a, b). The crew also comprised the helmsman and the captain. The helmsman may have been seated beneath the arching sternpost to work the steering oars. The coloring of the sail and the oars were made intentionally, thus to distinguish these elements from other gear of the ship. The hull does not show any flotation or draft line, nor is a water-line indicated. We may assume that the ship leaves the harbor, whereas the oarsmen rowed the ship to open waters and only then the sail was unfurled and adjusted to the optimal winds, thus to set the sailing course. The ship may symbolize a patrolling vessel along the shores of the Sea of Galilee or a merchantman.

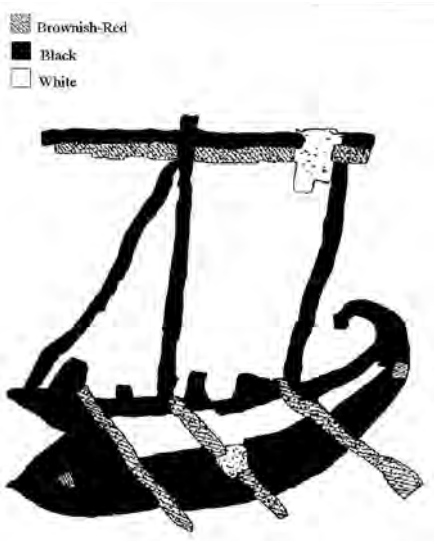

Figure 5b
Drawing of the Ship (drawing: Z. Friedman)

Discussion

Although, the ship in the Migdal mosaic is depicted schematically it provides us with valuable information that may help us to associate it to a specific type. Fishing vessels depicted in mosaic floors were quite a common subject in the sea or lakeside villas of the Roman Empire during the 1st - 4th centuries CE.[19] Most of these sites were located in North African provinces, and Italy. The Migdal mosaic decoration may be a symbolic depiction of scenes or activities specific on the Kinneret seaside. The ship appears to be shown in a 3/4 view and not in a full side view as the picture may suggest. The highly raised and narrowing stern indicates an attempt of fore-shortening (figs. 5 a, b), thus emphasizing a perspective view of the ship. Inner-volute sternposts appeared in ship iconography since the 7th century BCE.[20] This feature became a distinct element on merchant vessels from the 1st – 4th centuries CE.[21] It also appeared on some warships.[22] The inverted volute-like sternpost of the Migdal ship indicates a preserved tradition of this element that became a distinct feature of the Roman merchantmen.

Figure 6a
Kinneret Boat (photo: Z. Friedman)

The pointed stem of the Migdal Ship (figs. 5 a, b) probably resulted from the mosaicist's misinterpretation, lacking nautical knowledge and therefore not understanding properly the ship's hull. Pointed ram appeared for the first time on Phoenician ships since the 9th – 8th century BCE, as evidenced by the vessels

19 Dunbabin, 1978, figs. 16, 119, 123, 125, 150, 154; Aurigemma, 1960; Pls. 67, 69, 87, 89, 94, 95, 110.

20 Ivory fragment from Chiusi, end of the 7th century BCE; Basch, 1987, fig. 871.

21 Basch, figs. 919, 921, 1081, 1089; Casson, 1971, fig. 177.

22 Basch, figs. 971-B, 973-A.

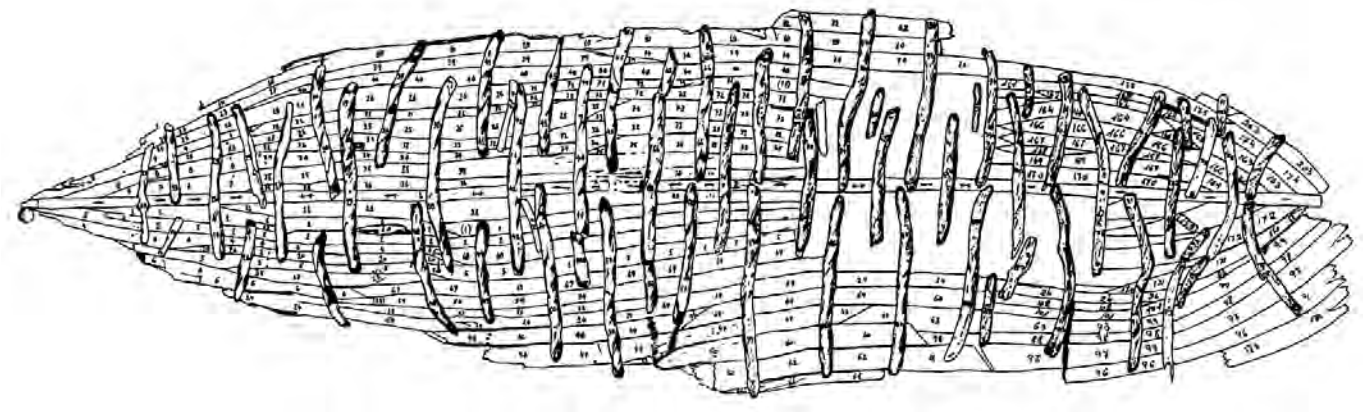

Figure 6b
Plan of the Kinneret Boat
(after: Wachsmann, Folder 1)

Figure 7
Odysseus Ship (after: Basch, 1987, fig. 882)

depicted on the wall-reliefs from Khorsabad,[23] or on Greek ships dated to the Geometric period[24]. The Hellenistic and Roman ships were fitted with two or three pronged ram. A single pointed ram on Roman warships makes its appearance shortly after the middle of the 1st century CE.[25] An earlier example of pointed broad stem similar to the Migdal ship is evidenced by a sailing ship (associated with the story of Odysseus), depicted on an amphora dated to *c*.330 BCE (fig. 7)[26]. On the port stem of the Odysseus ship is depicted an *oculus* with eye-lashes. The brownish-red tesserae placed on the port stem of Migdal Ship, also indicates an *oculus* (figs. 5 a, b). Odysseus' ship has a crew of four rowers, one helmsman and Odysseus tight to the mast. On the port hull are mounted two row-oars. Besides the time-span difference (370 – 400 years) between the Odysseus and Migdal ships, we may presume that such type of ships continued to be built in the eastern Mediterranean at least till the end of the 1st century CE. Evidently, ideas may be transferred from place to place, not only by passengers and crews, but also by the vessels themselves[27]. Boatbuilding and their handling were seen and copied everywhere since these vessels reached places through trade and/or sea combats.[28] Similarities of ship types and decorations strongly indicate that such influences could be seen on ships sailing in the Mediterranean in antiquity.[29] The closest parallel to the entire appearance of the Migdal Ship is evidenced by a ship graffito from Delos, at Maison aux Stucs (fig. 8), dated to the 1st century BCE. The sprit-bow of the Delos ship is supported by the raised stempost (at one end) and by two short spars, set on the bow (at the other end). The forestay is tight to the aft part of sprit–bow (fig. 8). The forestay of the Migdal Ship is tight to the fore part of the sprit-bow (figs. 5 a, b). The Delos ship is depicted with partly open square sail that is in raising or lowering process, as deduced from the lowered right-yardarm on the stern. Close to the edge of the right-yardarm are depicted four brails that worked the bunt. The brace is attached to the tip of the yardarm (it worked the yard and the sail to be adjusted to the optimal wind direction). The angled left-hand line, stretching between the left-yardarm and the aft end of the sprit-bow, may indicate the left brace or the leech of the lowered

23 Casson, figs. 76, 78.

24 Casson, figs. 30, 62, 64-66, 68, 72-74.

25 Casson, p. 146 and n. 22.

26 When using comparable evidence in any art form, we have to relate to examples that come from earlier periods than the subject in discussion and not later; e.g. the Migdal mosaic dates to the 1st century CE, and therefore we can't make comparison to later mosaics with similar scenes and dated to the 2nd – 4th centuries CE.

27 Lucian, *The Ship* 1-4; Athenaeus, v.204-209.

28 Friedman, 2006, p. 141.

29 Friedman, 2006, p. 141.

sail. The main propulsion of the Delos ship is provided by twenty-eight row-oars (fourteen oars are mounted on each side of the hull). The blades are missing, or probably are submerged in the water. We may conclude that the crew comprised twenty-eight rowers, one helmsman and the captain. The Delos ship missies its steering-oar (fig. 8) or it is not as distinct as in the Migdal Ship (figs. 5 a, b). The crew of the Migdal Ship is suggested symbolically by the four protruding heads above the gunwale. We may assume that the Migdal ship may have had a larger crew, comprising at least twenty-eight rowers, the helmsman and the captain, similar to the Delos ship (a total of thirty crew men). The slanting shafts of the row-oars may indicate that the rowers in the Migdal ship are facing the stern, and their backs are turned to the stem. Apparently, this depiction shows that each rower works one oar in *one/sit/pull* technique.[30] The helmsman seating beneath the inverted volute sternpost and facing the stem worked the steering oar (figs. 5 a, b); he also may have supervised and instructed the rowers, thus serving also as *keleutes*. The ship probably leaves the harbor and therefore the crew rowed the ship while the sail is still furled. When the ship reached open waters only then the sail was opened and adjusted to the proper wind direction. Both Migdal (figs. 5 a, b) and the Odysseus ships (fig. 7), indicate small to medium size vessels (5 – 120 tons, load capacity), mainly propelled by a square sail, whereas the row-oars appear to be auxiliary equipment used only when the winds failed or entering/leaving harbors. The Delos ship appears to represent a small size warship, probably a type of *liburna*, patrolling along the eastern Mediterranean shores, or transporting supplies and warriors for the navy. The sail was used when the vessel had not been engaged in sea combat or in faster movement. We may assume that the Migdal Ship had dual function, being an auxiliary in the navy stationed along the shores on the Sea of Galilee, or trading goods on the Sea of Galilee, or engaged in fishing. The writer may suggest that the Migdal Ship probably represents a more specific class known as *myoparone*. In ancient literature is mentioned that such vessels were fighting ships of no size and were used throughout the Mediterranean in the 1st century BCE.[31] One of the earliest pictographic evidence of a *myoparo* type appears in the Althiburus mosaic, Tunisia and dated to the 3rd century CE[32]. From the writings of Josephus, we may conclude that Migdal *myoparo* type may have been engaged in the Jewish Revolt sea combat in 67 – 70 CE.

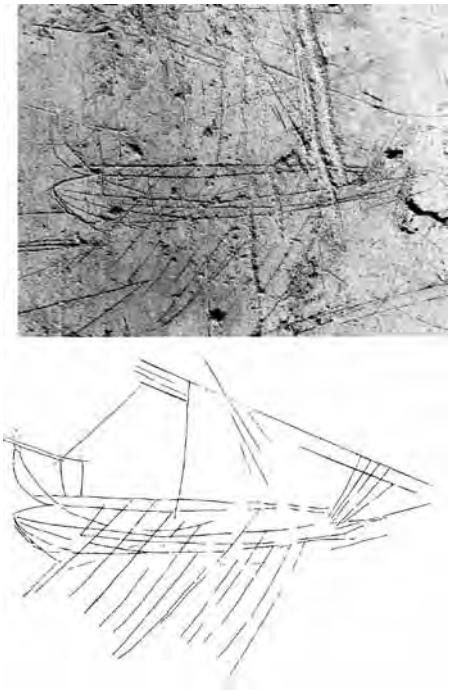

Figure 8
Delos Ship (after: Basch, 1987, fig. 804/41 Maison aux Stucs)

The load capacity of Migdal Ship may be deduced from the results of anthropological studies on skeletons dated to Josephus' period. These studies showed that the average weight of men was 62-67 kg[33]; e.g. only the crew of fifteen men weighted about one ton. Such vessels when fully loaded with warriors (at least fifteen *hoplites* or *epibatai*) and their full gears had a draft of over five tons. An additional source of information for the size of the Migdal Ships may be related to the unique, yet, wooden Kinneret Boat that was excavated in 1986.[34] It was

30 McGrail and Farrel, 1979, Table 1, p. 157, fig. 6, p. 160.

31 Torr, 1964, p. 119; *myoparone* ships apparently were hybrids of long ships (warships) and rounded vessels (merchantman).

32 The mosaic floor with the *Catalog of Ships*, at Althiburus, Tunisia (a mountain site about 200 km, inland from the northern coast), belonged to a shipper's association, or a bath-floor, or the villa of a very wealthy ship owner. The catalogue comprises twenty-seven vessels of different types and sizes, the majority are followed by Greek or Latin names; Gauckler, 1905, p. 132; Dumbabin, 1978, p. 128.

33 Zias, 1990, p. 125; Wachsmann, 1988, p. 32.

34 Wachsmann, 1988, pp.18-33; Steffy, 1990, pp. 29-47. The discovery of the boat was possible due to the "dry" periods of greatly reduces rainfall in the area (1985 – 1987). During this period the water level receded drastically to -211m (bellow the Mediterranean sea-level).The preserved hull was 8.2 m long, a breath of 2.3 m, and 1.2 m deep at the stern. The boat was built in the Mediterranean "shell-first" tradition. C-14 analysis of wooden samples were dated to 40 BCE±80; Carni, 1990, p. 128.

a fishing boat, whereas the Migdal Ship may represents a small to medium size auxiliary vessel or warship (*myoparo*), patrolling along the shores of the Sea of Galilee, or a merchantman (*navis oneraria*) to transport cargo and/or passengers along Lake Kinneret shores. The vessel in the mosaic and the Kinneret Boat belong to the same period, the 1st centuries BCE - CE. We may conclude that the Migdal Ship was built in the "shell-first" Mediterranean tradition as augmented by the excavated Kinneret Boat.

The Migdal mosaic (2.8 x 2.6 m) indicates that it was made in the *direct technique*, at its original location. We may suggest that all the objects depicted in the same orientation, were made intentionally by the mosaicist, therefore referring to a stationary viewer (fig. 4). Each object may be viewed individually, but together they all create a whole picture. Depiction of strigili, aryballos, and cantharus, are bath-floor themes. The ship, two grounding-mills?, and the fish indicate themes of trade and commerce nature. This mosaic is an allusion to the occupation of the villa's owner, or it hints to the function of the room as the office of a trader or shipper trading in the Sea of Galilee and in the eastern Mediterranean. The Greek inscription "*kai su*" on the doorstep was intended as an *apotropae* for the household and the business. The mosaic work indicates that the artist was a local artisan trained by a Roman expert craftsman, or probably he followed Roman traditions of mosaic making, or he had used patterns from circulating pattern books.

Conclusion

The archaeological context of the Migdal mosaic with the ship depiction was dated to the 1st century CE. The ship is a symbolic representation of a small to medium size vessel with dual function. It was propelled by wind on its voyages, while the oars were auxiliary gear use only when entering/leaving harbor or when the winds failed. The Migdal Ship may have been used as an auxiliary vessel in the navy stationed on the shores of the Sea of Galilee (patrolling or transporting of supplies and warriors). This ship also could be engaged in maritime trade on the Sea of Galilee or even fishing. It was built in the Mediterranean "shell-first" tradition as evidenced by the Kinneret Boat. We may suggest that the ship may represent a more specific type known as *myoparo*.

The mosaic technique apparently following the black-and-white style may suggest that the owner of the villa was familiar with this art, especially known in Italy (1st – 3rd centuries CE). The mosaic also may indicate that for economic reasons the villa's owner used local available materials: black from basalt stones, originating in the area of the Kinneret, Galilee or the Golan Heights, while the white and the brownish-red were provided by the local limestone. The ship associated with the other objects in the mosaic (strigili, aryballos, cantharus), emphasis theme of bath-floors. Both grounding-mills?, the fish and the ship may symbolize the owner's profession, who probably traded in fish, as it may be deduced from the ancient name of Migdal Nunia or Taricheae. Apparently the artist who made the mosaic had first-hand information from the vessels sailing on the Kinneret or he may have used a pattern book depicting vessels in the Mediterranean style. The state of the mosaic's preservations indicates that the villa was abandoned before the iconoclasm (in the 8th century CE).

Although the Kinneret is a small body of water, it had an active maritime life, as indicated by the writings of Josephus, the ship depicted in the Migdal mosaic and the Kinneret Boat.

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Islamic Re-use of Antique Mosaic Tesserae

Michael Greenhalgh*

Such large quantities of antique mosaics survive around the Mediterranean that an obvious question is whether they had any influence on decorative art in the Middle Ages, in style or material. This question has sometimes been studied for the West and Byzantium; but by the Millennium, it was Islam rather than Byzantium or any of the states in the West that occupied the largest number of mosaic-rich sites of the Roman world. What might Islamic re-use of antique mosaic tesserae tell us about the further development of this medium?

This paper surveys the evidence for the re-use of antique tesserae, examining some of the ways in which the medium was used, on the outside and inside of buildings, and on both floors and walls. It discusses the various possible sources of the tesserae, the evidence for mosaic trading far and wide, and tesserae collection as war booty. It concludes with an overview of the specifically Islamic speciality of jigsawed cut-stone mosaic portals and façades, which were still being constructed in 16th-century Cairo - a cleverer and more sophisticated form of mosaic than any to be seen in Christendom, and surely using ancient marble offcuts.

Akdeniz çevresinde bu denli çok antik mozaik kalıntısı bulunması; bunların Orta Çağ betim sanatına stil ya da malzeme bakımından etkisinin olup olmadığı sorusunu ortaya koymaktadır. Bu soru Batı bölgeleri ve Bizans İmparatorluğunu kapsayan coğrafyada araştırılmıştır, ancak İ. S. 1000 yılından itibaren, Roma dünyasının mozaikler konusunda zengin olan şehirlerinde ikamet eden Bizans ya da diğer batı uygarlıkları değil İslam dünyası olmuştur. Buradaki soru; acaba, bu antik mozaik tesseraların İslam kültüründeki tekrar kullanımı bize mozaiklerin daha ilerki gelişmeleri ile ilgili neler anlatabilir?

Bu makalede öncelikle Antik dönem mozaik teseralarının tekrar kullanım belgeleri araştırılmaktadır ve hangi parçaların binanın dışında ya da içinde, zeminde ya da duvarlarda kullanıldığı incelenmiştir. Ayrıca, tesseraların çeşitli olası kaynakları tartışılarak, mozaik ticareti konusundaki belgeleri ve tesserae kolleksiyonlarının savaş ganimeti olarak ele geçirilmesi olasılıklarını sorgulamaktadır. Makale, 16. yüzyıl Kahire'sinde kullanımına devam edilen belirli bir biçimde İslami dünyaya özgü oyma testeresi ile kesilmiş taşlardan oluşan mozaik revakları ve ön cephelerin –Hristiyanlıkta görülen mozaiklerden ve çok daha zarif ve gelişmiş bir mozaik üslubu- özet bir anlatımı ile bitmektedir.

Keywords: marble; re-use; mosaics; Jerusalem; Damascus; Cairo

Introduction

Of the thousands of studies devoted to mosaics, few deal in any detail with those designed by mediaeval Islam. This is surprising even on the simplest grounds (survival, documentation and quantity), for Islam is predominant in large areas of the erstwhile Roman Empire, with more survivals in standing monuments than anywhere in Christendom (Byzantium included), and a better documentation, partly bolstered by Moslem attachment to large inscriptions, which generally offer dates. And although many Islamic complexes have disappeared (the original Al-Aqsa (707ff), the 8th-century palaces in Damascus, Jerusalem (730s) and Samarra (mid-9thC)), yet many have survived, from the Umayyad Mosque in Damascus (706ff) and the Dome of the Rock in Jerusalem (687ff) to the Mezquita in Córdoba (785ff). There is of course no doubt that church (and perhaps less frequently palace) walls were extensivly covered with mosaics in Christendom, but nothing survives in quantity to match the dates of the Islamic monuments listed above, although spectacular floors survive at Madaba and Umm Al-Rasas.

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Figure 1
Haghia Sophia church, Iznik, mid-6thC: interior: intact mosaic floor in a city large portions of which were spoliated – So may we assume spoliators were not interested in this type of floor?

Four general arguments may be applied to the use of tesserae in the Islamic world, and to their likely re-use. The first is that, given the recycling of other precious materials including coinage,[1] glass,[2] and marble (Greenhalgh 2008), it would be strange if tesserae were not re-used, not only for original works, but for later restorations.[3] Certainly, Roman tesserae were reused in Byzantine enamels (Freestone 2007), were stockpiled for re-use in Palestine,[4] and were scavenged for Damascus, and some of them then used yet again (Flood 1997, 70; Flood 2001a, 24). At Haghia Sophia in Istanbul, there is evidence of earlier tesserae re-used in the 10thC mosaics (Ozil 2000); and elsewhere late compositions dis-

1 Gondonneau 2002, 588: "until about ad 750 all of the Islamic world recycled the previous coins: Byzantine and Sassanian coins in the Orient, Byzantine coins in North Africa and Visigoth coins in Spain. During the transition period between the end of the Ummayad dynasty and the arrival of the Abbasids (around ad 750), we have observed a change in the silver and gold supplies all over the Arab Empire."

2 Schibille 2008, 638: "potentially indicating the recycling of Roman glass or even the reuse of whole window-panes as spolia. The use of spolia is well attested in Petra … and the reuse specifically of window glass seems to be very likely."

3 cf. Flood 2006, 516: "Mamluk interest in this archaic art can be directly linked to the impact of the Umayyad monuments of Syria, which were repeatedly restored and renovated during this period. Glass mosaics were among a range of features that were integrated into Bahri Mamluk monuments with the intention of appropriating some of the kudos of the early Islamic structures for their mediaeval successors."

4 cf. Shugar 2000, 383: ca.95 litres of tesserae were uncovered in a tunnel at Beat Shean: "The tunnel is interpreted as being a storage facility for tesserae reclaimed for recycling and supporting evidence is provided. This should alert future investigators to the possibility that tesserae collected from a single mosaic can derive from either a single batch or from multiple sources if they were stored and reused." Cf general discussion in Henderson, Julian, The Science and Archaeology of Materials, London 2001, 67ff.

Figure 2
Umayyad Mosque, Damascus, 709-15: The "treasury" in the courtyard. All the marble elements are in re-use, so may we assume the same about the mosaics" damascus_umayyad_treasury.JPG – AD 709-15

play more re-use than earlier ones.[5] A similar argument applies to their import, given the long distances over which – for example – lead[6] and ceramics[7] were imported, and the likelihood that in any case mosaic-workers were probably (like marble workers and masons generally) by nature itinerant.[8] Thirdly, it is now considered likely that Islam in Syria, far from killing mosaic production and the churches they decorated, stimulated what Balty calls a "renaissance,"[9] and sometimes shared churches for worship, as perhaps at Tamra (Lower Galilee), where it is surmised that a Greek mosaic inscription was laid to cover a mosaic with birds (Di Segni 2004). In this (and in their taste for spoliated marble) they followed in the footsteps of the Persians before them (Foss 2003, 157, 159, 162). And finally, it is clear that mosaic floors (whether iconic or aniconic, and

5 Vandini 2006, 591: results from a wide variety of sites confirm "the lack of homogeneity of the late Byzantine tesserae … this can be explained by the re-use of tesserae from previous decorations and/or by supposing partial remelting of more ancient glass."

6 Wolf 2003 Synopsis: "most probably obtained from distant ore sources in Iran or Tunisia, Sardinia, Spain and the Taurus Mountains … at no time did the Fustat potters use the potentially more accessible Egyptian ore sources."

7 Bobin 2003, Synopsis: "*probably came from Mesopotamia, from a major production centre, possibly Baghdad, Samarra or Basra*." See 570: Saladin & Marçais established via texts that the monochromatic tiles were made in Kairouan by a craftsman from Baghdad, and the polychrome ones in Baghdad, Basra or Samarra – so their sources turned out to be trustworthy.

8 Alföldi-Rosenbaum 1980, 5 suggests that the mosaicists had worked in Greece before they went to Cyrenaica.

9 Balty 1977, 10: "Loin de porter un coup fatal à l'art de la mosaïque, la conquête arabe semble au contraire avoir donné aux derniers mosaïstes byzantins et à leur héritiers l'occasion de développer sous la dynastie omeyyade une ultime "renaissance." d'un singulier éclat ... Dans les schemas seculaires du repertoire classique, les Omeyyades ont en effet trouve les moyens d'expression de leur vision intime: en se les appropriant, ils leur ont insufflé une vie nouvelle."

irrespective of any iconoclasm) went in and out of fashion, for there are several instances where such (Christian) floors were covered over with marble slabs, as in the Atrium Church at Apamea (Foss 1997, 211-14). [10]

While for artworks true documentation is as lacking in Islam as it is in Christendom, some narrative accounts have survived of how tesserae were obtained, allowing some sensible guesses about availability and re-use. This paper surveys the various sources of tesserae (abandoned villas, churches, diplomacy, booty), and then the evidence for the mechanics of how the cubes got onto the walls, floors and domes of Islamic buildings. It then offers a brief outline of the florescence of marquetry mosaic especially in Aleppo and Damascus, as an indication of an invention which distances Islam from any Graeco-Roman tradition, although probably using mostly old marble. The conclusion is that Islam did indeed re-use ancient tesserae, occasionally but not always in designs imitated from Byzantium or Rome.

Sources of mosaic tesserae

The first recourse for hunters of tesserae and marble would have been abandoned Roman villas or cities, which were common in many now-Islamic lands. The longevity of Roman ways of life in some parts of Africa provided exempla for Moslems. In Tunisia, for example, floors and walls were often of mosaic tesserae, and some very splendid complexes survive, such as the House of Lucius Verus at Thysdrus. Some villas were apparently refurbished at the beginning of the 7th century, such as the Casa dei due Caccie at Clipea (today Kelibia, conveniently by the sea), and some villas at Carthage were certainly still in use (Bullo 2003, 285-7, 80-3) – models, perhaps, of splendid living to inspire Moslem palace-builders. Further west, on the coast of Morocco, the Roman remains have disappeared, and we might suspect that they went into mosques and palaces. One such is Sala (the lair of the "Sally Pirates"), of which Al-Idrisi (1173-1251) writes that the city "is today in ruins. Remains are to be found there, still standing, of monuments and imposing temples." Ibn Abd Al-Mun'im notes it was on the edge of the sea, with "numerous antiquities, chateaux, vaults, etc" while at Tandia "much marble and large cut stones were [note past tense] to be found" (Siraj 1995, 109, 117).

Scavenging abandoned antique sites was the main method of acquiring tesserae and other marble materials, and there is narrative evidence of the process, but with no specifics about the sites thus treated. At Damascus, for example, the Umayyad Mosque was to be roofed in lead, and prospectors went out to look for re-usable material, particularly in sarcophagi, for lead was not natively available in Syria, and hence supplies of this essential material had to be sought from spoliation.[11] At one site (unnamed) they found a stone vessel with a lead coffin inside – but when the corpse started bleeding from the mouth they ran away in terror (Sauvaire 1896, 196). This is surely a fanciful tale, yet it is likely that lead was indeed obtained from Christian cemeteries, even if Umm-Al-Rasas is not to be translated as "mother of lead" (Piccirillo 1994, 26). Lead would also be used

Figure 3
Madrasa Al-Firdaws, Aleppo, 1235-41: Mihrab

Figure 4
Madrasa Al-Firdaws, Aleppo, 1235-41: Mihrab, detail

10 Presumably the practice was widespread, for the tombaroli at Umm Al-Rasas removed such slabs to get at tombs beneath the earlier mosaic floor: cf. http://198.62.75.1/www1/ofm/fai/rasas99.html.

11 The lead for Damascus must have been scavenged if we are to believe Yakut, writing in 1225 notes (Le Strange 1890, 262) that "Al Walid ordered that it should he roofed with lead. And they brought lead from all lands to accomplish this, but at the last a piece (of the roofing) remained, for which they could find no lead, except some that belonged to a certain woman, and she refused to sell it except for its weight in gold. And the Khalif commanded them to buy it of her, even though it were (at the price of) double the weight in gold. And they did so."

Figure 5
Madrasa Al-Firdaws, Aleppo, 1235-41: Mihrab, detail

for fixing veneer (already seen at the Dome of the Rock[12]), as well as for fixing bases to columns and capitals to columns.

There are some instances where new buildings went up using the materials from those knocked down to make way for them. Such reconstructions follow from a desire to use monolithic columns as supports because, lacking special arrangements, they cannot be moved without destroying what they support. In most cases, however, it is not known where the material went. Qasr Al-Hayr West, for example, is now a shell with some stucco and fresco-as-marble-panel fragments; its antique decorated marble doorway lintel and jambs survives, but the marble and mosaic have been robbed out.[13] In one case, however, we do know: Yaqut writes of Al-Hayr, a palace at Samarra, on which Al-Mutawakkil spent 4m dirhams. "Then Al-Musta'in gave the materials from its demolition to his wazir Ahmad b. Al-Khasib" (Northedge 2005, 304). Just as in the mediaeval West, as far as we know there are no instances of ancient mosaic floors being transported and relaid intact, although at several sites pagan or Christian floors were left intact and the Moslems simply moved in and used them, as we have seen.

Ibn Batuta, writing nearly seven centuries later, states that the builder of the Umayyad Mosque at Damascus, Al-Walid I (705-15) "applied to the Roman Emperor at Constantinople, ordering him to send craftsmen to him, and the Emperor sent him twelve thousand of them" (Ibn Battuta 1958, I., 46). In another

12 Wilson 1865, 22: "The slabs are fastened to the stone by metal cramps, run in with lead , a good even bed of mortar having been prepared to receive them."

13 The site is being excavated: cf. http://www.slsa.ch/Projekte/QasrAl-HayrAl-SharqiE.htm.

Figure 6
Zahiriyya Madrasa and Mausoleum of Sultan al-Zahir Baybars, 1277-81: interior with various types of mosaic in costly marbles and mother-of-pearl

account, Mas'udi (writing 943) points to the Church of Mary at Antioch as the source for some of the antique marble for Damascus: "a round church, and one of the wonders of the world for the beauty of its construction and its height. The Khalif Al Walid, son of Abd al Malik carried off from this church a number of marble and alabaster columns, of wondrous size, to place in the Mosque at Damascus. They were transported by water down to the coast near to Damascus. The greater number of the columns, however, still remain in the Church at Antioch, as may be seen at the present day" (Le Strange 1890, 368). In yet another variation, Al-Muqaddasi relays that Al-Walid, "in order to construct these mosaics, brought skilled workmen from Persia, India, Western Africa, and Byzantium … And this does not include what the Emperor of Byzantium and the Amirs of the Muslims gave to him in the matter of precious stones and other materials for the mosaics" (Le Strange 1890, 228). So if the marble architectural elements supporting the "Treasury" in the courtyard (Figure 2) are in re-use, may we assume the same about the mosaic tesserae?

The nature of the mosaics, which might equally be found in a church or a Byzantine palace,[14] supports this story. He paid large sums "for the purchase of spectacular marbles, paving the courtyard with marble and the walls with da-

14 Grabar 1992, 190:"il n'y a rien d'islamique dans ces mosaïques, rien qui n'aurait pu être fait pour une église chrétienne ou un palais byzantin." The same might be said of the mosaics uncovered in 2000 at Qastal (Bisheh 2000) or indeed of Qasr Al-Hallabat, although the elements are although put together in unusual conjunctions. Indeed, the author (Bisheh 1993, 55) writes of Qasr Al-Hallabat: "Had it not been for the archaeological evidence, one would be inclined to attribute them to different periods" – so is it conceivable that some elements of these floors are indeed relaid from earlier buildings?

Figure 7
Zahiriyya Madrasa and Mausoleum of Sultan al-Zahir Baybars, 1277-81: interior with gold mosaics and opus sectile marble panelling

does of variegated marbles" (Ibn Hawqal 1965, I.172), a large part of which probably went on transport. Like his father, Abd Al-Malik, who supposedly used the revenues of Egypt for seven years to pay for the Dome of the Rock, Al-Walid also assigned to the construction seven years of the tax revenues of Syria. Whatever their source and the home of their craftsmen, the classical nature of the mosaics' vocabulary meant that "there is little that could not have been found in the architecture of the eastern Mediterranean in the preceding two centuries, if not four centuries earlier in Constantinian Rome" (Flood 2001a, 200). Indeed, there were churches in Syria ornamented with mosaics on the exterior. Ibn Butlan writes (1051) that "The palace called Kasr Rusafah is a fortress only second to the abode of the Khalifate at Baghdad. It is constructed of stone. Within it is a mighty church, the exterior of which is ornamented with gold mosaics, begun by order of Constantine, the son of Helena" (Le Strange 1890 522). The mosaics of the Dome were probably intended to recall Byzantium, and certainly did so for Al-Harawi (d.1215), who said he had seen work similar to that in the central cupola in the lands of Rum, although no mosque equalled this one (Al-Harawi 1957, 38f). Writers in this later, Mamluk period were alert to mosaic decoration because it saw a revival of Umayyad forms – as for example, in the Mausoleum of Baybars I (d.1277; monument 1281). This monument is rich in gold and marble mosaics, with not only an extravagant portal (Figure 10), but also a rich interior, with mosaic mihrab (Figure 8) echoed by hoods over the door (Figure 9). The structure is a fitting decoration for the structure of a man who paid for the restoration both of the Umayyad Mosque in Damascus (almost adjacent) and the mosaics of the Dome of the Rock in

Figure 8
Zahiriyya Madrasa and Mausoleum of Sultan al-Zahir Baybars, 1277-81: interior hood of mihrab

Jerusalem.[15] The surviving fragmentary mosaics in Baybars' Mausoleum (Figures 6 & 7) give some idea of the building's initial splendour – not necessarily an attraction for pious Muslims. Thus Caliph Umar (717-20), frugal and public-spirited as well as pious, supposedly pondered selling the mosaics if he were sure he could recoup the outlay for the public treasury (Mas'udi 1965, II 262ff). If this did happen, then we may deduce both that there must have been an active market in mosaic tesserae (to beautify probably Muslim buildings of which we know nothing), and that even in its initial form old materials were added to beautify the mosque. The Byzantine flavour of the mosaics suggests that Byzantine craftsmen really did work there, perhaps for motives of snobbery and/or triumphalism (Grabar 1964, 82f); and early 8th-century papyri from Aphrodito in Upper Egypt detail the responsibility of the governor there to send men to Damascus (as well as to Jerusalem) and to pay for them (Elad 1995, 37ff).[16] Hillenbrand points out (Hillenbrand 1999, 134) that this corvée system was a channel for the introduction of foreign forms and motifs to Syria, and we might add that it was not unusual for emirs to be called on to provide materials and workmen for construction projects, as with Alaeddin Keykubad's construction of the city walls of Konya, which in this case certainly included antiquities (Huart 1897, 174f). In the case

15 Flood 1997, 60: "it is likely that the art of glass mosaic was revived following the restoration of the Dome of the Rock (beginning in 1261) and the Great Mosque of Damascus (in 1269);" and then 66: "Such programs of work on the mosaics of both buildings may be convincingly corre- lated to the use of the same medium in the decoration of contemporary Mamluk buildings" – although it is likely that Saladin was collecting tesserae fromm the Christians of Jerusalem over a generation earlier. But NB Flood is dealing only with glass tesserae.

16 Grabar 1996, 211 note 34 points out that the Aphrodito papyri do not state that the "palace" was in Jerusalem - and, in any case, the word used should be translated as "aula" or "hall."

Figure 9
Zahiriyya Madrasa and Mausoleum of Sultan al-Zahir Baybars, 1277-81: interior hood over door, with wall mosaics

of Syria, the antique marble would have had to be imported, apart from the quantities that could be scavenged from the decoration of local Roman and Byzantine structures. Al Walid also embellished the Prophet's Mosque at Medina, in its 707-10 rebuilding, when again he supposedly received materials from the Byzantine Emperor, and also green, red and white marble from Syria (Flood 2001a, 197f). Al-Baladhuri writes (1916, I, 20) that after Uthman's rebuilding of the mosque ("making its columns of stone") Al-Walid wrote to the governor there and told him "to destroy the mosque and reconstruct it. Meanwhile, he forwarded to him money, mosaic, marble, and eighty Greek and Coptic artisans from Syria and Egypt."[17] According to Al-Tabani, the earlier structure was pulled down in 707, and "Al-Walid had sent to inform the lord of the Romans that he had ordered the demolition of the mosque of the prophet, and that he should aid him in this work. The latter sent 100,000 mithqals of gold, and sent also 100 workmen, and sent him 40 loads of mosaic cubes; he gave orders to search for mosaic cubes in ruined cities and sent them to Al-Walid." Al-Maqdisi noted (repeating Al-Muqaddasi's comment, hence suggesting a common source) that at Medina "the walls of the porticoes are covered on the outside with mosaics. Craftsmen from Syria and Egypt were brought there for the purpose and their names are still to be seen there" (Bisheh 1979, 158, 162, 202f., 206). This follows Christian practice, for churches in Syria/Palestine had wall mosaics, and glass tesserae have been excavated at Apamea, Bosra, Bethany, Pella and Petra (McKenzie 2007, 359). At least some of the marble imported from Byzantium might have been veneer,

17 Al-Baladhuri 1916, I, 21 also notes that "In the year 246, caliph Ja'far al-Mutawakkil ordered that the mosque of al-Madinah be repaired. Much mosaic was subsequently carried to it; and the year 247 marked the completion of the work."

Figure 10
Zahiriyya Madrasa and Mausoleum of Sultan al-Zahir Baybars, 1277-81: exterior portal with marquetry marble decoration matching the intricacy of the limestone muqarnas

and used for the Prophet's tomb as well as the mosque, for Ibn Jubayr praised the veneers there which were similar to those he had seen at Mecca (Ibn Jubayr 1952, 86ff, 199); but just how accurate is Sauvaget's very Roman-looking opus sectile reconstruction of the prayerhall walls is impossible to determine.

In many areas Moslems lived day by day with Christians, the large implantation of whose churches could often provide useful materials, as well as inspiration.[18] There are plenty of examples of the takeover of marble-rich churches, even late ones such as the Panaghia in Antalya, and of the reworking as well as re-use of antiquities (Grassi 1990, 93-107, 111f). At several sites, evidence suggests re-use from Christian structures, probably close-by – such as the relief crosses on some of the pillars at Khirbat Al-Mafjar, the chancel-screen balustrades on the second storey of the same building, or the fragmentary Greek inscription on the jambs of the entrance door at Qasr El-Kharanah. Such re-use is far from unusual – witness the several examples of Crusader sculpture (including figured ones) in various of the monuments of the Haram in Jerusalem (Jacoby 1982, passim). At Khilda-Amman (Jordan), a new church was constructed atop an older one, and "the walls of the new rooms were built directly on the top of the mosaic pavement … Later on, the mosaic pavement was almost completely removed and only those parts of it that were under the walls or covered by a thin layer of plaster were preserved … In the south apse the mosaic floor was completely

18 Mouton 2006, 50 for the church on the site of the Burning Bush: "elle est très vaste, la charpente est supportée par des colonnes de granit dur, et l'autel est constitué d'une dalle de marbre reposant sur un support semblable. Et, en-dessous, se trouve le buisson ardent, qui est l'emplacement du buisson où Dieu parla au prophète Moïse. Le sol est pavé de marbre blanc et les murs sont revêtus de marbre polychrome, jusqu'au sommet."

Figure 11
Maristan Arghun, Aleppo, 1354-5: courtyard with marquetry marble

removed." What is more, "The whole floor of the atrium was most probably also paved with plain mosaic. In its northern part the mosaic floor was completely removed except for a small segment that was under the threshold of a door to one of the Mamluk rooms. In this area not only the mosaic floor, but also the bedding was dug out down to the bedrock which was leveled and used as floor for one of the Mamluk rooms. All these activities took place during the Mamluk period" (Najjar 1994, 549f, 554). Mosaics were also used in Moslem buildings there: Al-Muqaddasi recording (Le Strange 1890, 391) that at Amman "In the city near the market-place stands a fine mosque, the court of which is ornamented with mosaic." At Tiberias, new houses built after the 749 earthquake included one with "a plain but attractive coloured mosaic floor, with a central medallion featuring intertwining bands" (Walmsley 2007, 78f). In the Church of the Lions at Umm Al-Rasas, the western section of the floor and large parts of the nave tesserae were completely removed, probably during the site's occupation as housing (Piccirillo 1992, 203, 211). Such removals suggest that the tesserae were targeted for re-use, especially if the removers had an eye for quality, since the Umm Al-Rasas floor was "per finezza di esecuzione resta uno dei capolavori dei mosaicisti operanti nella regione di Madaba nella seconda metà del VI secolo." Against this should be set floors which were left strictly alone, as with the Justinianic opus sectile floor in Haghia Sophia in Iznik (Figure 1) – and this in a city which was extensively spoliated.

In occasionally appropriating Christian buildings, Islam simply followed Christian practice in appropriating pagan buildings, sometimes with refurbishments, sometimes not. The "East Cathedral" at Apamea (where the whole of the two-kilometre-long main street appears to have been mosaiced) has its small marble paving stones laid directly on top of the beautiful mosaics of what is believed to be the famous school of philosophy in which it is built; so was this done in order to erase its very memory? Or is it just part of the common practice of laying new floors on top of older ones?[19] On the other hand, the five-aisle church in the courtyard of Basilica III "of Servus" at Sbeitla (Tunisia, with many surviving monuments) takes over part of the colonnade, with the cella of the temple

19 Balty 1977, #40: geometrical floor in the museum at Apamea, from the pagan building under the cathedral; # 8: geometrical floor, Apamea, house in insula V.10, 2nd half 3rdC – both of which would also have been perfectly suitable for any Moslem building. The same applies to other sites: cf. Germain 1969 for Timgad.

becoming the baptistery; the same thing happens at Thuburbo Maius, where the church uses the south colonnade of the temple courtyard for its own.

Many of the settlements the Muslims founded were located in or near ruined antique cities or Christian sites, and appropriation was a common practice,[20] including living in abandoned churches.[21] Especially in Andalucía, there are more "continuing" towns than new Islamic ones,[22] and this was perhaps part convenience, part emulation, since markers for the prestige of an antique site were large or enormous cut stones, Latin and Greek inscriptions, and Roman walls (Siraj 1991, 929ff). Islam generally left functioning churches alone, but appropriation (with payment) was sometimes practised, and disused churches and those of rebellious subjects were considered fair game for plundering. Minarets attached to erstwhile churches are one sign of takeover.[23] It is conceivable, but not provable, that the Dome of the Rock's mosaics did indeed come from stripping local churches, thereby providing overtones of triumph to echo the great old columns. Certainly, churches in the vicinity did have mosaics, as at Bait Lahm between Jerusalem & Bethlehem, where Ali of Heart writes that "There is also a church most wonderfully built with marble, and gold mosaics, and columns" (Le Strange 1890, 299). At Fa'lul, in Syria, the apse windows of the church had lintels of yellow marble in Butler's day, and he believes this was the source of the column-shafts of yellow marble and the white marble Corinthian capitals in the building to its south, when it was converted into a mosque (Flood 2001a, 200). At Jerash, of the remains of some thirteen churches, "Most of the inner walls of these churches were cased in marble, coloured limestone slabs, painted plaster and sometimes glass mosaics; little but the holes into which the slabs were pegged now remain…" (Harding 1967, 100). And Ibn Jubair writes in his diary that "Bait Lahiyyah, or Libya, lies east of Damascus … In ancient times there was a church here, which is now a mosque. It was of old the temple where the father of Abraham made his idols and kept them. But Abraham came and broke them to pieces. The temple is now the mosque of the inhabitants, and its roof is beautifully ornamented with mosaic of coloured marbles" (Le Strange 1890, 413).

At Damascus, the fitting-out of the mosque was carried out employing old columns, sheet veneers, and mosaic tesserae, and was very expensive. We might imagine that some materials came from the adjacent Byzantine palace.[24] The conversion was to the presumed displeasure of the Christians whose church had occupied part of the site and whose expulsion after years of worshipping amicably together had the flavour of a pre-emptive strike. For supposedly when Umar became caliph, he wrote to Damascus "to his 'amir ordering him to return to the Christians that part which he had added to the mosque from their church. The people of Damascus disliked the idea saying, "Shall we destroy our mosque after we have called to prayer and held service in it?" (Al-Baladhuri 1916, 192).

Figure 12
Al-Atrush Mosque, Aleppo, 1393ff: exterior window with ablaq masonry and marquetry marble

20 Examples from the Maghreb in Wheatley 2001, 300-1. At Dumayr (Jordan), sarcophagi (?from a nearby church) are used as pillars: cf. Genequand 2001.

21 As with the late Umayyad-Abbasid houses at Umm al-Rasas: cf. http://198.62.75.1/www1/ofm/fai/rasas99.html and http://198.62.75.1/www1/ofm/fai/2005.html. The mosaics at Madaba came to light when the town was reoccupied by Christian families in 1880: http://198.62.75.1/www1/ofm/fai/FAImadab.html.

22 Pavón Maldonado 1992 for listings - 17+ new as against 59+ built on earler towns.

23 King 1983, 133ff for the minarets; 125f some mosaic cubes found in the apse of SS Sergius & Bacchus (at Umm Al-Surab), with tesserae of white and pink marbles, and glass in blue-green, green and yellow-green - the rest surely robbed out.

24 Flood 2001a, 149 writes of the Byzantine palace adjacent the mosque, the rich decoration of which included "simple polychrome floor mosaics, opus sectile pavements, and stained glass, gives some idea of how the Khadra might have been embellished" - viz. the Umayyad Palace.

The objection indicates the extent of the refurbishment, and an element of triumphalism, for competition with Christianity could be engaged by building mosques more splendid than churches, in many cases probably using materials from churches. With old capitals (Wilkinson 1987, passim), columns, mosaic tesserae and marble floors,[25] the Dome of the Rock was certainly intended to outshine the Church of the Holy Sepulchre below, and to attract the attention of Christians.[26] The Fatimid Gate of David also displayed polychrome mosaics including an inscription (Kaplony 2002, 610ff) to echo those of the Dome. The Dome's exterior shows it to be an early exhibitor of monumental inscriptions (context in Blair 1998, 29ff), later echoed by the prayer hall at Damascus, its inscription now lost (Golvin 1970, I, 135). Christian mosaic inscriptions were generally small-scale, but some exceptions might have provided inspiration: at S. Simeon, for example, the great pilgrimage church near Aleppo converted into a fortress by the Moslems, the marble floor of the central nave has a mosaic inscription 7.84m broad (Obermann 1946, passim). So the erection in the 12th century of a dome on the Holy Sepulchre (a rebuild and heightening of an earlier one) was precisely a response to the Islamic monuments on the Temple Mount. Again, the multi-column Byzantine Imbomon on the Mount of Olives (Küchler 2007, 876-97) is a likely part-inspiration. The Dome of the Rock itself used some of the (already old) capitals from the Al-Aqsa, and was perhaps a response to Christian buildings set within open courts, which were very popular in the Holy Land (Curcic 1996, 57). Competition between Christians and Muslims worked both ways not just when the Dome was constructed, but during the Crusades. So not only were capitals from the Al-Aqsa used to repair the Holy Sepulchre (Wilkinson 1987, 27ff) but, if Strzygowski is correct, marble from the tombs of the Latin kings was used prominently on the Haram to adorn mihrabs, perhaps as another expression of triumphalism (Strzygowski 1936). And according to Al-Muqaddasi (Le Strange 1890, 99, 102), the colonnades around the Haram in Jerusalem had mosaics in their ceilings, just as the Al-Aqsa had gold mosaics in the portico, which were left undamaged by the Franks. Again, mihrabs and qibla walls were to be a favourite focus for mosaics, some of glass.[27] Certainly, the Christians covered the rock in the Dome with a cupola on marble columns and marble bas-reliefs: Saladin had all this torn down, although he left their wrought-iron balustrade (Al-Isfahani 1972, 55).

Diplomacy was also a channel whereby useful gifts could travel across the Mediterranean and further afield, Charlemagne's elephant being perhaps the bulkiest, closely followed by his bronze candelabrum, both from Harun Al-Rashid We are well-informed on the lighter, more precious gifts brought by embassies (Schreiner 2004). And we shall see below that sending to the Byzantine emperor for columns or mosaic tesserae is something of a leitmotif – so was marble ever a part of ambassadorial gifts? Certainly on one occasion it was part of diplomatic "fixing," for example, Syrian marble and mosaics were sent to the court of the 6thC Sasanian ruler, Chosroes I Anushirvan, as part of a peace deal. Pharaonic stone objects were sent to the Umayyad Caliph in Damascus, and Umar (ruled 717-20) apparently delighted in showing them to visitors (El Daly 2005, 41f).

25 Wilson 1865, 36: inside, "The pavement of the mosque between the external wall and screen is a confused mass of old material , amongst which there are many portions of sculptured slabs like those seen outside , one of which , a little to the north of the western gate is nearly perfect."

26 William of Tyre 1872, I.2 col 215: … alique vetusti operis exstantia vestigia demonstrantes, ubi sumptibus qui sufficere possent ad impensam designatis et covocatis artificibus, subjecta pro votis materia tam ex marmorum diversitate quam ex lignorum differentia multiplici, templum aedificari praecepit ... Exstant porro in eodem templi aedificio, intus et extra, ex opere Musaico, Arabici idiomatis litterarum vetustissima monumenta, quae illius temporis esse creduntur."

27 Williams 1994 for various 13thC & 14thC examples from Damascus, Cairo and Tripoli (Syria).

Just as in the West (Desiderius of Montecassino, for example), Moslem patrons supposedly sent to Byzantium for materials and craftsmen. We can assume Abd Al-Malik's architects for the Umayyad Mosque in Damascus knew what was needed, for he simultaneously refused the entreaties of the Byzantine emperor to purchase similar antique architectural elements from buildings under Muslim control (Flood 2001a, 202). This is surely some indication of a dearth of suitable antique marble in Byzantium. Abd Al-Malik (685-705) spent "40 chests of gold for the mosaics, excluding the marble and the ancient materials." There are various accounts of where these came from: Sa'id says that Al-Malik had the Byzantine Emperor provide materials as a condition of their peace treaty.[28] At Madinat Al-Zahra (near Córdoba), according to Al-Makkari, 40 columns supposedly came from the Byzantine Emperor as a personal gift; some from Rome, and 19 from the land of the Franks (probably Narbonne). Large quantities in mostly green and red marble arrived from Carthage, Sfax and other African locations – 1,013, writes Ibn Idhari in the *Al-Bayan* (Ruggles 2000, 60).

But as well as using diplomacy, Muslims also bought marble and tesserae so as not to stain a holy structure by theft (a common theme in accounts of Islamic building, hence perhaps a common practice). Thus Ibn Sasra, in what might be a very late pietistic gloss, tells that when Al-Walid built the Great Mosque at Damascus, "he collected marble, pillars and stone but took nothing from anyone without payment" (Ibn Sasra 1963, 160). In this way also, Christian marbles could be integrated in Islamic contexts (Flood 2001b, notes 2, 56). Ownership could be communal. Troops were used to scavenging, perhaps to supplement their pay, with Muawiya (d.680) supposedly sending figurines collected by his troops for sale in India (El Daly 2005, 10). One story has Umar b. Abd Al-Aziz dissuaded from selling off both marble veneers and mosaics from the Umayyad Mosque in Damascus because the troops had already collected them on campaign. As one of them protested, each of them was enjoined to bring back from the land of Rum a measure of mosaic cubes and a sheet of veined marble. Gold-backed glass tesserae (to represent Heaven) would have been especially popular.[29] Hence ownership was collective – and "so Umar fell silent" (Ibn Sasra 1963, 64). Was this a way tesserae and small sheets of veneer were often gathered – while on campaign, and brought back in the baggage train? If so, then some of the extensive mosaics in the Umayyad Mosque at Damascus may perhaps be seen as "gifts" from the Byzantine Emperor to complement the craftsmen he was supposedly asked to send, and others as a specific and collective exultation of triumph over destroyed Byzantium, or at least over some of her buildings. Then again, the point of the story about Umar is that the mosaics and veneer actually belonged to the plurality of the community (for civilians had also collected lead for its roofs), and therefore were not in fact his to dispose of. Such scavenging by soldiers might have been a long-lived tradition, if we accept Ibn Al-Atyr's account of the sack of Antioch.[30]

Along with silk (which appears sometimes to have functioned as a currency), marble provided another way of paying the soldiers, tesserae (presumably of glass and perhaps gold) being favoured because they could be collected "as of

28 Mas'udi 1965, II, 496; and he might have threatened to strip Christian churches, as he did to exact materials for Mecca: cf. Flood 2001a, 201.

29 In the Paleologan Apostoleion at Thessaloniki the figures have survived, but the gold backgrounds have gone.

30 Ibn Al-Atyr 1872, III, 720: "c'était une ville vaste, riche en édifi ces bien bâtis et de belles proportions . . . partout des demeures en pierres de taille, des portiques de marbre aux arcades solides"—which the emirs took to Syria. And outside the city was "une grande église, belle et ancienne, revêtue de porphyres, incrustée de marbres de différentes couleurs . . . Quand nos soldats envahirent la ville, ils enlevèrent ses marbres, dégradèrent ses beaux édifi ces."

right" from the buildings of conquered enemies. In the 14th century, a poem tells of the Turkish looting of what might have been of an Orthodox monastery, because there were gold-background mosaics, which the Turks took off and carried off in sacks in their ships. The editor believes this might have been near Mount Tragovouni (Greece), where there were ruins to be seen in the 20th century, with white marble column drums, capitals with the cross, and a scatter of mosaic tesserae, all very close to the sea (Lemerle 1957, 126 for verse 1140). No hint has survived of Turks themselves employing such materials at this date (the monuments of Bursa being faced in tile, not mosaic), so surely these tesserae were sold on to Christians, perhaps in Byzantium – or even for S. Marco, Venice.

The juxtaposition of competing monuments may be interpreted as triumphalist in Christian as well as Muslim settings, as when at Tipasa a large church was sited directly opposite temples and capitol.[31] And if the tesserae for the Dome of the Rock in Jerusalem were indeed obtained from Byzantium, or even from looting by soldiers, then this underlines a politico-religious dimension to the monument's dominance over the (externally drab?) Holy Sepulchre down below. Similarly Saladin's exaction of marble from the defeated Christians of Jerusalem for the further embellishment of Islamic monuments may be classified as war booty, as well as triumphalist. Again, the practice is not just Islamic, for in the early 7th century, marble plundered from churches in Palestine was sent to Ctesiphon, the shell of part of which survives (Flood 2001a, 23 & note 39). Ibn Al-Al-Atyr's account of October 1187 notes (Ibn Al-Atyr 1872, III, 705f) that after Friday prayers, Saladin ordered the Al-Aqsa mosque to be repaired "and to take all possible care in ornamenting, paving and decorating it with sculptures. Consequently, he had marble brought the like of which it was impossible to find, and gilded cubes in the Byzantine manner, and other necessary objects, all collected over many years."[32] Perhaps it was the result of his work that Al-Qazwini (1203–83) saw, namely "un gran cupula octagonal sobre columnas de mármol, techadas con plomo, y adornada por dentro y por fuera de mosaico y mármol de colores" (Rubiera Mata 1988, 108f). He also commanded that the mihrabs of Umar should be covered with marble (Al-Maqrizi, 1980, 85), so where did he get the materials, after the Crusader occupation of the city? Part of the answer, hinted at in Ibn Al-Atyr's account, is that the local Christians had hoarded marble as perhaps a bankable equivalent to gold and silver – just as Frankish pilgrims had cut out bits of the Rock and taken them to Constantinople and thence to Sicily – as relics sold for their weight in gold (Al-Isfahani 1972, 56.). They probably decorated their houses with it, as apparently did Jean d'Ibelin (d.1236) his palace at Beirut.[33] When Saladin conquered Jerusalem, an agreement was made for the Christians to evacuate the city. The goods they could not carry they left behind, including "a large quantity of marble beyond compare, consisting of columns, plaques, and little cubes to make mosaics," and pieces of marble and wood "of every kind and in great abundance" (Ibn Al-Atyr 1872, IV, 338). Following the surrender there was an influx of merchants who traded with the Muslim soldiers (Lyons 1984, 274f) – and we might surmise that marble was one of the commodities traded.

31 Balty 1972; 183 & pls LXIII-LXIV for the East Cathedral; 231-3 for Sbeitla and Thuburbo Maius; and 250 for P-A Février's estimation of the opposition at Tipasa.

32 These might have come from Constantinople: cf Golvin 1970, 94.

33 Richard 1996, 139-41, described by Wildbrand of Oldenburg, in 1211: "Il a un pavement de marbre ingénieux … Les murs de la maison sont entièrement revêtus de plaques de marbre qui figurent avec une suprême ingéniosité, des tentures de couleur variée ... Au milieu du palais se trouve une citerne constellée de marbre de diverses couleurs, dont les plaques de teinte différente sont si bien assemblées qu'on ne le sent pas en y passant le pouce; ce marbre montre une variété infinie de fleurs qui s'effeuillent et trompent l'oeuil de ceux qui cherchent à les identifier" - all dismantled by the Mamluks when they occupied the evacuated city in 1291.

How was the past re-used?

In spite of the continuing popularity in the Middle Ages of marble floors in the Christian East and West, and probably in Islam (surviving examples are scarce until the Mamluks), there is little evidence[34] of existing floors being lifted for relaying in the same pattern in a new location. Many floors were aniconic; many splendid opus sectile ones have survived in their original location;[35] and there is possible imitation of the technique in other media.[36] Thus such reuse would have presented no difficulties in Islam; but instead, new mosaic floors were created, with new iconographies. Such neglect surely indicates that Islam was uninterested in the Roman past as such, and sometimes followed decorative traditions from elsewhere (Van Buren 1946 for Tell Uquair and Uruk). The fact is underlined by the widespread (if not perhaps exclusive) use of old marble – indeed, the verso of some tesserae can be identified as such. For the tesserae of wall and vault mosaics certainly were re-used. Islam was supposedly presented with large quantities by the Byzantine Emperor; and these, like the ones the Moslems foraged for themselves, surely came from old Byzantine buildings. Out of these new structures were created, such as the Umayyad Mosque at Damascus. In the West, we know of pilgrims taking marble home as an act of piety; but no references have survived to the same thing happening with the tesserae of mosaic floors, although mosaics were used to imitate other marble decoration (Michaelides 1985, passim).

Lack of lift-and-reuse is all the more striking because of a tendency in mediaeval Islam to treat decoration – from columns and wall veneers to mosaics, doors and portals – as moveable items to be appropriated from old buildings for use in new constructions. In consequence the literature is replete with references to stripping out, and the surviving monuments often reflect the practice by their bare walls and floors. Thus some of Syria's "desert palaces" seem to be hunting lodges, and richly decorated (Qastal was carpeted in floor mosaics in stone and glass, and Qasr Al-Muwaqqar had mosaic pavements in several rooms) but some look like the late-Roman fortresses on which they were modelled, and the materials of which they sometimes re-used (Kennedy 2007, 103). The Qasr Al-Hayr palaces (East and West, 728ff) were sumptuously decorated, but any marble columns and veneers have long since been robbed out, as was Hamman Al-Sarakh, leaving little in place to remind us of what Hillenbrand calls "la dolce vita" (Hillenbrand 1982, passim). If stripping such remote sites is explicable, this also happened in the middle of Cairo, where the remains of the Fatimid palaces were being plundered long after their real life had ended.[37] In Baghdad, some palaces had marble baths and supposedly explicit mosaics,[38] which were

34 Meinecke 1996, 44 for the bath opposite the Great mosque in Bosra: "the sumptuous marble foor, including multicoloured opus sectile, as well as the intricate technical installations, testify to the highest standard of architecture and decoration. This masterpiece of engineering architecture was certainly not achieved by locally available specialists, but by an experienced building atelier from Damascus."

35 For a site inhabited in Vandal and Byzantine times, see Alexander 1973: e.g. Maison de la Cascade and Maison de la Chasse, pl. LXV, and in antiquarium, pl. LIV; plenty of Christian churches are recorded, but nothing survives of Xtian buildings or their mosaics. Dulière 1974, e.g. Boutique IV/V, at fig. 1190.

36 Dodds 1992, 600: at Cordoba in Abd al-Rahma's mosque "though fashioned of brick and stone, the alternating voussoirs were surely meant to evoke, in available materials, the opus sectile decoration of Umayyad buildings of the fertile Crewcent, in particular the Great Mosque of Damascus, and conceivably the Dome of the Rock."

37 Hautecoeur 1932, 140: in 1369, two immense white marble columns were found on the site of the Fatimid palaces, and Sultan Chaban II took them for his madrasa near to the citadel, their transport hymned by the poets.

38 Rubiera Mata 1988, 97ff for Al-Makkari's account: "Habia pilones de mármol de bonita forma

Figure 13
Matbakh Al-Ajami, Aleppo, early 13thC: exterior portal with marquetry of marble and limestone

perhaps stripped by a later and more shockable owner. For sites such as Samarra and the desert palaces, the dismantling was so thorough that the decorative schemes cannot be fully reconstructed, although scraps of fittings have survived from Samarra, and mosaic, glass and other fragments are to be seen in the Turk ve Islam Museum in Istanbul, and in the British Museum. Other schemes include Khirbat Al-Minya (near Lake Tiberias), built by Al-Walid (705-15; as proclaimed on a reused marble inscription) or perhaps his son, where mosaics covered the floors and dadoes and glass mosaic the dome - such mosaic domes having a long ancestry. It is unknown whether an adjacent bathhouse is Roman, Byzantine or Umayyad (Bacharach 1996, 35).[39]

Stockpiling was a constant feature of the Roman marble trade, at quarries, dockssides and building sites, because of the vagaries of sea transport. Because stockpiling is the only sensible way to conduct medium- or large-scale building operations, in Islamic territory we find not only the Christians stockpiling marble at Jerusalem (see below), but (probably) materials for the Mezquita at Córdoba being accumulated over time. This latter was supposedly funded with booty from Narbonne, and yet more arrived from Narbonne after Hisham's assault in 793. One source says that this included "loads of earth out of the demolished walls" (presumably old marble), "and not only was the mosque built of those

... un largo pasillo todo el de mármol purisimo su suelo tenia dibujos ealizados con piedras rojas, amarillas, verdes y doradas, todas ellas de cristal tenido con color rojo y amarillo; el tenido en verde dicen que es un procedimiento que viene de los bizantinos, y el dorado es cristal revestido de oro. El dibujo era bellisimo y formaba diferentes figuras que realizaban el acto sexual..."

39 Marcus Ritter has in preparation *Die Baukdekoration des frühislamisch umayyadischen Palastes Khirbat al-Minya bei Tiberias*.

Figure 14
Mausoleum of Taynabak al-Hassani (or Al-Taynabbiya) 1395, Damascus: exterior portal with marquetry marble and other stones

materials, but a large quantity still remained piled up in front of the royal palace," and the brass knockers were also taken (Al-Makkari 1840, II, 99). Again, columns and mosaic tesserae were supposedly sought from the Byzantine Emperor, although Cutler (2001 254) is sceptical even if Stern is not.[40] This must be a deliberate echo of the building of the Umayyad Mosque in Damascus, several stylistic features of which the Andalucian structure sought to imitate. No doubt many Christian artisans were used for the first construction; and there are masons' marks, some in Latin letters, on the columns of enlargement of Al-Hakam II (961-76) and that of Al-Mansur (976-1002), several of which were probably moved from the first structure.[41] For Pavón Maldonado (1973, passim), many of the decorative patterns used at Córdoba and Madinat are inspired by Roman floor mosaics, while Kubisch (1995) looks east, to motifs at Qasr al Hayr West, Khirbat Al-Mafjar, and Samarra . Mosaics were widely used at Córdoba, and also at Madinat Al-Zahra, where a poetic recitation in 971 hymned the splendour of the Caliph by comparing his glory with the marble and mosaics in the East Salon – "Cubren sus salones mantos de mosaico" (García Gomez 1967, 105ff).

Marble was such a valuable resource, especially in lands where it was not quarried (such as Palestine or Egypt) that Christians and Muslims sometimes seem to have played cat-and-mouse with marble supplies. Thus when Abd Al-Malik built Ramla, with considerable architectural ambitions, he discounted demolishing

40 Stern 1976 38 agrees with Ibn Idhari that the cubes (stone, marble and glass) came from Constantinople; hence 46: the mihrab mosaics are "l'un des rares exemples d'oeuvres monumentales qui portent témoignage d'un art formé au contact du monde byzantin et musulman."

41 Souto 2002, 231: both Qasr Al-Hayr East and Khirbat Al-Mafjar have graffiti in Greek letters, but also in Arabic and Hebrew – so manpower could have been various, and even brought in from afar.

the church at Ludd, and so wrote to the Byzantine Emperor, who sent him an agent "who indicated a place whence he could extract columns of unparalleled dimensions and beauty. They were also able to extract marbles both sawn and unsawn, amply sufficient for the mosque. It was said that this was in a property of Daroum near Gaza, which was called Amuda (Columns)." The Christians were then made to carry the materials to the site of the new mosque (Gaudefroy-Demombynes 1923, 3, 57f). The imported Greek, obviously having done marble- prospecting elsewhere in the Empire (and it could well have involved tunneling for material buried by humans as well as by the sands of time), found the necessary columns from what must have been a stockpile if they had the choice of sawn and non-sawn.[42] Mas'udi's account of building at Ramla leaves out the Greek inspector, and substitutes a direct threat to the Christians, namely that the church at Ludd would be destroyed unless they handed over their hidden stocks of marble (Mas'udi II 1965 184f). Ramla was an excellent place to build marble monuments, for when Nasir i-Khusraw visited in 1047 he came across a veritable marble-cutting industry there: "In the city of Ramlah there is marble in plenty, and most of the buildings and private houses are of this material; and, further, the surface thereof they do most beautifully sculpture and ornament. They cut the marble here with a toothless saw, Avhich is worked with ' Makkah sand.' They saw the marble not in the cross, but in the length — as is the case with wood — to form the columns ; also, they cut it into slabs. The marbles that I saw here were of all colours, some variegated, some green, red, black, and white" (Le Strange 1890, 307).

There has been a certain amount of resistance to the idea that Islam did import mosaic workers, but the action seems defensible for practical reasons, rather than for any notion of triumph over the Christians. Marble also moved around, naturally with the workmen to deal with it. Thus Mecca has had so many alterations and refurbishments, that it is difficult to get a clear picture of the exact use of mosaic there, but it is clear that the complex was at times in competition with the splendours of Jerusalem. Al-Muqaddasi (born c.946) relays that Al-Mahdi had three porticoes of white marble brought from Alexandria to the port of Jeddah,

Figure 15
Mausoleum of Taynabak al-Hassani (or Al-Taynabbiya) 1395, Damascus: exterior portal with close-up of marquetry marble

42 Gaudefroy-Demombynes 1923, 58 also refers to al-Muqaddasi's report that al-Malik learned that the Christians had a cache of columns put aside for building a church at Balaxa, and made them hand them over to ornament the mosque at Ramla. Cf. Al-Muqaddasi 2001, 140.

and that "The mosque [in its present form] was founded by him. The porticoes have their walls decorated on the outside in mosaic, artisans from Syria and Egypt being specially imported for the work. The names of these still appear on their work" (Al-Muqaddasi, 2001, 67, 73). But before this, Al-Baladhuri (1916, I., 76) notes that Al-Walid "amplified the Haram-mosque and conveyed to it columns of stone and marble, and mosaic."

This last remark is the kind of attestation or verification often used by Islamic historians, which could be a topos (Grabar 1996, 203 note 68), as indeed could the story of the import of experts – except that it has probably always been common for skilled workers to circulate. Al-Yaq'ubi writes of Al-Mu'tasim's orders for the building of Samarra as follows: "He wrote for the despatch of the workmen, builders and skilled people ... and for the bringing of worked marble, and slabs of marble" (Northedge 2005, 268). Samarra has been comprehensively plundered (although far from comprehensively excavated) and, if the main decoration was stucco, Al-Mutawakkil's palaces were decorated with marble slabs in the Throne Room complex. The fame of the site lived for centuries, so that Shabushti describes a throne room at Al-Burj (which he cannot have seen because he was writing a century and a half after 870): "The walls of the palace were covered inside and outside with mosaic and gilded marble" (Kennedy 2005, 147). As for the Great Mosque, this "used to be considered superior to the mosque at Damascus. Its walls had been coated with enamel, pillars of marble erected within it, and it was paved with marble" (Al-Muqaddasi 2001, 102). This might have looked something like the luxuriant 5th-century marble dadoes at Antioch, fragments of which survive (Allen 1988, 11ff & fig. 30), so that it is possible to view the use of stucco at Samarra as a translation from marble into another medium.

Elaborate church mosaics were still being created in the mid-8th century, as at Madaba (Walmsley 2007, 124f). In other instances, later refurbishments have obscured the earlier decoration. Thus the Muthir Al-Ghiram (written 1351) states that an earthquake (in 747) brought down the earlier Al-Aqsa, and that Al-Mahdi found it in ruins – but whether it was he who decorated it with mosaic is unknown. By the 11th century, however, the mosque had a polychrome marble floor (Kaplony 2002, 775), and Al-Qazwini emphasises the coloured marbles as well as the mosaics, as we have seen. An adjacent loss is the Umayyad Palace complex, for which the Al-Aqsa might well have been the palace chapel, as were contiguous structures at Damascus, Córdoba and Cairo. There also survive several sites where the evident classical inspiration of the motifs suggests probable re-use of individual tesserae (such as the bath area of the 8th palace at Anjar, Lebanon; Khirbat Al-Mafjar, 743/4, Occupied Palestine; and Qasr al-Hallabat, Jordan), and it seems very likely (could it be proved?) that many of the large mosaic complexes also re-used ancient tesserae.

Jigsaw-mosaic in Syria and Egypt

Against the background of diminishing availability of old marble in most centres, this section discusses the contrary tendency of what appears to be the deliberate flaunting of large reused blocks (often of rare marbles) in a three-dimensional version of opus sectile or marquetry, building on the development of multicoloured walls (ablaq) in the provision of sumptuous portals, window embrasures and mihrabs. Since the flat version of such techniques is to be seen centuries before in other media such as woodwork, and since its appearance from the earlier 13th century predominantly in Damascus and Aleppo is not echoed in Cairo (which

Figure 16
Damascus, Muhi al-Din ibn Al-Arabi complex, 1516, Damascus: courtyard mosaic floor, with roundels cut from antique columns

uses two-dimensional mosaic patterns instead), it appears as if Syria is providing a demonstration of skill which outdistances not only the general run of Moslem wall decoration, but perhaps also Christian techniques as well. For nowhere other than in Syria are such skill and lavish reuse of scarce materials to be seen.[43]

Cairo was a new city, albeit with an adjacent older one a few kilometres south at Fustat (Fu'ad 2000, passim), the site of marble-rich churches the materials from at least one of which was sold to pay taxes, in this case to Ibn Tulun (Lombard 1974, 198). Alexandria was a much-shrunken Hellenistic foundation, with a high-living nucleus surrounded by fields of ruins. It contained many marble capitals (Kautzsch 1936, 24ff; unfortunately, the book does not deal with Venice, Kairouan, Tunis, or Mahdiya) and, also like Cairo, private houses retained plenty of marble in the 16th century, including some complete mosaic floors, as Filippo Pigafetta writes in 1576-7: "In the people's dwellings you can see many pieces of marble and stone of different colours, cut in squares, circles, stars and other shapes which, with exceptional skill, the good people of ancient times employed to cover the floors and the walls of their houses; a really wonderful work as much for the shaping and fitting together of those well-cut stones as for their quality and excellence, and the diversity of their colours; there are some houses there in which such construction remains intact..." (Curatola 2004, 196-7) – though of course they might have been in one of the many later reincarnations known to be common with such Lego-like pavements (Guidobaldi 1983, 518ff).

Such "shaping and fitting together" is probably a spinoff from the ever-increasing shortage of prestigious marbles, which Ibn Khaldun builds into his rise-

43 Greenhalgh 2006 60ff for further discussion and illustrations.

and-fall cycle: "which are taken from empty buildings, from fortresses and palaces disused because there towns are depopulated. The very same materials are perpetually re-used, from palace to palace, from house to house, until they are completely gone" (Ibn Khaldun 1967-8, II.10, 745). This can be seen in the enormous portal to the Mosque of Sultan Hassan, where Rogers has found fixing markers for attaching thin marble veneers which – he points out – are a very different matter from the stylistic source, such as the Gok Madrasa, where the marble panels are six inches thick and must have been carved before erection (Rogers 1970/1, 50). So if the use of ever-smaller and more intricate fragments is a style in Cairene and Syrian buildings, it is conceivably one much influenced by circumstance, and perhaps in part by the example of Roman marble floors available in Egypt.[44]

If in Byzantium and the West mosaics usually constitute a thin veneer on wall or floor, and at least in later centuries re-use antique marble, in Islam another type of mosaic developed in early 13th-century Syria, which bears no relation to any earlier practice. This involves "constructional mosaic," in which substantial pieces of marble are ingeniously cut into intricate marquetry patterns which are not simply skin-deep, but part of the construction of doorways, window embrasures, and sometimes mihrabs. To be effective, such constructions must show two faces of the work – there is no point otherwise – so the viewer can appreciate that these jigsaw "puzzles" are not simply cut in depth, but also employ large pieces of often precious marbles. We can often make an extra check on the mason's ingenuity, for the elements of such structures have often moved over the centuries (earthquakes, etc), and the gaps opened up allow us to inspect the joinery in depth.

The finest of all marquetry displays is the mihrab in the Madrasa Al-Firdaws (by 1242: figures 3, 4, 5), in Aleppo. Sibt b. Al-Ajami, writing in 1274-5, notes the "stone, brought from many places," the black and white marble in the courtyard, the yellow marble columns, and the mihrab, "among the wonders of the world" (Allen 1999, ch.8). Other monuments conspicuous for their jigsaw-work include the mihrab of the Madrasa Al-Sultaniyah (1213/16), the Arak and Wali Al-Shaibani, all of which have a stone muqarnas portal; the Arak Mausoleum with reminiscences of the Al-Firdaws mihrab arabesques in blue tile. Secular buildings were probably equally rich in fine stonework, such as the Al-Atrush Mosque, with its ablaq and marquetry windows (Figure 12), or the fragmentary Matbakh Al-Ajami Palace (Figure 13), with a portal nearly as intricate as the Al-Firdaws mihrab. Mosques also delight in intricately-cut stone, such as the Al-Aqsab with black and white limestone and, like the Al-Tawba, with a splendid stone-work minaret; and the the Mausoleum of Taynabak al-Hassani (Figures 14 & 15), with its mix of marble, limestone inscription, and sandstone muqarnas. In Damascus, the Madrasa As-Zahiriya (1262-3) incorporates the Mausoleum of Al-Zahir Baybars, and is especially elegant, with its portal rich in inscriptions, and its interior retaining elaborate marble dadoes and mosaics inspired by those of the nearby Umayyad Mosque. The technique was to have a long life,[45] as indeed did the vogue for mosaic floors – such as that in the courtyard of the Muhi al-Din ibn Al-Arabi complex (1516), cut from antique columns. As in Aleppo,

44 Daszewski 1982, figs 16-17 for opus sectile floors from Kom Truga (W Nile Delta) and Alexandria (Kom el-Dikka).

45 The Madrasas Al-Jaqmqiya, Sabuniye and Sibaiye, built 1418-20, 1459-64 and 1509-15 respectively, demonstrate the continuing fashion for such exuberant decoration – or, as one critic has it (Eliséef, N., in *EI Damascus*) "everything was sacrificed to outward appearance, and the monument was no more than a support for shown ornamentation."

traditions continue, in the Darwish Pasha Mosque (1574) and Sinan Pasha Mosque (1590-4), which has an especially rich interior with marble columns and wall veneers, and superb marble minbar. For none of the above is the source of the marble or mosaic tesserae known, though sufficient monuments with re-used elements survive to be confident that such dazzling decoration did come from re-cut marble. In Aleppo these include the Bimaristan of An-Nouri (1154) with an antique tympanum gracing its entrance, parallel to Aleppo's Dar Al-Hadith (1154/74) which displays a re-used doorframe carved with a classical moulding; and its lintel block bears an elongated but uninscribed tabula ansata. Classical columns are re-used in Damascus when available, such as those in the mihrab of Nur Al-Din's tomb-chamber. In Cairo, all marble and granite were in re-use, together with the few applications of mosaic tesserae such as the mihrab in the Aqbughawiya Madrasa at Al-Azhar (1339), or the mihrab on the qibla wall of the Mosque of Ibn Tulun (14thC).

Conclusion: Islam & the West

Roman and Byzantine materials allowed Islamic mosaics to be sumptuous, but much more study is needed to ascertain the source of the tesserae, for our narrative accounts never list these, and earlier excavators have usually shown little interest in what might have happened to church structures when they fell out of use. This is a pity, for the mediaeval West was much enamoured of Islamic mosaic patterns,[46] and it would be interesting to know more of any connections. Famously, Abbot Desiderius supposedly imported mosaic workers from Constantinople "peritos utique in arte musiaria et quadrataria" (Chron. Cas. 3.27) because the "magistras Latina" had neglected mosaic-making for centuries.[47] This was probably not true – but in any case it is probably the lands of Islam, rather than Byzantium, which were the focus of mosaic expertise in Desiderius' day. Is it possible, indeed, to chart the progeny and group the relationships of the mosaic tesserae of a selection of important monuments, to ascertain both their source and their spread? This is possible, and has been done both for marble (cf. the various conferences of ASMOSIA[48]) and for glass mosaic, as we have seen. If the Roman left us a "marble map" of the Mediterranean, then a "mosaic map" would be just as useful, allowing us to chart relationships not just at design level, but also at that of tesserae as well. Given that scholars today are often alert to re-use, such endeavours should allow us to learn much more about the diffusion and re-use of tesserae around the Mediterranean.

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46 As at Pisa, where the workshop of Rainaldo was producing Islamic-derived mosaic panels, of which sections survive in the Opera del Duomo, together with capitals, including an Islamic one.

47 Maguire 2001, 164-6: the author of the *Vita Basili* refers to floors ringed with "spokes," which to Maguire suggests comparison with the floor at Montecassino, 1071ff; Giuliano 2003 for Desiderius and his commissions, plus Islamic influences. Bloch, for one, once believed that there were indeed suitable craftsmen in Rome by this date (that is, before the Cosmati: Bloch 1982, 617 note 5); but he later wrote that Greek expertise was needed to help Desiderius re-create Early Christian mosaic: Bloch 1986, 92.

48 Association for the Study of Marble and Other Stones in Antiquity: http://www.asmosia.org

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Quelques remarques à propos de l'étude des sols *in situ*

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This paper proposes a review of the various contributions of an « in situ analysis » upon the study of mosaics and architecture. They are helpfull to understand the story of the building and to distinguish workshops of mosaicists. They result from the association between mosaic specialists, archaeologists and restorers.

Bu makalede, mozaik ve mimari alanda in situ analizlerine yapılan çeşitli katkıların gözden geçirilmesi amaçlanmaktadır. Bu analizler binan tarihinin anlaşılmasında ve mozaik atölyelerinin ayrımında oldukça yararlıdır. Bu analizler, mozaik uzmanları, arkeologlar ve restoratörler arasındaki işbirliğinin sonucudur.

Key words : mosaic, restoration, workshops, in situ, architecture, handcraft.

L'étude de la mosaïque à travers l'iconographie est la méthode classique, issue directement de l'Histoire de l'Art. Après quelques ouvrages décisifs mais isolés[1], ce secteur de la recherche a réellement pris son essor à partir des années soixante pour devenir une discipline à part entière[2]. La majorité des mosaïques connues étaient alors conservées dans des musées hors de tout contexte architectural, ou sur des sites anciennement fouillés et peu mis en valeur. Les panneaux présentés étaient essentiellement des mosaïques prestigieuses à décor figuré, aussi l'attention des chercheurs s'est tout naturellement tournée vers une interprétation très picturale de leurs représentations.

Ces approches iconographiques et stylistiques, ainsi que l'étude des inscriptions, donnent de multiples indications sur la culture, la prospérité et l'ambition du commanditaire, ainsi que sur le but poursuivi par de tels décors ; leur décryptage peut permettre de deviner la fonction de l'espace que ces sols décoraient. Les tapis figurés sont des témoins culturels relativement bien conservés, du fait de leur structure moins fragiles que celle des peintures. Ils peuvent aussi servir de marqueurs historiques grâce au thème représenté. En effet, le succès de certains sujets et l'évolution des modes et goûts esthétiques tout au long de l'Antiquité sont de mieux en mieux connus.

Enfin, dans les cas de concentration de tableaux figurés dans un même site, les comparaisons stylistiques peuvent s'avérer possibles et précieuses, nous citerons par exemples Piazza Armerina, Antioche, Torre de Palma, Zeugma, Nea Paphos, El jem ou Byllis.

Plusieurs facteurs ont radicalement modifié l'approche des spécialistes. Outre l'évolution et le développement de l'archéologie de terrain, la découverte de très nombreux nouveaux pavements et le souci de leur conservation et leur fréquente présentation *in situ* – en liaison avec le développement du tourisme – ont fait évoluer la recherche dans bien des domaines de l'archéologie[3]. Les chercheurs sur la mosaïque interviennent de plus en plus souvent lors des fouilles et des restaurations des pavements ; la floraison de nombreux corpus de mosaïques[4] a incité à compléter

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1 On citera parmi les travaux anciens sur les mosaïques, ceux bien connus d'Arthaud, Espérandieu, Gauckler, Roux-Barré, Levi, Lassus, Blake, Chehab, etc.

2 La création du Centre de Recherche sur la Mosaïque au CNRS par H. Stern au début des années 50 et de l'AIEMA (Association internationale pour l'Etude de la Mosaïque antique) en 1964 a encouragé la création ou le développement de multiples antennes nationales (Italie, Espagne, Amérique du Nord, Tunisie, Grande-Bretagne, Portugal et dernièrement Turquie…), et la tenue régulière de Colloques internationaux (publiés sous l'abréviation *CMGR*, tome I à IX depuis 1963). Le *Bulletin de l'AIEMA*, bulletin bibliographique sur l'étude de la mosaïque, a été créé en 1967. La vingtième livraison est parue en 2007.

3 Certains chercheurs ont rapidement mesuré l'importance de l'approche par le terrain ; nous citerons V. Daszewski, qui a très tôt attiré l'attention sur l'analyse archéologique des pavements, ou d'autres qui ont prôné un travail simultané des chercheurs et des restaurateurs de mosaïques (D. Michaelides, A. Ben Abed).

4 *Recueil des mosaïques de la Gaule* (CNRS), *Mosaici Antichi in Italia*, Corpus des mosaïques de Tunisie, d'Algérie, de Suisse, d'Albanie, d'Allemagne, d'Espagne, et plus récemment du Portugal, d'Angleterre, et enfin le *Corpus of the Mosaics of Turkey* (création de l'AIEMA-Turkiye en 2006, premier volume sur les mosaïques de Xanthos, M.-P. Raynaud, *Xanthos, East Basilica*, vol. 1, in press). Des volumes de synthèse assez

Figure 1
Byllis, basilique E. Joint séparant des phases de travail, à droite de la ligne de postes (ph. M.-P. Raynaud)

l'étude iconographique et stylistique par une observation plus systématique des pavements. Les mosaïques géométriques sont désormais étudiées dans ces catalogues au même titre que les pavements figurés, ainsi que les sols en *opus signinum*, en *opus sectile* et les dallages. C'est le souci de décrire de façon claire et univoque le décor géométrique jusqu'alors souvent négligé qui a rendu nécessaire l'élaboration d'un vocabulaire descriptif[5] des décors géométriques

complets cataloguant les mosaïques sont aussi apparus sur les pavements de Syrie et du Liban, d'Israël, d'Autriche, de Jordanie, de Tunisie, de Macédoine, ainsi que des catalogues de musées célèbres pour leur collection de mosaïques, tels le Musée du Bardo, de Trèves…

5 Il s'agit de deux ouvrages collectifs, réalisés par le Centre de Recherche sur la Mosaïque (CNRS, Paris) créé à l'instigation de H. Stern : *Décor* 1985; L'oeuvre du fondateur fut essentiellement poursuivie sous la direction de J.-P. Darmon avec la publication du second volume : *Décor* 2002.

Figure 2a
Byllis, basilique C, observer les irrégularités de la bordure, surtout en bas à gauche (ph. CNRS-M.-P. Raynaud)

en cinq langues[6]. L'approche technique s'est faite de plus en plus exigeante, au vu des conclusions enrichissantes et variées qu'elle autorise.

Nous envisagerons ici divers apports d'une telle étude réalisée *in situ* parallèlement à l'établissement d'une documentation graphique et photographique complète, en relation étroite avec archéologues et restaurateurs[7]. Ces expériences de terrain seront illustrées d'exemples récoltés par l'auteur lors de sa participation à des missions en France ou à l'étranger.

1. Liens avec l'architecture : sols et murs

L'étude des liaisons des sols avec les murs et les seuils vient en préalable. La façon dont les pavements sont – ou non – liés avec les murs et avec le décor qui les recouvre (peinture, enduit, placage ou mosaïque) peut aider à établir une chronologie relative et élaborer un phasage qui sert à l'étude d'ensemble du bâtiment[8]. Nous évoquerons l'exemple à Lixus (Maroc) des maisons de la

6 Les cinq langues représentées dans ces dictionnaires descriptifs sont le français, l'anglais, l'italien, l'espagnol et l'allemand. Les traductions furent réalisées par des spécialistes de la mosaïque dans leur langue respective. Les volumes sont en cours de traduction en turc pour servir au Corpus de Turquie. Une traduction en portugais a aussi été réalisée et d'autres langues peuvent être envisagées.

7 Cette collaboration tient tout particulièrement à cœur à la nouvelle association turque *AIEMA Turkiye*, qui a tenu d'emblée à réunir ces différents spécialistes lors des tables rondes annuelles depuis 2005. Le *Corpus of the Mosaics of Turkey* se base sur le travail en commun des restaurateurs et des chercheurs et se soucie très sérieusement de l'état et de l'avenir des sols étudiés (établissement d'une base de données). Par ailleurs, les colloques de l'*ICCM* (Comité international pour la Conservation des Mosaïques) se tiennent tous les trois ans et donnent lieu à des actes, de I à VIII à ce jour.

8 Pour un exemple d'étude conjointe des décors de sols et de murs, voir l'article sur Zeugma : Barbet-Monier 2005: 1301-1306.

Figure 2b
Xanthos, basilique Est, atrium ; ici la bordure est régulière, planifiée dans le détail (ph. CNRS-M.-P. Raynaud)

ville haute. Les mosaïques avaient été déposées dans les années soixante et sont exposées au musée de Tétouan, avec de vagues indications de provenance. Un relevé précis du plan des maisons et l'étude de l'architecture (dimensions, traces éventuelles) ont permis de repositionner graphiquement les sols dans leurs murs[9].

2. L'observation attentive de la surface des sols (in situ)

avant restauration peut donner de multiples informations sur les avatars subis par l'édifice. Les plissements, effondrements et fissures indiquent des mouvements de terrain, dont l'orientation est utile pour étudier la destruction des structures. Ils révèlent aussi quelquefois la présence de structures sous-jacentes ou une éventuelle instabilité du sous-sol (pente, terrassements, remblaiements ou ruissellements).

Les lacunes permettent des observations sur le processus de destruction du bâtiment, particulièrement importantes lorsque les couches recouvrant les sols ont été antérieurement enlevées du fait d'une réoccupation ultérieure ou de fouilles anciennes. Elles sont l'œuvre de la chute d'éléments lourds, de la détérioration des supports (exposition plus ou moins longue aux éléments) ou témoignent d'une action volontaire de destruction[10]. Les traces de rubéfaction qui ont altéré la surface des mosaïques sont l'indice soit d'incendies, soit d'une réoccupation postérieure (foyers).

L'observation attentive de la surface de la mosaïque, en lumière rasante par exemple, permet dans certains cas de déterminer des « phases de travail ». Le lit de pose n'est versé qu'au moment de l'installation des tesselles, par petites

9 Fouilles franco-marocaines à Lixus, sous la direction de J.-P. Darmon et Z. Qnimba. Ces hypothèses devraient se trouver confirmées par l'étude des archives du premier fouilleur, G. Taradell.

10 Voir plus loin, dans la partie concernant les restaurations anciennes.

zones. La pose des panneaux se fait souvent séparément de celle des bordures. Les limites entre ces différents secteurs, indiscernables au premier abord, peuvent se manifester par un joint d'aspect différent (plus large et continu), ou par certaines irrégularités de niveau entre les deux parties. C'est le cas dans la basilique E de Byllis (Albanie)[11] (fig. 1), où le panneau figuré a nettement été réalisé séparément, à un autre moment que la bordure. Ces différents secteurs pouvaient aussi être le fait du partage du travail entre différents artisans d'un même atelier, entre des ouvriers plus ou moins expérimentés, ou spécialisés dans tel type de représentation ou tel décor géométrique particulièrement complexe.

On peut aussi déduire, dans certaines maladresses du décor ou rattrapage de motif, à quel endroit le travail a commencé et où il s'est achevé : la planification de décors refermés sur eux-mêmes, comme les bordures, renseigne sur le degré de qualification et l'expérience des artisans. On constate que certains commencent leur travail sans le planifier, c'est-à-dire sans tracé préparatoire de détail ; les motifs se bousculent dans les angles, « tournent mal », s'étirent par endroit et s'amaigrissent à d'autres (fig. 2a). Dans d'autres cas, les artisans ont manifestement préparé leur travail soigneusement en divisant mathématiquement l'espace imparti, produisant des motifs parfaitement réguliers (fig. 2b). Il est alors plus difficile de deviner où l'artisan a démarré sa tâche.

La façon dont deux tapis sont juxtaposés, raconte fréquemment quelle mosaïque est venue se coller contre la précédente : la lisière entre deux mortiers qui ont séché à des périodes différentes est toujours vulnérable aux infiltrations. Sa dégradation presque systématique au niveau des tesselles permet souvent d'étudier le raccord entre les deux supports successifs. Il est en effet impossible de juxtaposer deux mosaïques à différentes époques sans que cela soit visible (différents vieillissements et séchages des mortiers, niveaux de surface et techniques de poses variables, cicatrices entre les parties). Ceci aide à établir une chronologie relative des sols.

3. Matériaux

L'identification physique et l'analyse pétrographique (onéreuse, donc plus rarement pratiquée) permettent de savoir si les matériaux constituant les tesselles sont extraits localement, importés ou remployés. Elle nécessite une bonne connaissance géologique de la région et des carrières antiques.

La qualité des matériaux donne une indication sur la prospérité des commanditaires et leur ambition : marbres et matériaux colorés sont généralement réservés à des emplacements privilégiés, destinés à faire l'admiration du plus grand nombre. Ainsi à Xanthos (Turquie), dans la basilique Est[12], les décors les plus soignés, - mosaïques à tableaux figurés, emploi de couleurs plus riches et de matériaux nobles (marbres verts et violets)- se situent sur un axe de circulation conduisant de l'entrée au baptistère ; cette volonté attestée de « marquer » ce cheminement n'est vraisemblablement pas fortuite. Le compartiment central du narthex, devant la triple porte ouvrant sur la nef centrale, occupe aussi une place de choix ; il se distingue par un sol en *opus sectile* soigné, très riche en plaquettes de marbres colorés de toutes provenances et la plupart du temps remployés, avec un soin évident. À Byllis, on a trouvé dans plusieurs églises l'emploi de tesselles

11 Collaboration albano-française pour la publication des fortifications et des églises de Byllis et la reprise de fouilles, sous la direction de S. Muçaj, J.-P Sodini puis P. Chevalier. Premier volume en préparation.

12 Mission française en Turquie, sous la direction actuelle de J. des Courtils. La fouille de la basilique Est a été dirigée par J.-P. Sodini. La publication de ces travaux est en cours.

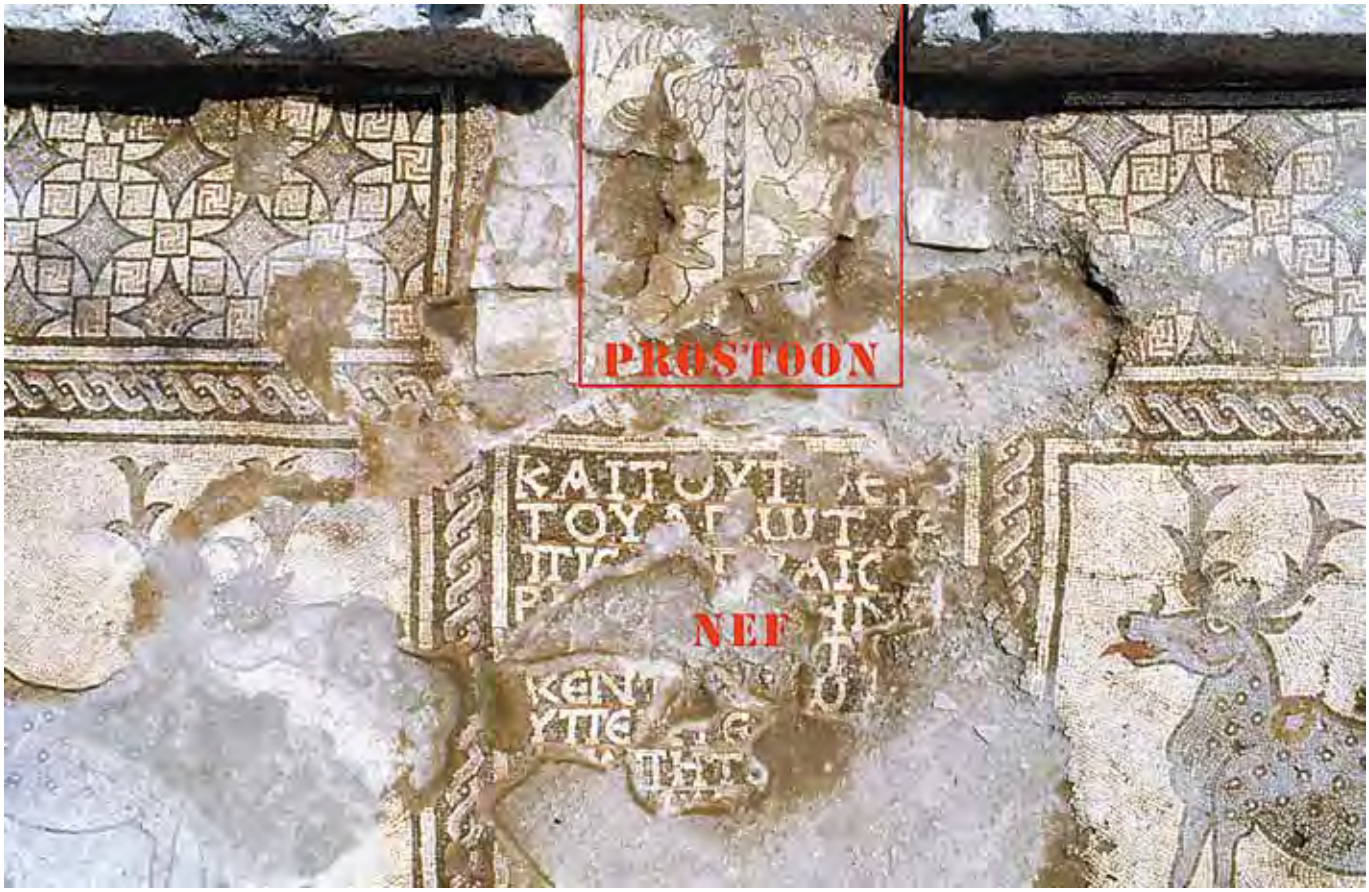

Figure 3
Byllis, basilique D, nef centrale et en haut au centre tapis du *prostoon* ; remarquer la différence de taille des tesselles (ph. CNRS-M.-P. Raynaud)

de verre dans les tapis du sanctuaire (basilique A, B et E), du *prostoon* (basilique D) ou du narthex (basiliques A et D). Les rares tapis conservés représentant des personnages sont réservés au sanctuaire ou à l'exonarthex.

Une hiérarchie tacite, attestée tant durant l'Antiquité qu'à l'époque byzantine, met les dallages en marbre (*opus sectile*) au premier plan. Les mosaïques viennent ensuite, et le choix des matériaux qu'elles mettent en œuvre, marbre, pierre, terre cuite ou verre, est assez représentatif de la richesse de la commande.

Une analyse géologique des tesselles de pierre permet dans certains cas de retrouver les carrières dont elles sont issues et de mieux connaître le réseau de circulation des matériaux dans une région. Ainsi l'identification des tesselles vertes observées dans la production d'un atelier aquitain a orienté les recherches vers les carrières de marbre des Pyrénées, dont l'exploitation était mal connue[13].

Autre exemple à Saranda (Albanie)[14], où deux fragments de mosaïque ont pu être attribués à un même atelier grâce à l'utilisation d'un matériau original et bien caractéristique : une pierre dure, rouge striée de brun, absente partout ailleurs. Cet indice a permis de faire le rapprochement entre ces deux parties de la nef éloignées l'une de l'autre (réparations ponctuelles, mais anciennes), bien que la disparité de leur décor n'ait été d'aucun secours pour témoigner d'une production unitaire.

On trouve également, surtout pendant l'Antiquité tardive et l'époque byzantine, des tesselles ou des plaques *d'opus sectile* retaillées dans des éléments de remplois

13 Ophite verte des Pyrénées, cf. Balmelle 1987: en particulier 170 et 186.

14 Mission albano-israélienne, sous la direction de E. Netzer, G. Foerster, E. Nallbani et K. Lako.

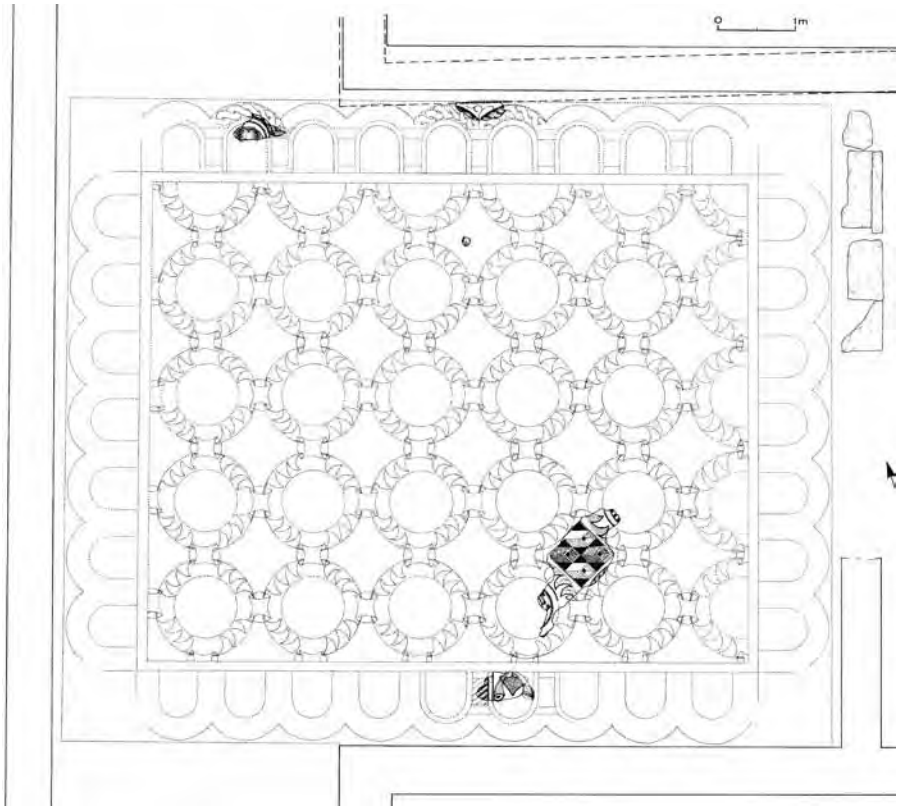

Figure 4
Séviac (Gers), restitution du décor du vestibule de la villa (del. M.-P. Raynaud)

(moulures, placages, plinthes). Le marbre, très prisé à toutes les époques, fut systématiquement remployé à partir de l'époque byzantine où l'exploitation des carrières cessa progressivement[15].

4. Dimensions et méthode de taille des tesselles

La qualité de la taille des tesselles ou des plaquettes d'un *opus sectile* est très variable et révélatrice des compétences des artisans. Son étude permet de déterminer les outils utilisés (pinces, marteline ou scie). Ces précisions sur le soin porté à la fabrication des cubes ou des plaques reflètent dans une modeste part la prospérité du commanditaire, et la qualité de l'atelier choisi. Des analogies concernant la taille des cubes sur un même site peuvent contribuer à l'identification de groupes homogènes. De la même façon, la densité des tesselles au dm^2 peut corroborer tel ou tel rapprochement. Ces mesures aident pour la comparaison de pavements physiquement éloignés les uns des autres.

Il arrive que la dimension des tesselles varie dans un même bâtiment selon l'emplacement des mosaïques[16], sans refléter l'œuvre d'ateliers différents. Ainsi à Byllis, basilique D, il est évident qu'un unique atelier a réalisé la nef centrale et le petit tapis du *prostoon*, comme l'attestent sans doute aucun le répertoire et le dessin des animaux. Cependant la densité moyenne de la première mosaïque (65 tesselles au dm^2) est nettement inférieure à celle de la seconde (120 tesselles au dm^2), dans le souci de soigner tout particulièrement l'emplacement privilégié du *prostoon*, grâce à un dessin plus fin et des matériaux précieux et chatoyants (pâtes de verre colorées) (fig. 3).

15 Sur cette question : Sodini 1994, et Sodini 2002.

16 Tapis de circulation, panneaux figurés ou situés à des emplacements privilégiés.

Figure 5
Xanthos, basilique Est, tracé préparatoire sous la mosaïque du narthex sud (ph. J.-P. Sodini)

5. Mortiers et supports

L'observation des mortiers et de la constitution stratigraphique des supports peut s'avérer très instructive.

-La dimension et l'aspect des joints entre les tesselles ainsi que la finesse du lit de pose peuvent servir de critère de distinction entre plusieurs mosaïques et contribuer à la classification en groupes homogènes.

-Il arrive que lorsque des tesselles ont disparu, totalement ou sur une surface importante, l'empreinte des cubes soit préservée, visible en lumière rasante lorsque le mortier est parfaitement nettoyé. On peut alors, aux heures propices (matin et soir), pratiquer le relevé de ces empreintes et proposer une restitution du décor disparu. Quelques maigres traces bien placées ont parfois permis de restituer la totalité d'un décor. Citons le cas du vestibule d'entrée de la *villa* gallo-romaine de Séviac (Aquitaine, France), où le décor pourtant peu banal a pu être reconstitué grâce à de petits fragments épars et quelques traces (fig. 4). Dans le cas de la Basilique de Candidus à Haïdra (Tunisie), l'étude systématique des supports des mosaïques, pourtant déposées longtemps auparavant, a permis un relevé des traces et des empreintes. Ce document a ensuite servi à retrouver les divers panneaux de l'église, conservés au Musée du Bardo - sols du musée et réserves –, en dépit d'indications de provenances très vagues et de restaurations plus ou moins abusives. Ainsi le plan presque complet des sols de l'église a pu être reconstitué[17] de façon certaine. Enfin, troisième cas, dans la Maison des Trois Grâces à Lixus, l'observation des supports laissés en place lors des déposes pratiquées dans les années soixante a permis de retrouver l'empreinte d'un des

17 Fouilles de Haïdra, Basilique de Candidus, publication en préparation sous la direction de N. Duval et F. Baratte.

pavements, exposé au Musée de Tétouan sans précision sur son emplacement d'origine[18].

Il est aussi enrichissant d'étudier les supports lors de campagnes de restauration. Plusieurs découvertes peuvent avoir lieu à cette occasion.

- La peu fréquente découverte d'un tracé préparatoire peut survenir lors d'un nettoyage ou d'une dépose soigneuse. Ce tracé est exécuté sur la couche supérieure du support, le *nucleus*. Il est destiné à être recouvert au moment de la mise en place des tesselles par le mince lit de pose dans lequel elles sont insérées. Ce tracé peut être gravé ou dessiné par des pigments ou de la craie. Dans ce dernier cas, il est très rarement préservé après recouvrement par la mosaïque. Le tracé incisé est plus durable et repérable. Deux exemples partiels existent à la basilique Est de Xanthos, l'un dans le compartiment Sud du narthex, préservé dans un angle, qui présente un quadrillage de bandes un peu sinueux correspondant plus ou moins clairement au décor de la rallonge (cercles sécants) et du champ (croix de U) (fig. 5). L'autre, plus dégradé, se trouvait dans la partie ouest de la nef Sud (tracé ferme et rectiligne). Ces tracés ont été repérés respectivement l'un après une dépose soigneuse des tesselles qui a respecté la surface du support, l'autre dans les lacunes. Dans les deux cas, le décor des mosaïques qui les recouvrait était particulièrement complexe, difficile à réaliser sans l'aide du tracé directeur. On citera pour mémoire le remarquable tracé préparatoire incisé d'une mosaïque géométrique de Stabies (Musée de l'Antiquarium de Stabie, Italie)[19].

- Les déposes permettent le démontage éventuel du support par les archéologues, ou la réalisation de sondages ponctuels. Sa structure stratigraphique peut alors être étudiée et des éléments de datation collationnés (monnaies, céramiques…). La fouille sous le sol peut en outre apporter des indices archéologiques de datation sur l'installation du pavement, et enfin sur d'éventuelles structures antérieures au sol. La repose du pavement *in situ* a lieu après le remplacement du support (mise à plat, drainage) et la restauration en atelier de la surface mosaïquée. Une documentation complète est alors effectuée en vue la publication.

- L'étude des supports peut démontrer le souci des mosaïstes de trouver des réponses adéquates aux problèmes sismiques posés localement. Ainsi à Xanthos, dans le compartiment Sud du narthex, après le premier tremblement de terre, on a essayé de donner au nouveau pavement une assise plus stable que le support pratiqué ordinairement (*statumen, rudus, nucleus*). Au-dessus d'une surface de terre nivelée, les artisans ont ici divisé l'unique couche du support en bandes parallèles séparées par des alignements de fragments de tuiles posées de chant. Les intervalles entre ces lignes ont alors été comblés par un remplissage serré de tuiles posées de chant perpendiculairement aux lignes ; l'ensemble a été recouvert par un mortier de surface permettant un bon nivellement. Ce support devait être dans une certaine mesure souple et élastique, et ainsi mieux résister aux contraintes sismiques. Ceci est attesté par l'état relativement bon de la mosaïque malgré l'ultime tremblement de terre qui a détruit l'ensemble de la basilique au 7e siècle. On a pu observer ce type de support souple dans deux exemples en Albanie (dans la basilique E Byllis, et celle de Vrina), où le sol présentait des risques d'instabilité, le premier du fait de la forte pente, le second à cause d'un sous-sol très humide[20].

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18 Il s'agit de la mosaïque du combat de coqs.

19 Une très bonne illustration de ce tracé a été publiée dans le Catalogue Madrid 2001: 103. H. Lavagne à cette occasion donne une bibliographie complète de ce pavement. E. Chantriaux, Ateliers de Restauration du Musée de Saint-Romain-en-Gal, s'est aussi intéressée aux tracés préparatoires : Evelyne Chantriaux, Tracés préparatoires sous la mosaïque de la *domus* du collège Lumière de Besançon. Lettre de l'AFEMA 2006 : 6-7.

20 Raynaud 2008 : fig. 3c.

Figure 6
détail de la restauration d'un fragment trouvé enfoncé dans une lacune
(ph. P. Blanc)

-Une étude physico-chimique du mortier peut apporter des indications précieuses sur les techniques respectives de différents ateliers et contribuer à des rapprochements. On en connaît de nombreuses illustrations lors de prélèvements de mortiers sur l'architecture et les enduits muraux.

- La restauration *in situ* peut réserver des surprises. Les restaurateurs nettoient très soigneusement les lacunes et les lisières avant de procéder à leur comblement en mortier pour renforcer la cohésion du pavement. À cette occasion peuvent apparaître des découvertes :

. La plus fréquente est le dégagement de fragments enfoncés dans le sol (sous le niveau de la mosaïque), soit par la chute d'éléments lourds sur la mosaïque, soit par des mouvements et plissements tectoniques du terrain. Le restaurateur les remet à niveau et le relevé pourra alors être complété (fig. 6).

On peut procéder à l'analyse soigneuse des supports nettoyés, sous le contrôle des restaurateurs qui consolident les lisières au fur et à mesure afin d'empêcher une dégradation supplémentaire. C'est aussi l'occasion d'observer un éventuel tracé préparatoire ou des empreintes de dalles d'un sol antérieur. Ainsi à Xanthos, dans la nef centrale de la basilique Est, la mosaïque du second état était directement posée sur le support d'un dallage du premier état, brutalement détruit : les empreintes des dalles, seules encore visibles, ont pu être relevées dans les lacunes ou à l'occasion de déposes ponctuelles. Ce travail a permis d'établir un plan restitué du premier sol, dont pourtant aucune plaque n'était restée en place (fig. 7).

-Découverte du sous-sol : dans la nef sud de Xanthos nous avions constaté, par l'observation de surface, que deux mosaïques juxtaposées appartenaient à deux phases différentes. Le nettoyage des lisières des deux tapis par les

restaurateurs[21] a apporté des enseignements décisifs pour comprendre la succession des évènements. On a pu établir la chronologie relative suivante : 1-pose de la mosaïque primitive sur toute la surface de la nef ; 2-tremblement de terre et destruction partielle des sols ; 3-récupération des débris de la mosaïque détériorée et nivellement de ces fragments pour servir de semelle à un nouveau sol; 4-installation d'une nouvelle mosaïque dans les parties détruites au-dessus de cette semelle sommaire (fig. 8).

Ceci a donc permis d'établir de façon certaine la chronologie des pavements, mais aussi de comprendre l'état d'esprit qui a présidé à la restauration de l'église en partie détruite : la hâte et l'économie. On a pu ensuite mieux saisir ce qui s'était passé ailleurs dans l'église : dans la nef centrale[22], dans l'architecture[23], dans la sculpture architecturale[24]. Le phasage des éléments et des sols de l'église s'est donc aidé des évènements observés avec les restaurateurs. Ces observations ont été immédiatement parachevées par des fouilles très poussées dans tous les secteurs lacunaires des mosaïques du secteur sud de l'église et ont occasionné de multiples découvertes (fragments ensevelis par le tremblement de terre, tombes ultérieures).

L'histoire du monument commence à apparaître clairement. Ces deux cas, dans le même édifice, de réutilisation de fondations antérieures ou de débris pour constituer un support après le séisme, s'expliquent par la nécessité de remettre très vite en état le bâtiment (cathédrale de la cité) pour le rendre au culte. La réutilisation de gravats dans la nef sud résolvait en partie le problème du déblaiement des ruines, tandis que la réutilisation du support de *l'opus sectile* détruit de la nef permettait d'épargner le temps et la mise de fonds nécessaires à l'installation de fondations traditionnelles d'une mosaïque. Hélas, ces initiatives à première vue astucieuses, mais réalisées à la hâte, ne se sont pas révélées solides à long terme.

Figure 7
Xanthos, basilique Est, nef centrale ; empreintes de dalles de l'*opus sectile* détruit (ph. CNRS-M.-P. Raynaud)

6. Restaurations anciennes des sols

Les restaurations racontent la durée d'utilisation au même titre que les usures, les occupations successives, les transformations et réaménagements des espaces ; elles témoignent de la prospérité respective des différents habitants selon l'époque de réfection et de leur sensibilité esthétique.

- La catégorie la plus sommaire des restaurations consiste en comblements de lacunes, toujours visibles (cicatrices de lisières, niveaux, matériaux, taille des cubes, couleurs ou décors différents). Ces comblements sont d'une valeur esthétique toute relative. La qualité des pièces est en effet très variable et révélatrice, depuis l'obturation « de fortune » par un mortier de chaux ou une dalle de marbre, l'empiècement en tesselles blanches jusqu'à l'imitation

21 P. Blanc et L. Krougly, Atelier de Restauration du Musée d'Arles Antique, ont pratiqué la consolidation *in situ* et la mise en place de la protection de la majeure partie des mosaïques de la basilique Est de Xanthos, travail qu'ils n'ont pu continuer récemment, faute de financement.

22 Comme on l'a vu plus haut, le dallage primitif en *opus sectile* une fois détruit, on a réutilisé son mortier pour installer une nouvelle mosaïque.

23 On avait à de multiples reprises constaté deux phases de construction proto-byzantines, proches l'une de l'autre, et leur lecture fut confortée par la preuve des manifestations d'un tremblement de terre. Le baptistère, que l'on savait construit dans un second temps très proche du premier en s'appuyant contre l'abside primitive, a pu s'intégrer dans la seconde vague de travaux qui a suivi le désastre. Il semble presque certain désormais que l'édifice a subi cette première secousse alors qu'il n'était pas achevé. La publication des fouilles, en cours sous la direction de J.-P. Sodini, développera ce point.

24 Tables d'autels et ambons successifs, chapiteaux de deux types, etc., étaient attestés.

Figure 8
Xanthos, basilique Est ; à droite, fragments de la mosaïque détruite du premier état, remployés en remblai sous la mosaïque du second état (conservée à gauche) (ph. CNRS-M.-P. Raynaud)

soigneuse du décor en continuité, en passant par une disposition dans le désordre des tesselles récupérées, le bouchage au décor simplifié, ou même le décor délibérément différent du décor d'origine (fig. 9), etc. L'aspect plus ou moins harmonieux de ces pièces témoigne de la qualité des restaurateurs, professionnels ou occasionnels, des moyens financiers du commanditaire, des matériaux dont les artisans disposent, ainsi que du respect des uns et des autres vis-à-vis du décor primitif[25].

- La réfection la plus habituelle est le recouvrement d'un sol antérieur par une nouvelle couche de mosaïque : utilisant comme assise (hérisson) le sol précédent, le nouveau sol est légèrement surélevé, mais ne nécessite pas d'importants travaux de fondations. On ne découvre la couche inférieure que dans les lacunes ou par dépose de la couche ultérieure.

- Il existe aussi des mutilations volontaires, destinées à faire disparaître des motifs jugés gênants ou hérétiques, illustrant la notion de *damnatio memoriae*. Ce pourrait être le cas à Saranda, pour certains tapis manifestement remplacés lors de la transformation de la synagogue en église[26]. En Jordanie, le cas est particulier : on constate dans nombre d'exemples d'églises l'ablation exclusive et systématique des motifs figurés (têtes, mains, pieds, pattes) au 8e siècle, tout en préservant le reste de la mosaïque. Les lacunes ainsi formées sont

25 Sur ce sujet, voir les ouvrages de W. Daszewki, entre autres Daszewki 2003: 245-254. Voir aussi la bibliographie donnée par l'auteur.

26 Les tapis antérieurs ayant disparu, ceci est une hypothèse. Cf. Raynaud et al. à paraître.

Figure 9
Xanthos, basilique Est, empiècement dans la nef sud (ph. CNRS-M.-P. Raynaud)

immédiatement et soigneusement rebouchées avec les tesselles récoltées[27], réinsérées dans le désordre, ou en dessinant un motif végétal (fig. 10). On a interprété ces destructions systématiques à une volonté aniconique, longtemps attribuée aux premiers musulmans, mais la découverte de motifs chrétiens comme des croix dans certains comblements privilégie désormais l'hypothèse d'un refus délibéré des images de la part de la communauté chrétienne, qui aurait ordonné elle-même ces destructions. Cette « iconophobie » reflète le souci de cette époque de lutter contre l'idolâtrie, état d'esprit confirmé par l'étude des textes et l'histoire de l'église en Orient et des conciles[28]. On soulignera le fait que ces destructions partielles ont de toute évidence été réalisées par des artisans mosaïstes, comme le prouve la qualité technique des « bouchages ».

- Le changement de destination et de proportions d'un espace occasionne souvent des reprises et des restaurations des sols. Leur lecture facilite la compréhension de l'évolution de l'occupation d'un bâtiment ; de nombreux exemples apparaissent lors des fouilles. On citera parmi d'autres le cas des maisons du quartier de l'Odéon à Carthage[29].

- On observe dans certains cas un respect tout particulier des occupants successifs pour les restes des mosaïques antérieures : l'exemple de l'église de Saranda (Albanie) en est une étonnante illustration. La succession des phases d'aménagement de cet édifice compliqué - synagogue transformée en église - est apparue lisible à travers l'étude des sols. Chacun des occupants a tenu à garder dans la mesure du possible les tapis antérieurs – lorsqu'ils ne choquaient pas – en les restaurant et les incluant dans les nouveaux décors, ou même en imitant dans des empiècements le décor de parties plus anciennes (fig. 11)[30].

27 Cette destruction est si précisément faite qu'il est souvent possible de deviner par la forme de la lacune l'objet ou l'animal représenté à l'origine. Malice de l'artisan chargé de cette opération ?

28 À ce sujet, voir les nombreux ouvrages de M. Piccirillo, entre autres Piccirillo-Alliata 1994: 158-164 et la bibliographie jointe ; Ognibene 2002: part. 95-130.

29 Maison du Cryptoportique, Maison de la Rotonde ; Missions franco-tunisiennes sous la direction de J.-P. Darmon et M. Ennaifer. en cours de publication.

30 On a ainsi pu discerner quatre phases de mosaïques juxtaposées dans un même bâtiment. Raynaud *et al*. à paraître.

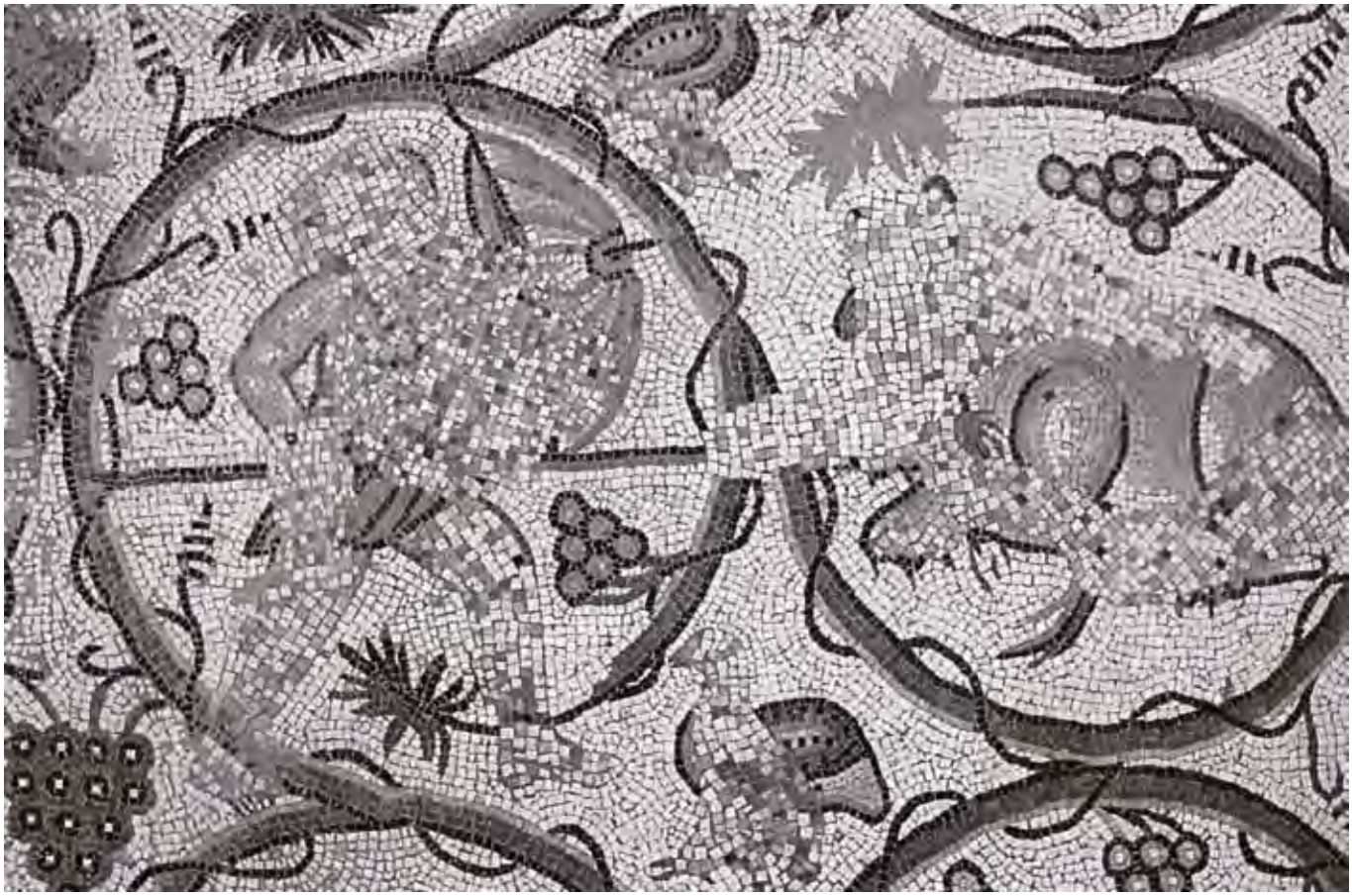

Figure 10
Saint-Etienne à Umm al-Rasas (Jordanie), destruction volontaire des motifs figurés (d'ap. Piccirillo 1994, fig. 54)

Les caractéristiques respectives de chaque intervention de restauration ancienne s'avèrent donc bavardes sur l'époque à laquelle elles se rattachent. Elles seront interprétées différemment selon qu'elles sont la production d'un atelier confirmé, témoin d'une volonté de re-décoration ou d'amélioration ambitieuses, ou selon qu'elles reflètent simplement le souci ponctuel de maintenir une mosaïque *in situ*, dans une continuité d'occupation, afin de prolonger la vie du pavement. Ces deux états d'esprit sont forts différents.

7. Recherche de la production d'ateliers

L'ancienne prééminence du « tableau figuré » et l'indifférence vis-à-vis du décor géométrique (considéré souvent en peinture comme en mosaïque comme une catégorie secondaire du décor) avaient anciennement conduit à la perte d'un nombre considérable de témoins souvent laissés sur place sans protection. Or la proportion des décors géométriques sur un site est quantitativement bien plus importante. C'est cette fréquence même qui autorise, par des comparaisons pertinentes, l'identification d'ateliers, éventuellement de mains. On repère dans les décors géométriques, plus répétitifs, des « tics de langage », des maladresses ou des manies d'artisans, autant de petits détails spécifiques à un atelier et inconsciemment répétés. On peut parfois suivre des influences diffuses d'un foyer de production à un autre, sans doute le fruit du déplacement d'ateliers, de travaux communs, du changement d'atelier ou de la mise à leur propre compte de certains artisans.

Figure 11
Saranda, synagogue-église, panneaux ouest de la nef ; le panneau de droite imite grossièrement la bordure de celui de gauche, qui lui est antérieur (ph. CNRS-M.-P. Raynaud)

- Parmi les critères servant à cerner des groupes homogènes, on a déjà cité les critères techniques, tels l'observation de la taille des cubes, leur densité au dm^2, la taille des joints et la qualité du mortier de finition, le choix des matériaux et des couleurs (reflet du choix de chaque atelier), sont autant de détails communs à chaque atelier. On décèle parfois quelques influences extérieures. Citons dans l'atrium de Xanthos (basilique Est), l'emprunt par un des deux ateliers ayant travaillé simultanément d'une tesselle de marbre violet, matériau rare exclusivement utilisé par l'autre atelier. On constate aussi l'influence mutuelle et progressive du répertoire de ces deux ateliers qui cohabitent sur le même chantier.

- On peut ajouter à ces critères distinctifs entre ateliers la façon de poser les tesselles (filets noirs d'abord par exemple, ou les raccords en pose parallèle ou perpendiculaire au mur), ou encore la façon de combler les fonds blancs : en cernant les formes sur plusieurs rangs, en lignes horizontales ou en écailles par exemple.

Ces diverses caractéristiques techniques sont nécessairement similaires dans deux œuvres d'une même main, et souvent dans la production d'un même atelier.

- La conception d'ensemble du décor d'une mosaïque et la façon dont il s'intègre dans les murs, intervient parmi les critères significatifs pour déterminer des groupes homogènes de pavements. En effet, l'organisation d'ensemble d'un

Figure 12a
Rinceaux de lauriers à Loupian (Narbonnaise, ph. H. Lavagne) et Séviac (Aquitaine, ph. CNRS-M.-P. Raynaud)

Figure 12b
Rinceaux de lauriers à Loupian (Narbonnaise, ph. H. Lavagne) et Séviac (Aquitaine, ph. CNRS-M.-P. Raynaud)

décor dépend moins du commanditaire que de l'artisan : la façon dont les tapis se juxtaposent, s'adaptent ou non au cadre architectural, la multiplication des bordures, l'organisation d'ensemble de la surface à décorer, ou au contraire le manque de planification, sont importants pour mieux évaluer l'expérience et la qualification des mosaïstes. Dans le cas des églises de Byllis, cette conception globale du décor de certaines parties à permis de clairement identifier un atelier[31]. Plus encore, la mise en comparaison avec d'autres pavements a permis de reconnaître les mêmes caractéristiques dans des pavements contemporains de la région d'Ohrid[32]. L'observation de multiples autres détails similaires (motifs, répertoire, couleurs) a par la suite confirmé cette hypothèse.

- En dernier lieu, le répertoire tient un rôle essentiel dans la classification par ateliers. Les choix du répertoire général d'une mosaïque ne dépendent pas uniquement de l'artisan ; commanditaires et modes entrent en ligne de compte.

31 Muçaj-Raynaud 2005: 383-398.

32 *Ibid*. part. 395-397, fig. 12. Cf. aussi Bitrakova-Grozdanova 2006: fig. 8-10.

Figure 13
Xanthos, basilique Est, nef sud ; tapis du premier état à droite (svastikas dessinés par un double filet blanc) ; à gauche, restauration du second état : les svastikas sont tracés en noir (ph. CNRS-M.-P. Raynaud)

Pourtant le choix de certains motifs secondaires et purement ornementaux reste à la discrétion du mosaïste. Des coïncidences de motifs, d'apparence anodine, permettent dans certains cas d'attribuer deux pavements éloignés à un même atelier de façon assurée. Ces motifs particuliers ou façon de faire spécifiques constituent une signature de l'artisan à son insu ; par exemple l'utilisation en écoinçon d'un calice trifide sur fond rouge, à Byllis et à Studençista (région d'Ohrid), a attiré l'attention sur les similitudes entre ces deux centres[33]. En Aquitaine, des pavements de Valence-sur-Baïse et Séviac, peuvent être attribués au même atelier grâce à un traitement des feuilles de vignes ou des paniers de fruits absolument similaire et original[34] ; enfin dernier exemple, à Séviac (Aquitaine) et Loupian (Narbonnaise), on a observé la même façon de traiter les couronnes d'acanthe ou les rinceaux de lauriers (fig. 12a et b)[35]. Ces détails ou « tics de langage » similaires sont plus facilement repérables dans les décors géométriques et végétaux. Ils présentent l'avantage d'être facilement comparables, contrairement aux détails figurés qui, rarement identiques, en appellent davantage à la formation esthétique de leur observateur.

33 Voir notes 28 et 29.

34 Balmelle-Lapart 1987.

35 Aragon-Launet-Balmelle 1987-88: fig. 6, 7 et 10. Ce rapprochement entre deux ateliers éloignés a été confirmé par plusieurs observations. Parmi elles, la présence dans les deux villas d'une composition d'origine orientale, inconnue ailleurs en Occident, la composition centrée en croix de U, cf. Raynaud 1996: fig. 2-4.

Il arrive que d'autres habitudes, spécifiques à telle ou telle production, aident à l'identification discriminatoire d'ateliers : ainsi à Xanthos, la propension d'un des ateliers à tracer ses compositions en « négatif » ; le dessin n'est pas réalisé par une ligne de tesselles noires mais par un double filet blanc (fig. 13).

Dans la Basilique Est de Xanthos, l'évolution du répertoire graphique de deux ateliers ayant travaillé simultanément a permis, à travers les emprunts mutuels, de déduire par quel secteur le travail avait débuté. Cela a aidé à appréhender la façon dont le chantier de construction de l'église s'est déroulé[36] et à distinguer cinq ateliers de mosaïstes. C'est à Xanthos que l'on a pu mener l'analyse la plus aboutie sur les différents ateliers de mosaïstes[37].

Il apparaît constamment, lors de cette brève approche par le terrain, que la qualité des observations *in situ* dépend d'un nettoyage extrêmement soigneux, d'une collaboration étroite entre archéologues et restaurateurs, et parfois d'une orientation de la fouille décidée conjointement. La présence des spécialistes de la mosaïque sur le terrain doit donc être soutenue et régulière, et non pas ponctuelle comme cela arrive trop souvent. L'ensemble de ces observations et analyses aboutit à l'établissement d'une chronologie relative, qui aide à la compréhension de l'histoire de l'espace et du bâtiment. L'exemple de la basilique Est de Xanthos offre un exemple de ce type de contribution qui, mis en relation avec les études archéologiques, céramologiques, de l'architecture, de la sculpture et du matériel, par convergence des données, aboutit à une meilleure connaissance de l'édifice.

Si l'étude iconographique et stylistique peut s'avérer riche en indications sur les commanditaires et l'espace que la mosaïque décore, une bonne étude technique renseigne davantage sur sa fabrication, sur les ateliers de mosaïstes, sur les vicissitudes subies par le pavement (restaurations, accidents – tremblements de terre, incendies ou reconstruction) et ainsi sur l'histoire du bâtiment et de ses occupants successifs.

36 Raynaud 2008: fig. 1a et 1b.

37 *Ibid.*, et Raynaud, *Xanthos* in press.

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Family, Death and Afterlife According to Mosaics of the Abgar Royal Period in the Region of Osroene

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The region of Osroene is the area including Edessa (Şanluurfa), Carrhae (Harran), and Birtha (Birecik) located east of the Euphrates (Fırat) River. The Abgar Dynasty, the major power in the region, overthrew Seleukos's control and regained independence in the region in132 BCE. Family members depicted together and at ease in mosaics of the royal period symbolize the importance of peace within the family and family unity. Of the figures portrayed next to the genearch, the wife is the most striking individual with her dignified pose. Family mosaics indicate that whole family will be together after death as they were in life. A Phoenix and two Orpheus mosaics found in the region also support the pagan notion of a new life after death.

Osroene bölgesi büyük ölçüde Edessa (Şanluurfa) ile anılan, Karrhae (Harran), Birtha (Birecik), yerleşimlerini içine alan, batısından Euphrates'in (Fırat) aktığı bölgedir. Bölgede önemli bir güç olan Abgar sülalesi M.Ö. 132 yılında Seleukos idaresini sona erdirmiştir. Bu sülalenin oluşturduğu krallık idareyi M.S. 242'ye kadar sürdürmüştür. Krallık Dönemine tarihlenen mozaiklerde bir aileyi oluşturan bireylerin bir arada ve özenli bir şekilde işlenmesi aile huzurunun ve birlikteliğe verilen önemi vurgular. Aile reisi yanında yer alan bireyler içinde kadın, saygın pozisyonu ile dikkat çeker. Aile mozaikleri ölüm sonrasında da gerçek hayatta olduğu gibi bir arada olunacağını göstermektedir. Ölüm sonrası yeni bir hayata inanan bölge paganlarının mezarlarında çıkan bir adet Phoeniks mozaiği ve iki adet Orpheus mozaiği de bunu desteklemektedir.

Key Words: Osroene, Edessa, Abgar, Family, Orpheus, Phoenix

The region of Osroene is the area including Edessa (Şanlıurfa), Carrhae (Harran), and Birtha (Birecik) located east of the Euphrates (Fırat) River. The Abgar Dynasty, the major power in the region, overthrew Seleukos's control and regained independence in the region in 132 BCE. Family members depicted together and at ease in mosaics of the royal period emphasize the importance of peace and unity in the family. Of the figures portrayed next to the genearch, the wife is the most striking individual with her dignified pose. Family mosaics indicate that the whole family will be together after death as they were in life. A mosaic of a Phoenix and two Orpheus mosaics found in the region also support the pagan idea of a new life after death.

The Abgar Kingdom (132 BCE-242 CE) comprises the region between the Euphrates and Khabur Rivers and includes Carrhae, Birtha, Mesudiye and Serrin. Its capital is Edessa. The Kingdom which overthrew Seleukos's control and regained independence in the area attracts attention because of its special identity. In the period of freedom before Parthia and the Romans took control, the kingdom led an independent and traditional existence during the times mentioned and is remembered historically with this same character. The traditional characteristics of art in this region show themselves especially in mosaics[1]. Mosaics have been discovered in Mesudiye, Birtha, Serrin and especially at Edessa. Numerous mosaics were found, and some are now lost and only photos and drawings of them remain today. Others are kept in museums (see: Colledge 1994: 196, fig.114; Healey 2006: 313–327) and private collections overseas (see: Bowersock 2006: fig. 2,4; Parlasca 1984: 231; Desreumaux 2000: 212–215), while additional examples remain undocumented.

Edessa is the city where a major part of the royal period mosaics was discovered. Themes in Edessa mosaics include the family, family solidarity, and death and the afterlife, and they are products of an original local workshop(s) (Salman 2007: 242). Mosaics mentioned above whose provenance is unknown should be attributed to the site of

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1 These traditional characteristics result from Persian and Syrian influence.

Figure 1
Family Portrait Mosaic, Lost.
(Segal 2002: fig. 1)

Edessa. Edessa, which is the center of the Osroene Kingdom, created an original mosaic school for a brief time. Some of the pavements have dates on them. These mosaics which use the Seleucid calendar were made between the end of the 2nd century and middle of the 3rd century CE. In this period rulers in the kingdom were named Abgar VIII (214-240 CE), Abgar IX (177-212 CE) and Severus Bar Abgar (212-214 CE), Ma'nu Bar Abgar IX (214-240 CE) and the last king, Abgar Frahat Bar Ma'nu X. (240-242 CE) (Hayes 2005: 24–25). The reason for the manufacture of mosaics during these kings' reigns is not the kings' personal initiative but the intense interest in mosaic-making that existed both in Rome and locally. Many mosaics, dating to the 2nd and 3rd centuries CE, were found in Zeugma (Ergeç 1995: 2–10), which is west of Euphrates River, and in Antioch (Campbell 1938: 205–218), which has a similar culture to other North Syrian settlements and the Osroene Region.

Even though mosaics began to be discovered after J.B. Segal's research in the 1950's in Edessa and the neighboring region, some earlier discoveries also have been documented too (Balty 1981: 388, fig. 23; Leroy 1957: 307–315). Mosaics in which members of the family are depicted emphasize the comfort of the family which gathers around the genearch or *paterfamilias*. In some examples, members are depicted standing, while in others they are portrayed as busts in frames. Another iconographic feature also preferred in family mosaics is symposium scenes, in which the genearch lies on a kline and other members are shown serving and honoring him. Similar scenes are present on reliefs (Drijvers 1980: fig.17) in Northern Syrian settlements, and at Edessa and in the neighboring region, especially at Palmyra (Colledge 1976: fig. 61–62). The symposium scenes reflect an important funerary ritual in the region.

Figure 2
A fragment of Tripod Mosaic, Aya Irini,
Istanbul-Turkiye (Photo. B. Salman)

Figure 3
A fragment of Tripod Mosaic, Aya Irini, Istanbul-Turkiye (Photo. B. Salman)

The mosaic J.B. Segal discovered in 1952 at Edessa in the city's south necropolis, in which members of the family are portrayed standing, is lost today (Balty 1995: 15, fig. 5,1; Drijvers and Healey 1999: 170–171, fig. 49; Dunbabin 1999: fig. 182; Ross 2001: fig. 5,7; Segal 1953: 117–118, fig. 12,1; Segal 1954: 29–30; Segal 2002: fig. 1). It is called the Family Portrait Mosaic and it shows a total of seven figures. Four of them are men, two are women, and one is a little girl (Fig. 1). In the Tripod Mosaic, discovered in 1956, whose two fragments are kept in Aya Irini at Istanbul (Figs. 2-3), six figures - two men, two women and two children - are portrayed (Segal 1959: 153–155, fig. 1). An object similar to a tripod, held by the genearch – possibly an incense-burner - represents a religious ritual in the family (Fig. 4). Mosaics in which members are portrayed standing emphasize the family's unity and hierarchical structure.

Similarly, Symposium Mosaics and other pavements, in which members of the family are shown as busts, display the family and its hierarchical structure. A mosaic discovered in 1901 in Edessa and on display in Istanbul today is composed of three friezes. The mosaic, which still preserves its tessera colors, has a total of six figures depicted as busts, two in each frieze (Bossert 1951: 131, fig 415). In the top section are the genearch Aphtuha and his wife Šumu. In the middle section are two young men, and at the bottom are two young women (Fig. 5). The Abgar Mosaic which portrays family members as busts was found in 1979 in Edessa, but later the female figure was stolen and the mosaic was reburied in its original site. Today the area where the mosaic was found functions as a park. Figures are depicted in two friezes. There are a total of four men and one female figure depicted in the mosaic: in the upper register there are three bearded men, and in the lower section one man and one woman. According to the inscription, a man named Abgar stands in the middle of the upper section and has ornate clothing. He is most probably the ruling king, depicted in this mosaic to honor the family[2]. Right next to him is the genearch, who is probably holding a seal and was a high-ranking official (Nuhadra). In contrast to all of these men, most eye-catching figure in the mosaic is the woman. Although she is depicted in the lower register, her head reaches into the upper zone, and the scene is arranged accordingly. With her ornate clothing and headscarf, she is the largest figure in the imageand the closest to the viewer (Fig. 6) (Drijvers 1981: 17–20, fig. 1).

The last group of family-scene mosaics is the Funerary Symposium group. The most famous mosaic in this group is the one discovered by J.B. Segal in 1956. This pavement disappeared after a while, and fragments of it were seen in an antique dealer's shop in Beirut[3]. In the mosaic, the husband, wife and six children

2 There was a discussion between H.J.W. Drijvers and J.B. Segal on the Abgar figure and his identity in the mosaic. The titles "master and patron" used for Abgar in the mosaic may indicate he is a king. Also his different and ornate clothing supports this interpretation. Drijvers dates the mosaic to end of the 2nd century -beginning of the 3rd century CE, because of the border decoration. The mosaic roughly dates roughly to the 3rd century CE. If the Abgar figure in the mosaic is one of the Abgars living in this period then he must be either Abgar VIII (172–212 CE), Abgar IX (212–214 CE) or the last king Abgar X. (240-242 CE). Because from the end of the 2nd century to the collapse of the kingdom there were three kings named Abgar. Drijvers thinks that the Abgar on the mosaic is the Abgar VIII. The name Abgar is a common one in Edessa and similar cultures. On the other hand Segal, according to a coin depicting Abgar VIII, thinks that even if the Abgar in the mosaic is a king, he can not be Abgar VIII, because Abgar is depicted with a crown on the coin. On the crown there are crescent and star motifs, which are important symbols for Edessa. Also the king looks younger here. In the mosaic Abgar wears a common Phrygian cap that men from Edessa use. That is why the figure in the mosaic does not fit the normal Abgar VIII iconography. Segal believes if this man is a king, then he should be Abgar X; see, Drijvers 1982: 167-189; Segal 1983: 107-110.

3 In 6-8 September 1980, on his paper in a mosaic symposium in Ravenna K. Parlasca said he has seen two lost fragments of this mosaic in an antiques dealer in Beirut. These fragments show two little boys to te below of the scene. This paper is printed in 1984. See. Parlasca 1984: fig. 2

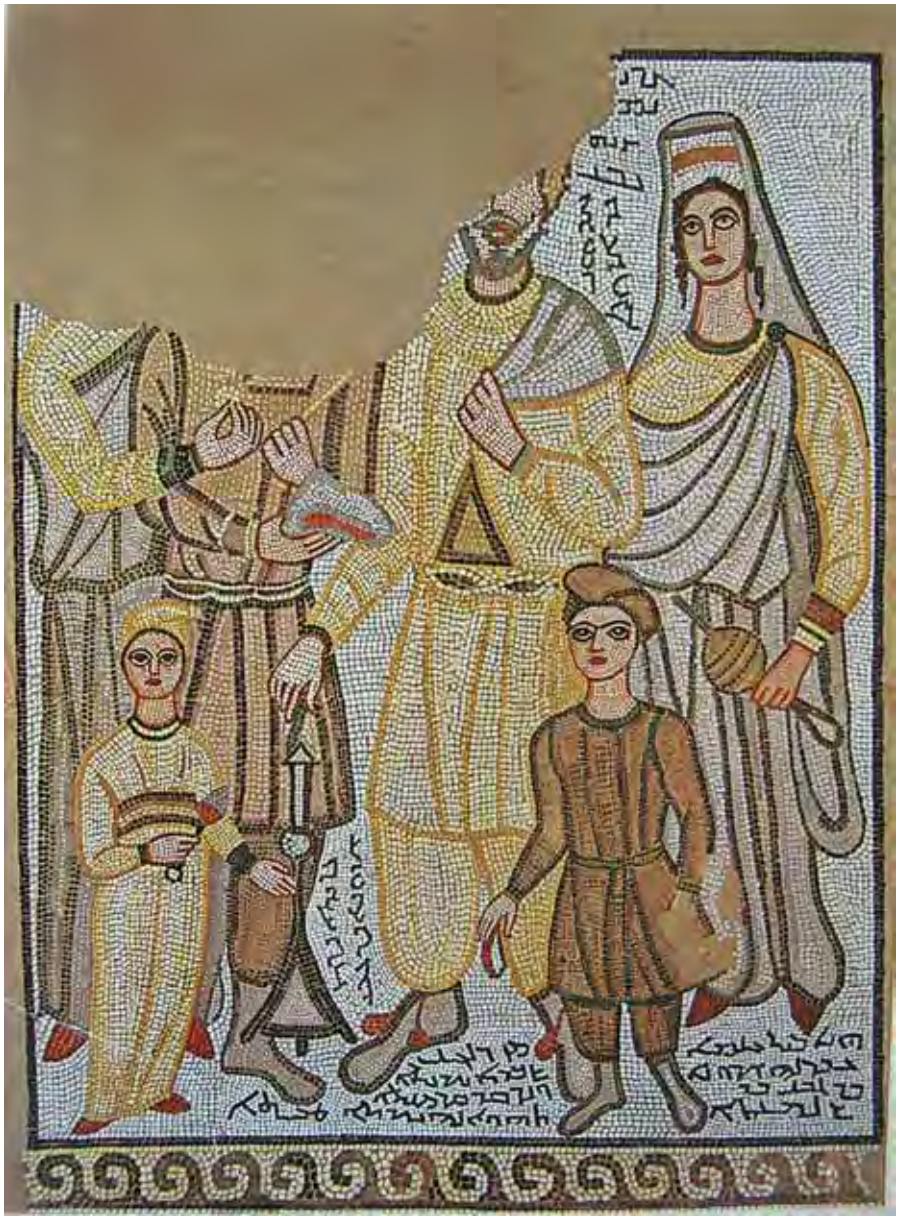

Figure 4
Tripod Mosaic. (Segal 1959: fig. 1)

were depicted. Within the scene, the deceased (named Zaydallat according to the inscription) reclines on his side on a kline or sofa. He is holding a wine glass and resting his arm on a pillow comfortably. At the same time he is leaning his back against a cushion. Right next to him is his wife with her high headscarf shown in a respectful pose. Between him and her wife are a little girl with a headscarf, and on the left three boys serving him and finally two boys portrayed as busts (Fig. 7) (Balty 1981: 388, fig. 23; Balty 1995: 15, fig. 5,2; Colledge 1994: 191–192, fig. Drijvers and Healey 1999: 180–183, fig. 54; Dunbabin 1999: fig. 183; Leroy 1961: 165–169; Parlasca 1984: 227–229, fig. 1–2; Segal 1959: 155–157, fig. 3; Segal 2002: 93, fig. 2).

Other than this lost example, there are some other preserved examples depicting this ritual of the funerary symposium. One work kept in Aya Irini in two pieces and depicting a family of four (Fig. 8) (Drijvers and Healey 1999: 216–217, fig. 69), and another kept in the Şanliurfa Museum, which is badly preserved (Fig. 9) (Salman 2007: 160–162, fig. 70–75), are examples of funerary symposium

Figure 5
Aphtuha Mosaic, Archaeological Museum, Istanbul-Turkey (Photo. B. Salman)

mosaics[4]. Scenes of a funerary symposium in mosaics are always depicted in same way: the genearch lies on a sofa holding a wine cup, and next to him are the wife in a respectful pose and the children serving him. Symposium mosaics iconographically express the funerary ritual of the symposium held after the deceased has passed away, to bid him farewell. But we can be more concrete here and come to this conclusion: on symposium mosaics family members, especially children serving their father and the wife standing or seated next to him, express respect and love for the father. The genearch lying on sofa shows how comfortable and well respected he was in his lifetime and how faithful was his wife to him.

One of the most striking characteristics of the family mosaics of the region is the realistic depiction of the figures. Mosaic artists portrayed figures as realistically as possible and reached a remarkable degree of accuracy. Figures have calm facial features (Segal 2002: 68). Figures looking around with big eyes have their mouths closed and mostly portrayed with a serious look. All men, young and old, are shown with beards. The main figure in the Abgar Mosaic, Abgar himself, is portrayed with a gray-black beard to show that he is past middle age (Drijvers 1981: 18, fig. 1). The figures in the mosaics are depicted with ornate, eastern-style dress (Dunbabin 1999: 173).

4 A mosaic from the Osroene region published by S. Brock recently shows the funerary symposium iconography. This mosaic is in the mosaic style of Edessa and belongs to the royal period. S. Brock in his publication of the inscriptions in the mosaic tells that it belongs to a private collection, but he does not say who owns the work or in which country the mosaic is located. See Brock 2007: 714-721, fig: 1-3; many mosaics from this region share the same fate, and their locations remain unknown. For similar examples see, Bowersock 2001: 411-416; Desreumaux 2000: 212-215.

Figure 6
Abgar Mosaic. (Drijvers 1982: fig.1)

The most important person among family members is the genearch, the man of the house. The royal figure honoring the family and the genearch in the Abgar Mosaic is an exception to this rule. In all mosaics in the region, all men including the genearch are portrayed with beards. Men have elaborate dress. Caps are the distinguishing features of the men. Even though the Phrygian cap is mostly used, sometimes it is possible to see other types of caps. For example, in the Family Portrait Mosaic, the deceased, the one in the center of the scene, wears a form of headgear similar to a turban. This is the only example of a man wearing a turban in this region's mosaics. One of the figures in the mosaic right next to him wears a high Phrygian cap. The presence of this bonnet and his placement on the man's right side could mean that he is the oldest son of the genearch. The other two men are portrayed without headgear and have full wavy hair (Segal 2002: 76). Another man portrayed without headgear also is present in the Abgar Mosaic. Men are portrayed with a knee-long tunic and wide trousers similar to a shalwar. Similarly, boys wear knee-length shirts as well as trousers. The trousers descend below the knee[5]. Trousers sometimes appear loose and sometimes tighter. There are two types of shoes: one with triangular clips and an open back, and another, taller shoe which is still used in the east today.

Despite the men's importance in local mosaics, the most striking figures are the women. Their positions in the mosaics, their ornate clothing and dignified poses show us how much they were esteemed. Their poses in these mosaics also show us their position of authority within the family. This also indicates to us the important status of women in the region. In local mosaics women are portrayed immediately next to the husband, and in funerary mosaics they are portrayed sitting in dignified poses with very fine dress and headscarves. One of the most important details in mosaics is the fact that each woman's face is

5 This type of trousers can be considered a Persian influence, and it was first used by them.

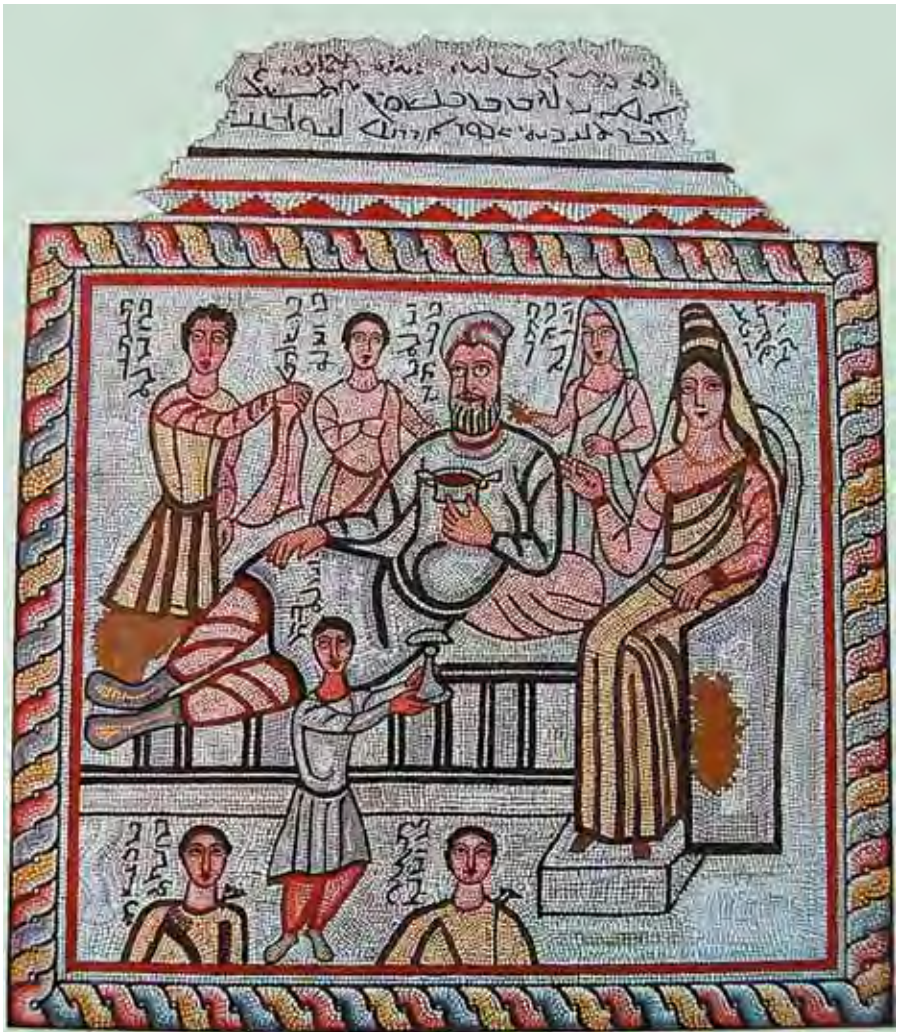

Figure 7
Funerary Couch Mosaic, Lost
(Dunbabin 1999: fig. 183)

always uncovered. Their headscarves hang down but do not cover their faces. Even though the headscarf is thought by some to be a veil (Dunbabin 1999: 173), the open faces do not support this notion. The headgear women use under their headscarf can still be seen today in the region. This headdress is called Köfü and is associated with the family's wealth (Segal 2002: 74). Accordingly, a pointed headdress with many stripes shows that the woman is rich, whereas a flatter and wider headdress with fewer stripes shows that she is from a less affluent family[6]. Women are portrayed with braided hair and long tunics with embroidery. Over their tunics they wear long caftans in different colors attached to the left shoulder with a brooch or a clip similar to a fibula (Segal 2002: 74). Little girls have plainer clothes. They do not wear caftans, and their tunics are fastened with a wide belt (Segal 2002: 74). Little girls who have not reached puberty wear their hair uncovered and fastened with hairpins in three ponytails, as we can see in the mosaics (Ross 2001: figs. 5,7).

Mosaics representing the family show us the period's family structure clearly. In the hierarchy of the family, husband, wife and children all seem attached to each other in life. In the mosaic in which every member of the family is presented, this attitude is conveyed by having each family member's name placed next to

6 This cap is also similar to the cap used in 19th-century tower shaped headgear or the "hennin". See Segal 2002: 74.

Figure 8
Funerary Couch Mosaic, Aya Irini, Istanbul-Turkiye (Photo. B. Salman)

the figure and written in Estrangelo Syriac. This devotion to each other in life can still be seen in the region. Since these mosaics were discovered in graves and bear inscriptions about death and the afterlife, including names other than family members' names, we can observe the local pagans' approach to these subjects. Family mosaics show us that people are attached to each other in death as they are in life. In other words, these scenes should be considered a reflection of the desire for togetherness in life, death and the afterlife. It seems that pagans in the region think of death as a means to bring the family together and to start a new life together after death. So an appropriate death and funerary ritual is developed in the region. From a different perspective, depiction of family members in the mosaics is the result of the solidarity of the members, alive or not. Because the grave is the place where the living and dead come together, the deceased are brought back to life in the mosaics made by their kin. Members of the family, the close kin, will remember the good old days, when they see the deceased represented in the mosaic at the time of visiting the grave.

Inscriptions in the mosaics are written in Estrangelo Syriac, which is a dialect of the Aramaic language special to this region[7]. One of the striking features of the inscriptions is the "House of Eternity" expression in the mosaics[8]. It shows us the importance of the tombs; they provide this name and indicate the importance of the grave cult for pagans. It reads: "*I, Aphtuha, son of Garmu, made for myself this tomb, for myself, for my children and for my heirs to eternity*" (Drijvers and Healey 1999: 163–164) on Aphtuha mosaic. And "*I, Barsimya, son of Ašadu, made for myself this house of eternity, for my children and for my brothers, for the life of Abgar, my lord and benefactor"* (Drijvers and Healey 1999: 185–186)

7 For the inscriptions in mosaics and graves of the region, see Brock 2007: 715–717; Drijvers 1973: 1–14; Drijvers 1993: 147–161; Healey 2006: 313–327; Segal 1954: 2–36; Segal 1957: 513–527.

8 The expression of "house of eternity" can be seen in the Zenadora Mosaic, Aphtuha Mosaic, Balay Mosaic, Tripod Mosaic, Phoenix Mosaic, lost Orpheus Mosaic, and Abgar Mosaic.

Figure 9
Funerary Couch Mosaic, Archaeological Museum, Şanlıurfa-Turkiye (Photo. B. Salman)

appears on the Abgar Mosaic. For the one who had the mosaic and the tomb made, the now deceased, the genearch proclaims the importance of the tomb, made for all of his kin. The inscription on the Tripod Mosaic shows that the local pagans believed in life after death: *"Adona, son of Gabbay son of Šelam'ata made this house of eternity for himself. Whoever removes the sorrow of* (his) *offspring and mourns for* (his) *forefathers will have a happy afterlife*" (Drijvers and Healey 1999: 172–173). This also can be considered an expression of belief in the hereafter (Yaşar 2003: 111-121). The family's wish to spend life after death together causes them to be shown happy, peaceful and calm in the mosaics.

In inscriptions other than those in mosaics, tombs are said to be under the gods' surveillance, and whoever harms them will be punished by the gods. For example, an inscription found in Sumatar (for Sumatar, see Segal 1953: 97–119) gives us information about this and life after death: *"I, Gayyu, daughter of Baršuma, made this grave for myself. Whoever comes here shall not remove my bones. Whoever does it shall not have the other world* (afterlife) *and Maralahe curses him*" (Drijvers and Healey 1999: 78). Another inscription from a tomb in Serrin[9] dated to 73 CE reads: "..*Whoever shall give praise-all gods shall bless him. Whoever comes and damages this tomb shall not have a grave and shall his children be blind"* (Yaşar 2003: 113). An inscription dated to a later period, 6th century A.D. found in Birtha reads; "...*God bless everyone come to this tomb and give praise"*(Yaşar 2003: 113). Life after death and the wish to treat the tomb and the deceased with respect are clearly expressed in the tomb inscriptions.

Besides the inscriptions, other visual evidence expressing life after death occurs in some mosaics found in Edessa. They include two Orpheus mosaics and another pavement representing a Phoenix (Balty 1981: 389; Drijvers and Healey 1999: 176–177, fig. 52; Ross 2001: 111–113, fig. 5.3; Segal 1959: 155; Segal 2002: 93, fig. 67), which is not commonly portrayed in mosaics. The mosaic examples with Orpheus, discovered by Segal in 1956 in the city, are lost today. In one mosaic Orpheus is portrayed leaning against a tree and sitting on a rock

9 Serrin is south of Edessa and northeast of Herapolis (Mabbug).

holding a lyre with horn-shaped tips. Animals are portrayed above each other in a vertical plane; a lion appears at the bottom and three birds occur above each other to Orpheus's left. At the bottom of the scene two draped figures, similar to a little girl and boy, represent the spirit and hold ontoa *tabula ansata*[10]. The inscription on the *tabula ansata* reads: *"I, Aphtuha, son of Barnay, on July of the year 39* (227-228 CE)*[11], made for myself this house of eternity, for my children and for my heirs"* ((Fig. 10) (Drijvers and Healey 1999: 178–179).

Figure 10
Orpheus Mosaic, Lost (Segal 2002: fig. 68)

The other Orpheus mosaic was found recently but then smuggled abroad. Today this mosaic is in the Dallas Art Museum. Orpheus sits in the middle but the chair or rock on which he sits is not visible. His head and upper body are seen from the front, but his lower body is turned to the right. He wears a typical Phrygian cap. Animals are arranged in two groups: an aggressive group consisting of a lion, tiger, leopard and a wild boar can be seen on the right, and a calm group of two birds, two wild goats and a colt or mule is on the left. We are used to seeing only calm animals in Orpheus groups so this example is different. The animals in the aggressive group all have the same pose, running and jumping up as if they were attacking Orpheus. We can see the shallow perspective in the animals being placed one above the other. In the mosaic there is a short inscription next to Orpheus's head: "*Bargased, mosaic-maker, laid the mosaic"* (Healey 2006: 319). This is the only artist's signature in a mosaic found in the region. On the calm animals' side, above the resting wild goat is the tomb inscription in a frame: *In the month of Nisan in the year five hundred five* (M.S. 194) *I, Pāpā, son of Pāpā, made for myself this chamber of repose, for myself and for my children and for my heirs. Blessed be Whoever sees and gives blessing"* (Fig. 11) (Healey 2006: 316–319).

The Phoenix Mosaic was found in the south necropolis by J.B. Segal in 1956 and disappeared a short time later. In the mosaic as the main feature is an *arcosolium* tomb, which is special to the city. In the background, a column – or maybe a stele - can be seen. On the coloumn there is a bird standing. Next to the bird there is a four-letter inscription which reads "Phoenix". This Phoenix represents the regeneration of life. The inscription in one corner of the mosaic reads: *"I, Baršamaš, son of Barga, on the year 547 made this house of eternity for myself and for my children for all times*" (Fig. 12) (Drijvers and Healey 1999: 176–177).

Belief about death is different in each culture. This belief is another aspect of the local religion. Art representing funerary rituals is also connected to this belief (Ross 2001: 96). In Greek and Roman society, the spirit was believed to return to the body[12]. Eastern Mediterranean Jews believe that the deceased goes

10 Even though some believe these figures are Eros and Psyche, that is not possible because the boy is draped, which is uncharacteristic of Eros. These figures resemble angels who will be very important in Christian art later. Angel or Greek Angelos (Αγγελος) is a very controversial term. The biggest problem is to identify which features belong to polytheism and which to monotheism. According to one idea, Angelos, a Greek creation, is associated with the underworld. Another idea says they are from the Near East. What we are sure of is the existence of angels in both polytheistic and monotheistic religions. In polytheistic religions, angels get their revenge from sinners by punishing them in the underworld. Angels with protective features are spirits wandering in trees and groves and in the sky. At this point we can talk about a Persian influence. The sky association and the Persian influence lead us to the conclusion that pagans in the region believed in angels. They represent the spirit and protect the grave. Their existence in local religion confirms belief in life after death in this religion. See Özdemiroğlu 2004: 71-75; Sokolowski 1960: 226; Şahin 2001: 19-20.

11 A. Luther dates the mosaic to 252 CE. See Luther 1999: 137.

12 On white lekhytoi, scenes about Greek funerary rituals can be seen. According to these, the Greeks saw the dead as immortal and as a hero, and they also represent the relatives of the deceased in funerary scenes. See Şahin 1996: 143–144.

Figure 11
Orpheus Mosaic, Art Museum, Dallas-U.S.A
(Healey 2006: fig.1)

to the underworld, which is the last phase of life. But for Christians, death is joyful, for it brings a better life than the previous existence. It brings another way of life after death, eternity and eternal life (Akyürek 1996: 94). This belief of Christians and those of the pagans in the same region overlap each other. The Orpheus mosaics represent this best. Traditional and moral elements of the Orpheus cult, maybe under the influence of Christianity, attracted attention, and pagans respecting this cult practiced the rules of the cult. That is why they refrained from eating animals and other possible contaminants, since pureness of the spirit could only be attained by avoiding contaminants (Segal 2002: 93). In this context, Christianity and the beliefs of pagans in the region complement each other. The happy and pure spirit of the deceased will ascend to heaven in a joyful event; namely, death.

The phoenix represents the human spirit, its eternity and immortality. A phoenix standing on a grave stele and the grave in front of it suggest the notion of life after death (Yaşar 2003: 116). So looking at these features from an iconographic point of view, it seems that local pagans believed that, if the funerary rituals were performed properly, the deceased would come back to life, and regeneration.

Figure 12
Phoenix Mosaic, Lost (Segal 2002: fig. 67)

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Bookreview

Patricia WITTS*

Mustafa Şahin (editor), ***III Uluslararasi Türkiye Mozaik Korpusu Sempozyumu Bildirileri – The Proceeding of III International Symposium of the Mosaic of Turkey***, Uludağ University, Bursa, 2007, 222 pages including 64 pages of plates in colour and black and white. ISBN 978-975-6149-32-4.

Mustafa Şahin (editor), ***IV Uluslararasi Türkiye Mozaik Korpusu Sempozyum Bildirileri, "Geçmişten Günümüze Mozaik Köprüsü" – The Proceedings of IV International Mosaic Corpus of Türkiye, "The Mosaic Bridge from Past to Present"***, Uludağ University, Bursa, 2008, 247 pages including 448 plates in colour and black and white and 57 figures. ISBN 978-975-6149-43-0.

These two books represent the first volumes in the Uludağ University Mosaic Research Center Series 1. They publish the papers given at two symposia held in Turkey but with an international attendance: the first took place at Bursa in June 2006, and the second was held at Gaziantep in June 2007.

These symposia owe their origins to a small gathering of Turkish and international scholars who met in Istanbul in 2004. They came together again the following year at Altinoluk, and later that year the creation of AIEMA Turkey was announced. The formation of a Turkish branch of AIEMA (*l'Association internationale pour l'étude de la mosaïque antique*) is welcome evidence of the commitment to Turkish mosaic studies. The President of AIEMA Turkey is Prof. Dr Mustafa Şahin, the driving force behind the Mosaic Research Center at Uludağ University and the editor of these volumes.

By the time of its 2006 meeting, the Turkish mosaic symposium had attracted 27 archaeologists and conservators from seven countries. The 2007 conference exceeded all expectations, being attended by 178 participants from 12 countries (including Turkey). This level of attendance attests to the great interest in Turkish mosaics and is well served by these publications which have appeared with impressive and commendable speed.

The volume of the 2006 proceedings is of smaller dimensions than its later counterpart, which has an A4-sized format. It contains 104 colour illustrations and 69 illustrations in black and white, while the volume devoted to the 2007 proceedings contains 406 colour illustrations plus 42 illustrations in black and white, supplemented by 57 figures, many of them in colour. For publications appealing to an international, multi-lingual audience, the generous provision of illustrations is exceptionally helpful. Many of the plates in the earlier volume are of small size, and while some of the plates in the later volume are also small it is pleasing to note that many are much larger: this adds considerably to the usefulness and attractiveness of the books.

The volume of the 2006 proceedings contains 18 papers, of which nine are in English, eight in Turkish and one in German. With two exceptions, all the non-Turkish papers have an abstract in Turkish, and with only one exception all the Turkish papers have an English abstract. The volume of the 2007 proceedings, reflecting the increased scale of the symposium, contains 31 papers, of which 13 are in English and 18 in Turkish. Each paper has an abstract in the other language. Both volumes start with an introduction by Prof. Dr. Mustafa Yurtkuran, the Rector of Uludağ University, which appears both in Turkish and English. They also contain a foreword in Turkish by Prof. Dr Mustafa

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Şahin and Prof. Dr Selçuk Kirli; the later volume contains an English translation of its foreword.

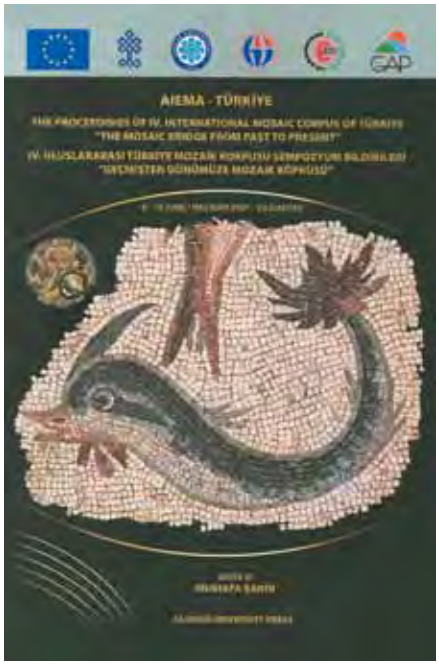
The volume of the 2006 proceedings begins with a text in English of the opening speech of the symposium, given by the Vice-Rector of Uludağ University, Prof. Dr Erdal Emel, in which he stressed the importance of conservation and explained the university's interest in this topic, which has culminated among other measures in the establishment of its Mosaic Research Center. The main papers begin with Mustafa Şahin's review of the history of the foundation of the Center. This is illustrated by photographs of the participants at the previous meetings, showing that the commitment to history extends to recording the history of these symposia – something that should prove fascinating to scholars in years to come. There then follows a summary of the general state of mosaic research in Turkey in 2005 by David Parrish of Purdue University in the USA, one of the distinguished international scholars who have been involved with these symposia from the outset. He explains that new discoveries, especially from Zeugma but also from Çiftlik, Antandros and Metropolis, have led to an acceleration of interest in the mosaics of Turkey. He outlines the project to create a bilingual corpus to further that interest and to disseminate material, and he sets out the detailed form the corpus will take.

There follow papers by Derya Şahin on mosaic terminology, Yusuf Oğuzoğlu on the history of the Bursa region, and Anne-Marie Manière-Lévêque and Marie-Pat Raynaud on the Corpus of the mosaics of Xanthos, which will be the first new publication in the corpus project.

Subsequent papers deal with new discoveries: at a basilica of the late fifth-century at Büyük Orhan in the borough of Bursa by Recep Okçu, and the distinctive mosaics of Edessa (Urfa), many of them from funerary contexts, by Bariş Salman. Emine Tok discusses early Byzantine mosaics at Gara Church near Bodrum, Veronika Scheibelreiter traces stylistic developments in the mosaics of western Asia Minor, and Emel Aksoy addresses stylistic considerations in the Severan mosaics of Antioch. Ayşe F Erol looks at the relationship between the Muses and the technique called *opus musivum*.

There follow a number of papers relating to the protection and conservation of mosaics: Birol Can on an early church at Altintepe/Erzincan, and Mustafa H Sayar and Şehrigül Yeşil on the mosaics of Cilicia. Celal Küçük and N Mine Yar analyse four different lifting methods used for the mosaics of Zeugma and list the advantages/disadvantages and implications of each. They make the point that photographs taken of mosaics before lifting may not be sufficient for the precise demands of conservation even if they are adequate for archaeological research.

Papers concerning national corpora follow. A paper by Maria de Jesus Duran Kremer, Miguel Pessoa and Fátima Abraços on the inventory, risk map and corpus of the Roman mosaics of Portugal urges that conservation and study should be followed by diffusion of information. Sophie Delbarre, Michel Fuchs and Claude-Alain Paratte stress the need for a corpus to be updated regularly, arguing that V von Gonzenbach's 1961 publication of Swiss mosaics (*Die römischen Mosaiken der Schweiz,* Basel) is no longer sufficient. They pose some problems concerning the concept of a corpus, while demonstrating the varied uses to which it can be put, such as comparing patterns within corpora for neighbouring countries and reflecting on figurative mosaics. Hande Kökten explains how the mosaic corpus of Turkey will be distinctive from other corpora in that



the information about each mosaic will include the state of its preservation. Hélène Morlier and Marie-Patricia Raynaud address editorial questions concerning the Turkish corpus and remind us of the many practical issues relating to publication that need to be considered.

The volume of the 2007 proceedings follows the theme of the conference, 'The Mosaic Bridge from Past to Present', and groups the papers under three categories: ancient mosaics (with nine papers in Turkish and 10 in English), restoration (with five papers all in Turkish), and modern mosaics (with four papers in Turkish and three in English).

In the ancient mosaics section, Nurten Aydemir, Seçil Çokoğullu and Nedim Dervişoğlu describe the rescue excavations that took place between late 2006 and early 2007 at Halepli Bahçe in Urfa. Among the discoveries were fragments with charming depictions of ducks, and a spectacular panel showing a number of Amazons on foot and on horseback hunting wild beasts. Christophe Bailly, Hélène Morlier and Michèle Tahri describe plans to make the bibliographies contained in the AIEMA Bulletins available online and discuss the considerations involved in this project. Fatima Bulgan explains how the 1,500 square metres of mosaic found at Zeugma necessitated the construction of a new museum to display these finds. She outlines how the museum in Gaziantep was created, and she evaluates the project from the perspective of museology. Rescue excavations by the Hatay Museum in 2006 at the ancient site of Issos and in the Harbiye district of Antakya are described by Ömer Çelik. At the former, a large mosaic was found in a tepidarium depicting Artemis engaged in a hunt, while at the latter busts of Okeanos and Anosis were uncovered.

Sophie Delbarre, Michel Fuchs and Claude-Alain Paratte adopt a thematic approach, evaluating depictions of Achilles on Skyros in mosaics throughout the Roman empire. They examine the architectural contexts and consider reasons why this subject proved so popular. Rifat Ergeç reflects on the excavation and lifting of mosaics at Zeugma in the period from 1992 to 1999. Zaraza Friedman gives an exposition of ship iconography in mosaics, explaining how the depictions aid our understanding not just of different types of vessel but also of the sailing environment – river, lake, delta, harbour or open sea – and of sea-borne trade.

Werner Jobst outlines the conservation work undertaken during the Istanbul Great Palace Mosaic Project. He has been heavily involved in this project, and he stresses the need for ongoing care and maintenance. Maria de Jesus Duran Kremer highlights the plight of the Roman villa at Abicada in Portugal. Mehmet Önal of Gaziantep Museum describes the excavation in 2000 of the Euphrates House at Zeugma, which produced a number of figured mosaics that are now on display in the museum. He draws attention to ancient repairs, and remarks that some fragments of mosaic had fallen from an upper storey, demonstrating that the use of mosaics was not confined to the ground floor.

David Parrish discusses genre imagery of children's games and of labouring peasants in the Great Palace mosaic at Istanbul. Among the comparative material he cites are two other mosaics from that site that are now stored elsewhere. The focus of Birte Poulsen's paper is a geometric design found in a late-antique house at Halikarnassos which has been called a 'signature pattern' of a mosaic workshop based on the island of Kos.

Miguel Pessoa outlines the considerations being taken into account in the construction of protective covers for the mosaics at the Roman villa of Rabaçal in Portugal. Marie-Patricia Raynaud explains how a study of the mosaics of the East Basilica at Xanthos has provided a better knowledge of the chronology of the Basilica and of the vicissitudes to which it was subjected. Bariş Salman's paper on the Edessa mosaics describes how the funerary mosaics were an early equivalent of a family photograph and also highlights a group of Orpheus mosaics.

Inspired by the discovery of the use of gold-glass tesserae in the crown worn by Dionysos in a mosaic at Ephesus, Veronika Scheibelreiter considers the use of gold tesserae throughout the Roman empire. Derya Şahin reviews the popular figure of Tethys, aiming to eliminate the confusion that often exists between Tethys and Thetis.

The ancient mosaics section ends with Emine Tok's discussion of the mosaics in a church at Çağlayanköy near Manisa and Turgut H. Zeyrek's presentation of the mosaics discovered in 2006 at Besni in the region known as Kommagene.

In the restoration section, the paper by Ali Akin Akyol and Yusuf Kağan Kadioğlu on the mosaics of the Torba Monastery complex near Bodrum emphasises the importance of analysing the materials used in a mosaic in order to find a reliable, long-lasting method of conservation. Stressing the importance of using a common language, Hande Kökten outlines the criteria to be used when creating the database of the condition of Turkish mosaics, dividing them into three main categories: mosaics in situ, exhibited in museums, and those to be lifted and stored. The different methods of exhibiting the Zeugma mosaics in the Gaziantep Museum are explained by Celal Küçük. Y. Selçuk Şener sounds a cautionary note in his review of conserved mosaics from various sites throughout Turkey, emphasising that approaches to conservation that are thought appropriate at the time might later prove to be deleterious. Mine Yar's paper ends the restoration section by discussing the Gaziantep Mosaic School within the context of increasing the region's tourism potential.

The section devoted to modern mosaics opens with a paper by Asker Ali Abiyev, Rifat Ergeç and Münteha Şahan in which mathematical methods are used to analyse geometric designs. This is followed by a description of ethnomathematics by Meltem Ceylan Alibeyoğlu and Yelda Şişman Gökalp. This discipline examines the relation between mathematics and culture. It is being applied to the Zeugma mosaics to help school pupils with their studies and to give them an understanding of their cultural heritage. Gülten Akyan adopts a philosophical approach in a paper entitled 'Being a Patented Country in Mosaic'.

Mosaic artist Elaine M. Goodwin discusses how a profound understanding of the Roman use of materials can inspire contemporary artists. Ayşegül Güvenir compares the work of two modern masters, the Russian artist Boris Anrep who worked in London, and the Turkish artist Bedri Rahmi Eyüboğlu who worked in Istanbul. Luciana Notturni explains how artists who have a deep knowledge of ancient mosaic technique can go on to break the rules and open themselves to fresh artistic expression. Finally, Hakan Pehlivan outlines a project by pupils to create mosaic panels for their school, decorating them with images of wildlife that the pupils had seen in Roman mosaics.

All too often, mosaic studies focus either on scholarly evaluation of the figures and patterns on the pavements or on their conservation. It is particularly admirable that these volumes, as did the original symposia, bring together both

aspects. Indeed, they go further, for they contain thoughtful critiques of how to record and present information in corpora, how best to display mosaics to the public in museums, and how mosaics can be used in tourism and education as well as being a vibrant and enduring medium for modern art.

These two volumes are ambitious in their attempt to communicate with a multilingual audience, and it has been a wise decision to use a large number of illustrations. Even without reading the text, there is much to enjoy in the pictures of new discoveries and to appreciate in the photographs showing the mosaics as they were in situ and as they now are in museums. It is unlikely that many readers will be fluent in both Turkish and English, but the spread of papers between the two languages ensures a good balance. This reviewer is not qualified to comment on the Turkish abstracts of the English-language papers, but the information contained in the English abstracts of the Turkish papers varies greatly in its usefulness, as does the clarity of expression. But the achievement in making little-known or newly-discovered Turkish mosaics available to a wide readership and in bridging many gaps – between ancient and modern mosaics, archaeology and conservation, professionals and enthusiasts – outweighs the difficulties inherent in a project such as this. This new series represents a significant contribution to mosaic studies and deserves to be warmly welcomed.

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Guidelines for Authors

This journal is going to be published two volumes annually, henceforth. The articles going to be sent must be written according to these guidelines. Thank you for your involvement and attention.

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The Editor-in-Chief and the Editorial Board are in charge of the scientific content and other editorial matters relating to the journal. The JMR is intended to be read by archaeologists, classicists, historians, epigraphers, scientists, heritage management specialists, restorers, conservators and others concerned with mosaics found around the world. In addition to analyses of archaeological data from excavations, surveys, and laboratory research, the JMR publishes technical and methodological studies of general significance and reviews articles that appeal to a wide professional readership. The JMR also publishes book reviews, brief articles, etc.

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The manuscripts can be written in English, German or French. Two short abstracts (in English and Turkish) must identify the site or culture concerned, its time period and location, and summarize the thesis and conclusions of the article. The abstract must be capable of standing alone and so may contain no text or figure references, no bibliographic citations, and no footnotes. If there must be a reference to another publication, the complete citation must appear in the abstract.

Six key words must be provided under the line of the abstract. Keywords should be given in both languages (English and Turkish) if the article was not written in English. All papers will be subject to a refereeing process, and may be discussed at meetings of Editorial Board. Detailed comments from referees are normally forwarded to the author, anonymously, by the Editor and if necessary, the authors may be invited to revise their manuscripts.

WRITING STANDARTS

The manuscripts should be typed on one side of their pages in double spacing. The title page of the paper should contain the title, the author(s) name, the keywords, an abstract and the author(s) address(es) in a footnote. Manuscripts should not exceed 30 pages of text and 15 pages of illustrations and tables in the research articles. The text must be in a 12-point typeface of the Times font family and double-spaced throughout, from the first line of the title through to the last line of the figure captions. Margins on both sides and at the top and bottom of each page should measure at least 3 cm.

Footnotes must be at the bottom of the page. They have to be written single-spaced and 10 points in font family Times.

The digital text should be in a format that can be processed in Microsoft Word. Figures for review purposes should be provided as tiff files at a resolution sufficient to retain the information in the illustration: 300 dpi for photographs and 600 dpi for line art is usually suitable. The names for the figure files should begin with the authors last name, e.g., Akurgal_01.tiff, Akurgal_02.tiff, Akurgal_03.tiff, etc.

The texts should be sent in a CD with a printed copy of the original text.

Dates before Christ (also ''before the common era'') should be written as ''B.C.'' following the actual year (e.g., 255 B.C.). Historical dates after Christ (in the Common Era) should be written with ''A.D.'' preceding the year (e.g., A.D. 1071); alternatively write ''7th century A.D.''

Use abbreviations for dimensions, distances, weights, and measures but not with general statements such as "a few meters above the floodplain." Examples of abbreviations are "7 m", "0.3 m", "5 cu m", "and 70 m asl , 300 km , 8 sq km , 1 sq m, 500 g". If multiple dimensions are given, write "15 × 30 m." Write "D" for "diameter" in parentheses (D. 24 cm). Do the same for "L", "W" etc.

References and Citations

The bibliography must contain an entry for each work cited in the text and only works cited in the text are to appear in the bibliography.

A reference within the text takes the form of a parenthetical citation. For example, "(Dunbabin 2002: 181-183)". All quotations must have specific page citations.

The use of "et al." is restricted to text citations of works for which there are more than three authors. Otherwise, all authors must be listed in the bibliographic entry "(Akurgal et al. 1984: 80)".

An example of a text reference to a figure or table in another published work is "(Akurgal 1996: fig. 5, table 7)." When referring to figures and tables in the present manuscript, use "Figure" and "Table" in the text and captions; in parentheses use "(Fig. 3)" and "(Table 1)." For figures with separate parts, use lower case letters in the text and upper case letters when the reference is enclosed in parentheses. For example, "Figure 7a" "(Fig. 10A)."

If a manuscript has been accepted for publication, the text citation is "(Jobst in press)." The bibliographic entry should put "in press" where the year would normally appear and name the publisher.

References in the text to reprints of older works should be cited in this manner: "(Vitruvius 1964 [27 B.C.]: 381)."

Full citations, including the names of all of the authors, complete titles, and page numbers for articles or chapters, are to appear in a bibliography at the end of the text, alphabetized by the first author's last name. Include publishers and place of publication for books and monographs. Authors' names should be given as they appear on the work being cited; avoid reducing first names to initials. The bibliography should be typed as in the following examples, but not double-spaced.

Article

Barringer, Judith M. 1991 "Europa and the Nereids: Wedding or Funeral?, American Journal of Archaeology 95: 657-667.

Book

Dunbabin, Katherine M.D. 1999 Mosaics of the Greek and Roman World, Cambridge: Cambridge University Press.

Unpublished Dissertation or Thesis

DePuma, Richard 1969 "The Roman Fish Mosaic", unpublished Ph.D. dissertation, Bryn Mawr College, Pennsylvania

Published Dissertation or Thesis

Reitz, Elizabeth J. 1979 Spanish and British Subsistence Strategies at St. Augustine, Florida, and Frederica, Georgia, between 1563--1783. Ph.D. dissertation, University of Florida, Gainesville. Ann Arbor: University Microfilms.

Monograph in a Series

Jobst, Werner 1978 Römische Mosaiken aus Ephesos I, Die Hanghäusern des Embolos. Corpus der antiken Mosaiken in der Türkei I. Forschungen in Ephesos 8, 1, Vienna.

Article in an Edited Book

Abadie-Reynal, Catherina 2006 "Roman Domestic Architecture at Zeugma," in R. Ergeç, ed., International Symposium on Zeugma: From Past to Future. Gaziantep: Gaziantep University Press, 1-6.

Work Accepted for Publication

Deck, Daniel in press "The Restless Grass," Llano Estacado Studies.

Ancient Works

Livy The Early History of Rome. Aubrey de Sélincourt, trans. Harmondsworth, U.K.: Penguin Books 1960.

Reprints

Cobo, Bernabe 1964 Historia del Nuevo Mundo. (Originally published 1653.) Biblioteca de los Autores Españoles, vols. 91, 92. Madrid: Ediciones Atlas.

Figures and Tables

Figures

1. The word "Figure" is used to refer to all line drawings, photographs, maps, charts, and graphs that accompany an article. Every illustration is to be given a figure number. Every figure must be referred to in the text, and initial references to them must be in numerical sequence ("1, 2, 3," not "1, 3, 2").

2. If a map is necessary, Figure 1 should be a map locating the site or study area within its wider geographical context. The JMR has an international readership that needs to be kept in mind when designing Figure 1. Field reports should include at least one photograph that depicts the terrain and environment of the site or study area.

3. A simple graphic scale, when necessary, should appear in the image area of the figures; do not give scales such as "3×" or "1:50.000" in the captions. Should a figure showing artifacts lack a scale in the photograph, writing "The pot on the left is 21 cm tall" in the caption is fine.

4. The list of captions should be typed in upper and lower case letters, double-spaced, all lines justified left, and the word "Figure" should be the first word in each caption. For example,

Figure 1. Map of the Weicker site and environs. Inset shows the location of the site in NW Mexico. Map by Patricia Parker.

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5. All drawings and photographs will be returned.

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2. For conventional photographs on film, prints made from the negatives should be provided, especially in the case of slides. Please do not submit slides or digitized versions of conventional photographs. Digital photographs should be taken at high resolution and saved in tiff-format. The JMR does not accept jpeg-files which is a file format designed for monitor display, not for print. Upon acceptance of the article for publication, digital photographs should be provided as a tiff or as a Photoshop application file, at 300 dpi.

3. Hand-drawn (pen and ink) line art prepared to professional standards is welcome and the original art should be provided. Please do not provide scans of line art; the pre-press requirements of our printer are rather stringent.

Line drawings prepared digitally must use a vector application such as Illustrator or Freehand, and not a bitmap program such as Photoshop or Surfer. Upon acceptance of your article, submit both the application file (unflattened, Illustrator or Freehand) and an unflattened eps file with all font information embedded. Our experience with pdf-files prepared by contributors has been disappointing and we suggest avoiding that file format. Lettering on line art should be of a size to allow reasonable reduction; the JMR reproduces letters no smaller than 1,5 mm in reduction.

Tables

1. Tabular material is time-consuming to typeset, so authors should make certain that tables are essential for their argument. Every table must be referred to in the text, in numerical sequence. Chronological charts, unless they are very simple, seldom work well as tables and should be prepared as figures with a vector application.

2. Tables are to be numbered separately from the figures. Table captions should be typed double-spaced, flush left, in upper and lower case letters, and appear at the top of the table.

3. All table columns must have headings with the first letter capitalized.

4. Footnotes in tables should avoid the use of numerals or letters as superscript. Instead, use the following sequence: asterisk, dagger, double-dagger, section mark, two asterisks, two daggers, etc.

5. When designing tables, authors should organize the rows and columns in ways that help the reader understand the data.

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2. Books being reviewed should be cited in the manner of the examples given below, followed by the reviewer's name and full mailing address.

Mosaics of the Greek and Roman World,

Katherine M.D. Dunbabin, 357 pages, 318 figures, 8 tables, 3 plates, 10 appendices, bibliography, index. Cambridge University Press, 2002. $40.50 paper. ISBN0-521-00230-3.

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XITH INTERNATIONAL AIEMA MOSAIC SYMPOSIUM

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Mosaics of Turkey and Parallel Developments in the Rest of the Ancient and Medieval World: Questions of Iconography, Style and Technique, as well as New Discoveries, from the Beginning of Mosaic until the Late Byzantine Era

T.C.
KÜLTÜR VE TURİZM
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Zodiac Mosaic from Tophane - Bursa, Türkiye. The central panel was stolen.