An Umayyad period magical amulet from a domestic context in Jerash, Jordan

John Møller Larsen, Achim Lichtenberger, Rubina Raja and Richard L. Gordon
Introduction

1 Jerash, ancient Gerasa, a multi-period site in northern Jordan, has been the focus of much research over the last century (fig. 1). From the 1920s, when large-scale excavations were carried out by Yale University, consisting of teams also involving British archaeologists, until today the site has undergone intensive study of its urban history in several periods. The development of the site in more recent times when a modern settlement began to expand on the eastern side of the Wadi Jerash, the ancient Chrysorrhoas (the Golden River), has meant that archaeological exploration is now focused almost exclusively on the western side of the wadi, where the most monumental complexes dating to the Roman period are located. The site flourished from the 1st cent. CE into the early Islamic period. Although the earthquake of 749 CE devastated large parts of the city, some evidence has recently been found for a degree of continuation into the Abbasid period, but substantial archaeological evidence only begins to occur again in the Ayyubid-Mamluk period, when several housing complexes were constructed in different parts of the city.
Since 2011 the Danish-German Northwest Quarter Project has been exploring the highest area within the city walls (fig. 2), which until then had remained largely unexplored. This area of approx. four hectares is located behind the Roman period Artemision on a hill overlooking the city. The area is densely covered with structures, which according to the examinations and excavations undertaken until now point to a surge in activity in the early third cent. CE and continuing into Late Antiquity and the Umayyad period. So far no traces of an Abbasid period settlement in the Northwest Quarter have been found, and it is only in the Ayyubid-Mamluk period that substantial archaeological evidence in the form of buildings and pottery re-appears.
Since 2014 the Danish-German Northwest Quarter Project has been exploring the so-called East Terrace, which is located on the easternmost edge of the hill prominently overlooking the Artemision. During the 2014 campaign parts of a private house (trench K) on the East Terrace of the Northwest Quarter in Jerash were excavated (fig. 3). The structures on the East Terrace were heavily destroyed by the earthquake and the area is densely covered with rubble, which makes excavation of the area complicated. However, this also means that the area was sealed and that the archaeological contexts encountered during the excavation have probably been left undisturbed since the mid-8th cent. CE, thus presenting unique situations rarely encountered on sites with a long and continuous settlement history. C\textsubscript{14} dating of a number of objects from the complex excavated in 2014 showed consistent mid-8th cent. CE dates. These were supported by the find of a coin hoard (located in evidence 23, fig. 3), which had been wrapped in textile or lying in a purse, in the complex. Although the latest coins from the hoard belong to the reign of ʿAbd al-Malik (685–705 CE / AH 65–86) the last coins in the associated destruction fill of the house can be dated to before 750 CE (two post-reform Umayyad coins). Furthermore the latest ceramics from the complex also consistently show 8th cent. CE shapes and forms.
The complex excavated was a private house of two storeys. On the ground floor in the westernmost part of the trench a kitchen with two hearths was located, as well as a number of other kitchen-installations and utensils. In the eastern part of the trench a forecourt with stairs leading to an upper floor was located, and a stone slab covered water-channel cut in bedrock was situated on the easternmost fringe of the trench. The upper storey had fallen onto the ground floor during the earthquake of 749 CE. It was in the find-rich debris stemming from the upper floor that the encased lamella was found.

The lamella and its case

The find consisted of two parts: a container and a lamella which was placed inside the container (fig. 4-5). During conservation the metal strip lamella was removed from the container. However, the lamella was too fragile to be unfolded manually without causing extensive damage to the metal, so it was decided to submit the lamella to computed tomography followed by an attempt to ‘unroll’ the object digitally.
Figure 4.

The container while the lamella was still inside
© The Danish-German Northwest Quarter Project

Figure 5.

The container and the lamella separated after conservation
© The Danish-German Northwest Quarter Project
The capsule is 50 mm wide with a diameter of 17 mm; the lead itself is 1 mm thick. No smithing lines were visible, but they may have been obscured by corrosion and mineralization on the exposed surfaces. The capsule was somewhat deformed, with a fissure running down its length and several smaller fractures, as well as holes where fragments of the metal had broken off. There were clear traces of imprints from textile fibres indicating that the container had been wrapped in cloth (fig. 6).

Figure 6.

Close-up of the container showing the traces of textile fibres
© The Danish-German Northwest Quarter Project

The rolled silver lamella (ca 0.15 mm thick and 42 mm long [fig. 5, 7]; diam. 8 mm) was extremely finely worked. The metal sheet has a calculated length of 9.5 cm. It was corroded, mineralized on the surface and small fragments from the edges were missing. When the lamella was removed from the container, it was clear that it was inscribed with letters of a Semitic character. The letters on the lamella were incised with a fine stylus with a rounded tip. The letter size can be exemplified by the initial N-shaped letter in line 6, which is approx. 3 x 5 mm (fig. 10). The lamella was folded and rolled with the front side of the text to the inside.
The container and the lamella were subjected to metallurgical analysis, which showed that the container was made of lead, possibly with some bronze decoration. The lamella on the other hand consists of almost pure silver mixed with a trace of gold.

The technique applied in the current case in order to digitally unfold the lamella was a combination of computed tomography and general-purpose industrial imaging software for voxel analysis (fig. 8-9). Such techniques have in recent years been applied with good results to ancient carbonized texts from Herculaneum in the bay of Naples. However, the difference between the text-carriers in the two cases (papyri versus metal) as well as the use of different writing techniques (ink versus incision) raises different technical problems, and other solutions were needed for our text.
The results of the digital unfolding were satisfying and successful, but it was a time-consuming process involving much manual processing. The lamella yielded 17 lines of text (fig. 10-11). However, the interpretation of the text remains unclear. Nonetheless the find remains extremely significant, since it gives insight into the continued practice of producing and using protective amulets, which was an important tradition in the Semitic as well as the Greco-Roman cultural spheres.
Figure 10.

Lines 1-8 from the silver lamella. Shown are the back sides, mirrored. "a" and "b" represent upper and lower parts of a line.

© The Danish-German Northwest Quarter Project
The letters employed on the metal sheet are not readily identifiable. It is immediately clear that two different scripts were employed. In line 1 the seven letters to the left stand out, since none is ligatured, and their appearance is different from most of the remaining text. In other lines there are a few further individual letters of a similar type, which we return to later.

The letters to the right in line 1 and most of the writing in lines 2-16 and perhaps also line 17 clearly belong to a cursive, ligatured script. Of course, the archaeological dating of the destruction of the house in which the lamella was discovered (mid-8th cent. CE) only provides a terminus ante quem for the production of the object, but since the house was a private dwelling, it may not be unreasonable to suggest a maximum age of one hundred years for the object, which largely places it in the Umayyad period. In theory the lamella could have been brought to Jerash from a different linguistic and cultural context. However, it is safe to interpret the lamella as an amulet, and once the lamella was placed in its metal container, it had no aesthetic value. Its value was personal, and it is difficult to see that it would have been ‘imported’ to Jerash unless it was brought there by its owner. Accordingly, if we assume that it was produced locally at some point during the Umayyad period, the number of possible identifications is greatly reduced. For instance, we can leave out the Nabataean and Palmyrene scripts, which had gone out of use centuries earlier. Mandaic script, which is cursive, can be found in this period, for
example on incantation bowls and metal amulets, but they are found in Mesopotamia, so
that we need not entertain this possibility here. 
Outside the Semitic script families the
most obvious candidate would be cursive Greek, but this possibility can be dismissed
when we look at the overall duc tus of the script. The main forces driving the development
of cursive scripts are ease and speed of writing, and the many oblique or curved strokes ( e.g. in line 6) would only be ‘natural’ if written downwards to the left in a script running
from right to left.

This leads us first to the Aramaic dialects written in Semitic scripts. Samaritan Aramaic
(an unlikely candidate in the first place) was written in a developed form of the (non-
Aramaic) ‘Paleo-Hebrew’ script; it was not ligatured and can thus be disregarded. The two
other major Aramaic dialects in use in the wider region of Palestine in this period were
written in Aramaic scripts. 
Jewish Palestinian Aramaic was written in the Jewish
(‘square Hebrew’) script, but it had not developed any systematic ligaturing either.
Christian Palestinian Aramaic (Melkite Aramaic), however, used a script which is clearly
derived from the Syriac Estrangela script but developed its own duc tus and certain
peculiarities. Epigraphically this script is attested at several locations including Jerash
and Khirbet el-Samra (about 30 km west of Jerash). 
This is a ligatured script, and for the
sake of argument we might consider both this western, Christian Palestinian (Melkite)
script and the eastern, Syriac forms traditionally termed Estrangela, Serto and Nestorian,
which are all closely related and ligatured scripts. However, it is only possible to
identify very few similarities between letter forms in these scripts and that of the lamella
under scrutiny. In the Christian Palestinian script the letter ḥēṯ often has the shape of a
Latin N; such a form is found in lines 5 and 6 of the lamella. 

The script is unvocalized and without diacritical points; the first trait is quite common,
while the second is not uncommon in amulets. 

A recurrent feature in the lamella script is letters ending in (or consisting of) a more
or less pronounced curve downwards to the left. This trait is rare in the Syriac scripts where
it is really only characteristic of the letter šāḏē. However, in another member of the
Aramaic script family, Arabic, this trait is very frequent, occuring in (some forms of) the
letters ẓā/wā, ẓā/nūn, ẓād/dād, qāf, lām, nūn, wāw and yā’. We should try to pursue this
 possibility further.

The script is unvocalized and without diacritical points; the first trait is quite common,
while the second is not uncommon in amulets. 
We should begin by looking at those
passages that seem to be the most likely candidates for an Arabic interpretation. Line 6
begins with an N-shaped letter (fig. 10), possibly a magical sign as in lines 1 and 5 (these
will be discussed separately below). Following this we may read ʿaw or ʿall. If we read ʿaw,
the absence of diacritics gives us five possible interpretations: ʿaw/ʿayw/ʿayw/ʿayw/ʿaw.
If we read ʿaw, on the other hand could be the conditional particle law (“if”; it can also be used optatively: “if only”, “would”). However, in line 17 ʿaw are the last letters in the text, following the
‘trefoil’ shape, and it would of course be odd to end a text with such a particle, unless it
was used as an interjection of sorts. Alternatively the two letters in line 17 could be seen
as a separate magical sign similar to the one in line 1. It is noteworthy that this combination is also found in lines 8-11 and perhaps lines 5 and 7. In line 6 the top of the following letters go slightly around the bend in the sheet. When this part is viewed from a different angle in the computer program, it becomes clear that it is possible to read this either as an N-shaped sign with a long and curved left leg (and thus not as Arabic) or as where the first letter would have the same five possibilities as above, and the second letter could be read as rāʾ or ẓāy. The next letters could be read لَبَنِين (or لَبَنَة؟), but without diacritics the second letter has the same five possibilities as above, while the third letter again can be either rāʾ or ẓāy (a similar combination may be seen in line 16.) A possible reading could be ʿl-yara “and he shall see” with the so-called lām al-amr and jussive form of rāʾ. The following letter can be either rāʾ or ẓāy. Next, we could read an ʾālif, but the following sign is more difficult. It could possibly be read as a lām-ʾālif ligature, but then we cannot explain why the following rāʾ or ẓāy has a ligature. Finally, the sign to the left is difficult to interpret as Arabic, unless it is a poorly written lām-ʾālif ligature. In line 10 the initial letters may be read as لَبَنِين. If so, the following letter rāʾ or ẓāy merely touches the nūn and does not form a proper ligature. Following this we could read an ʾālif.

The next two letters are also difficult. The first letter could be a lām in its isolated form; it does not form a ligature to the second letter which could be rāʾ or ẓāy if it were not placed above the base line. The next could again be read as an N or as لَبَنِين. Following this we have the recurrent ʿalif (or ʾalif). Finally, to the left we probably have a magical sign. We should note that the initial five or six letters in line 11 are rather similar to the beginning of line 10. In line 14 the initial letter resembles a dāl, but since it is ligatured to the following, it could perhaps be seen as a ḥāʾ. A possible reading could then be حَلَارِيل (with the usual diacritical alternatives). If so, could -il be the simplified theophoric element ending an angelic name, just as Ġabrāʾil is interchangeable with Ġibrīl? Angelic names found in later Muslim amulets are by no means limited to those otherwise known from the Qurʾān and tradition but could, for instance, be formed according to certain numerical rules.  

This attempt to identify meaningful text(ual elements) has not been very promising in terms of decipherment. Moreover, much of the remaining text consists of more or less vertical strokes ligatured to each other. This could mean that the text employs proper Arabic letters but not in order to convey a meaning in a natural language. If so, we could speak of a pseudo-text or a ‘magical’ text consciously employing incomprehensible syllables, although we cannot exclude the possibility of a private language known only to the practitioner who prepared the text. The use of unintelligible ‘words’ and ‘names’ is quite frequent in magical texts. In line 1 of an amulet collected in Iran, for instance, we find the following: کَهْبَعْسُلْتُهْ لَحْجُمُلْسُمْحُ، beginning with the five mysterious letters of Sura 19:1 (kāf, ḥāʾ, yāʾ, ʿayn, sād) and continuing with 16 further and incomprehensible letters. Line 2 continues in a similar vein: کَهْبَعْسُلْتُهْ لَحْجُمُلْسُمْحُ, as do lines 3-4.

However, in some lines we also find forms that are decidedly not Arabic. In line 12, for instance, there is a letter consisting of an upper horizontal stroke continuing downwards at its left end; and towards the end of the same line another letter consists of a vertical stroke with a hook to the left at the top. Considering the length of the text, it is also notable that we certainly find no clear instances of the letters sād/dād/tā/zāʾ/ʿayn/gayn/ kāf/mim and ḥāʾ. The presence of ʿāṣm/ḥāʾ/ḥaʾ and ūnūn is doubtful as well. In view of these facts, the question arises whether the script in fact is pseudo-Arabic, i.e. mimicking parts of the graphical repertoire of Arabic script but not conveying a meaningful text,
and (in this case) occasionally employing letter forms that cannot even be interpreted as
Arabic. Research on pseudo-Arabic script has mostly dealt with specimens from Europe
and Byzantium, but the phenomenon is also widely found in the Muslim world.

Pseudo-script is also a well-known phenomenon in magical texts; for instance, it is found
on Arabic amulets, and we have numerous examples in the Aramaic incantation bowls.

As mentioned above, the text also contains a number of signs which clearly are neither
Arabic nor imitations of Arabic letters. Most of these occur in line 1, i.e. the seven signs to
the left. A few further signs are found at the beginning of lines 2, 5, and 6, and at the end
of line 10. Line 17 contains a conspicuous trefoil-like shape. It has not been possible to
assign any of these signs to a known alphabet. They are certainly neither Greek nor Latin.
Since we can take it for granted that the artefact is an amulet, and since the main text
seems to be in pseudo-script (characteristic of many magical texts), it is reasonable to
view them as magical signs (charaktêres). The use of magical signs was widespread in
Antiquity, and they are found in texts written on a multitude of media. In Greek, for
instance, we have many examples from papyri, from metal amulets, and from engraved
gems. We have examples on Aramaic amulet texts incised on metal sheets, and on
occasion, magical signs are also found on Aramaic incantation bowls. Frequently, such
signs are of the ‘ring-letter’ type (Brillenbuchstaben), signs characterized by the addition of
small rings or loops at the end of lines, but they can have numerous different forms, and
the signs here belong to the simpler, unadorned forms. The use of magical signs in
Antiquity greatly influenced the Jewish, Christian and Muslim magical traditions, but
there are no obvious clues to the religious affiliation of the owner of this amulet (unless
the ‘trefoil’ in line 17 could be seen as a Christian symbol).

However, while the amulet may be indecipherable, it still provides important information
on the cultural milieu in which it was produced. Through the Umayyad period the use of
Arabic became widespread, and earlier finds have also documented Arabic texts in the
early Islamic period in Jerash. For instance, two marble slabs discovered in 2007 with
Arabic texts written with a charcoal pen have been interpreted as merchants' records,
testifying to “the sophistication of commerce in the eighth cent., but also the common
use of Arabic (...) by this time in the market place”. The use of Arabic by both Christians
and Muslims has been documented on the so-called Jerash terracotta lamps which for a
brief period (723–750 CE according to the dated specimens) frequently show the name of
the potter inscribed in Arabic. The apparent use of a pseudo-version of the Arabic script
now documented shows that it was deemed suitable for magical purposes as well, but as
mentioned above, we cannot identify the religious affiliation of the amulet’s owner.

The use of pseudo-script and letter-like magical signs is important evidence for the value
and power written texts had for people in the ancient world, but it remains a question
how the use of pseudo-script arose. It has been suggested that it came about “as amulet-
makers copied exemplars that they did not understand. In some cases the maker, as well
the person purchasing the item, may have been virtually illiterate and unable to
understand the original inscription or recognize that the copy was meaningless”.
Therefore even if in the case of the Jerash lamella we cannot reconstruct a text from the
(pseudo-)script, it is an important contribution to the reconstruction of mentalities and
daily life in the ancient world. The application of the new technique on other texts
written on friable or brittle rolled or folded metal sheets that cannot be opened without
fear of destroying the text (such as poorly-preserved curse-tablets on lead) will provide
us with further glimpses into the mentalities of people in the ancient and medieval worlds. The use of such inscribed metal amulets in the eastern Mediterranean area can be traced continuously up to modern times, also in Jerash, though nowadays they are mainly written on paper.

**Conclusion**

The successful digital unrolling of the tightly-folded silver lamella is an important advance in technique, which may in the future also be applied to similar objects. Although the letters are clearly visible, a meaningful text could not be established, but the use of pseudo-script and charaktêres is not unusual on amulets. It is clear that once it had been inscribed, folded, rolled and placed in the container it was intended to protect the wearer from certain kinds of harm. Such amulets were not meant to be re-opened, so that the wearer was and remained ignorant of the precise text. It is plausible to suppose that the bestowal of the finished amulet was accompanied by some kind of ritual (of which we have no evidence). Since it was found in a sealed archaeological context, it may be assumed that it either was part of the personal belongings of (one of) the residents or was placed somewhere in the house for general protection.

The lamella attests to the power of writing in Late Antiquity and the Early Islamic period. It is clear that the practitioner who prepared the amulet and possibly also the purchaser had some idea of the general appearance of Arabic script but apparently no reading competence in Arabic. It is thus likely that it was produced by a person with a different Semitic or with a Greco-Roman background. An apparently meaningless text could be said to be in contrast to the valuable material of the lamella, which was silver with a trace of gold. This, however, can be compared to other contemporary phenomena such as Arab-Byzantine coinage, which also sometimes carries imitations of Greek letters. It is clear that script, medium (the coins) and material in such cases belonged together, even if the Greek script on the coins did not convey a meaningful text. The same goes for the amulet lamella with its illegible letters: The letters had purely symbolic value and were not intended to communicate textual information. The transmission, adaptation and appropriation of earlier traditions in new cultural and religious environments is an important cultural phenomenon. We may locate the silver lamella from Jerash on the cusp of the transition from Greek to Arabic as the dominant language: the very attempt to write a protective amulet in (pseudo-)Arabic, underlines that Arabic was coming to appear as an authoritative religious language worth imitating even if one did not command the language. The lamella was produced in a situation of transformation between Byzantine and Early Islamic culture, and it is thus an impressive witness to the cultural and religious dynamics of this period.

**Appendix : Some unintelligible Greek phylacteries on precious metal in the Graeco-Egyptian tradition**

In the Graeco-Egyptian tradition phylacteries are texts written out by a practitioner with the aim of protecting a client from specific types of harm. Except for texts against hail and other agrarian ills, which were typically buried on the farmer’s land, the great majority of such phylacteries must always have been written on papyrus or other
perishable materials, such as animal-skin/parchment. Those written on precious sheet-metal, like the Jerash lamella, were relatively expensive and thus restricted to the few who could afford them.

Kotansky’s commented edition of these more expensive texts, published in 1994, contains 68 texts, 36 of which were found in Greek-speaking areas of the Empire, mainly Greater Syria and Greece. 22 of these are on silver foil, virtually all the remainder on gold. Since then at least 20 other examples have been published, a few in controlled excavation. Almost all, however, wherever found, are written in Greek. The great majority of them, as one would expect, date from between 2nd and 5th-6th cent. CE. About one third of Kotansky’s texts are fragmentary, abraded or frankly incompetent. Although one can find a variety of aims, even erotic and aggressive, in one case even an astrological scheme, the most typical purpose is medicinal/curative, including relief from migraine, epilepsy, tertian and quartan fevers, ophthalmic or gynaecological troubles, daemonic/demonic assault, anxieties or nightmares. We can be fairly sure that such an aim inspired the Jerash amulet even if the practitioner’s communicative strategy remained entirely implicit.

This strategy we may term ‘unrecuperability’. As pointed out above, two obvious possibilities are that the writer was illiterate in Arabic, but knew something of the genre, or that he was using a pseudo-script as well as charaktêres. It seems however worth entertaining a slightly different possibility, namely the deliberate invention of unrecuperable ‘words’ as a means of claiming the authority to intervene in a specific situation. Such texts obey some of the rules in writing natural languages, such as acceptance of paratactic/linear sequential succession of graphic marks, use of signs within a recognised system of writing, an implied (in this case, divine) reader capable of deciphering the signs, but not others, specifically the requirement to employ a shared lexis. A small number of late-Roman phylacteries on precious-metal lamellae have been published that choose precisely this option. The earliest of these (3rd cent. CE), on silver, was once in the Museo Kircheriano in Rome, and its provenance is unknown, but probably Italian. It is evidently an address to a divine power but consists entirely of two columns of letter-sequences, of which I cite those in the right-hand column (B):

Charaktêres
ευστεφσ charaktêres λεγε charaktêres
charaktêres ἑβρυωηουακτεινοβραωθθηνωρλαιψ
ψεμεσειλαμοειπροροκκλα
ερεννουμενεχαρνινχανερμανει
αερειναβιωβιωθχανουβηθραναερμανει
αερειναβιωβιωθχανουβηθραναερμανει
[–] σπροκλα

In this case, the deliberate intention of combining a suggestion of recuperability by including standard or conceivable Greek (λεγε, ακτεινο, του κοσμου, πυροβουλο-, αερει, αρνου) with recognisable voces magicae (which are, for practitioners of Graeco-Egyptian magic ‘standard semi-unrecuperables’) vies with the desire to imitate or evoke an exotic or even occult language full of consonantal collocations impossible in Greek, but nevertheless of high phonetic expressivity. The idea of a communicative system is retained yet simultaneously subverted—the paradox familiar from Dada—in the hope of conveying mastery of the ineffable. To convey this mastery, the writer was prepared to pay the price implicitly required, the virtually total abandonment of natural language.
Curiously enough, however, three of the relevant cases were found in the area of Roman Syria and date from the late-Roman period (late 3rd-5th cent. CE), which brings them somewhat closer to our Umayyad text. They may thus suggest the existence of a thin tradition in this area that valued the radical choice of total abandonment of natural language. Two of these, one from near Haifa, Israel and the other from Emesa (Homs), nevertheless employ ordering devices to convey the aim of amuletic protection. In the first, the initial 8 lines of text, beginning δ.ενια ραβουμα | ραβυαι ωθαι | ασλα ξανβαιν ..., each ‘word’ carefully separated from the previous one, is followed by a roughly-drawn ouroboros enclosing a columnar sequence of voces, four of which clearly begin with Ζ; the lower half of the snake is filled with traces of further letters. 50 The second, on a long thin strip of silver foil, divides its columnar sequences of individual ‘words’ into six clearly delineated ‘boxes’. The penultimate box also contains at least three charaktêres. Yet none of the ‘words’ bears any resemblance to standard divine names, and seem simply to be voces magicae, albeit without much similarity to those in the Graeco-Egyptian tradition; those in the first ‘box’ read: αγεοηλε | κωφαζε | βολκοσε | ναθμουθ | θειγος ευ | ταμηλσεφ | αστραχε | λαμπαρε | σκιοφωρφ | ηυκταζη | οκταζειν | αμφαυνε. 51 The familiarity shown here with Greek syllabic formation is obvious, and it too implies that a communicative intention lies behind the unrecuperable ‘words’. The final example, from a tomb in Heliopolis (Baʿalbek), of the same period, cannot be properly read because no modern photograph exists, but seems to consist entirely of unfamiliar voces distributed in ten lines, with the notion of communicative intent once again conveyed by the adherence to linear structure and the division of the text into groups of letters recalling words. 52

These four texts may provide a parallel for an amuletic text that deliberately decides to forego recuperability into a natural language in favour of a claim to mastery of ineffability. The communicative act that survives is thus the claim to special or higher knowledge. This leads on to a final point, namely that, although we may term such efforts ‘magic’, they are better understood as claims by ritual specialists, some inside, some outside the ranks of denominated ‘priests’, to be able, through their access to restricted knowledge, to open up the possibility of direct contact with the other world in cases of urgency, desperation or crisis, subjectively defined by clients. Written amulets of this type are thus always to be seen in implicit competition with other types of symbolic aid available in a given social order, just as the knowledge required to create them is always contested and ‘precarious’. 53

The authors would like to thank the following funding bodies for generously supporting our research: the Carlsberg Foundation, The Danish National Research Foundation (DNRF 119), Deutsche Forschungsgemeinschaft (DFG) and H. P. Hjerl Hansen Mindefondet for Dansk Palestinaforskning. Thanks also go to the Danish-German Jerash Northwest Quarter Project team. We would like to thank the Department of Antiquities (DoA) in Amman and in Jerash without whose continuous support our work could not be carried out. The authors would also like to thank the following people for their comments and input on the inscribed text: Gideon Bohak, John Healey, Ahmad al-Jallad, Christa Müller-Kessler and Shaul Shaked. We also thank Henry Weber and Sandra Engels for dedicating time to training John Møller Larsen in using the computer software as well as Henry Weber for offering input on issues concerning the software and its application. Thanks also go to Gry Barfod (Aarhus University) and Sarah Roeske (UCDavis) for help with electron microprobe analysis and interpretation of the results and to Greg Baxter at UCDavis thin section lab. Further help and advice was given by Philip Ebeling, Helmut Franke, Markus Mayerhöfer, Dirk Neuber, Uwe Peltz and Christof Reinhart.

ALBUM (S.) & GOODWIN (T.) 2002 Syllsloe of Islamic Coins in the Ashmolean. I. The pre-reform coinage of the early Islamic period, Londres.


BAREDO (G. H.), LARSEN (J. M.), LICHTENBERGER (A.) & RAJA (R.) 2015 « Revealing text in a complexly rolled silver scroll from Jerash with computed tomography and advanced imaging software », Scientific Reports 5:17765, 2015 (http://www.nature.com/articles/srep17765 [03/05/2016]).


BEVILACQUA (G.) et al. 2010 Scrittura e magia. Un repertorio di oggetti iscritti della magia greco-romana (Opuscula Epigraphica 12), Rome.


GZELLA (H.) 2015 A cultural history of Aramaic: from the beginnings to the advent of Islam, Leyde/ Boston.


KOTANSKY (R. D.) 1994 Greek Magical Amulets: The Inscribed Gold, Silver, Copper, and Bronze Lamellae, 1: Published Texts Of Known Provenance. Text and Commentary (Papyrologica Coloniensia 22.1), Opladen.


LICHTENBERGER (A.) & RAJA (R.) 2015b « A Hoard of Byzantine and Arab-Byzantine Coins from Jerash », NumChron 175, p. 299-308.


MOCCELLA (V.), BRUN (E.), FERRERO (C.) & DELATTRE (D.) 2015 « Revealing letters in rolled Herculaneum papyri by X-ray phase-contrast imaging », Nature Communications 6:5895. doi: 10.1038/ncomms6895 [04/05/2016].


MULSOW (M.) 2012 Prekäres Wissen: Eine andere Ideengeschichte der frühen Neuzeit, Francfort.

NAVEH (J.) & SHAKED (S.) 1987 Amulets and magic bowls: Aramaic incantations of Late Antiquity, Jérusalem, 2nde éd.

NAVEH (J.) & SHAKED (S.) 1993 Magic Spells and Formulae: Aramaic Incantations of Late Antiquity, Jérusalem.


PORTER (V.) 2011 Arabic and Persian Seals and Amulets in the British Museum, Londres.


SCHAEFER (K. R.) 2006 Enigmatic charms. Medieval Arabic Block Printed Amulets in American and European Libraries and Museums (HdO Section 1, The Near and Middle East 82), Leyde/Boston.


WINKLER (H. A.) 1930 Siegel und Charaktere in der muhammedanischen Zauberei, Berlin.


NOTES

1. For introductory literature on Gerasa and further references see: KRAELING 1938; ZAYADINE 1986; LICHTENBERGER 2003, p. 191-243; KENNEDY 2007; RAJA 2012, p. 137-189. ANDRADE 2013, p. 160-169 presents the most recent summary of the history of the city. Also see the collection of articles in Syria 66, 1989, p. 1-261, which relate to the history and archaeology of Gerasa. See the recent article by LICHTENBERGER & RAJA 2015a for the first three campaigns in Jerash by the Danish-German Northwest Quarter Project and further considerations as well as new considerations on the implications of the results for the overall development of Gerasa in the Roman period.


3. WALMSLEY 2008 and WALMSLEY 2011 as well as WALMSLEY et al. 2008 for considerations on the Abbasid material.


5. CLARKE & BOWSHER 1986 for a short contribution on soundings in the Northwest Quarter, which yielded evidence from the 3rd cent. CE.
6. LICHTENBERGER & RAJA 2012 and KALAITZOGLOU, KNIESS, LICHTENBERGER et al. 2012 for publications on the first season of examinations undertaken by the Danish-German Northwest Quarter Project.

7. LICHTENBERGER & RAJA 2015a.


10. LICHTENBERGER & RAJA 2015b.

11. The lamella and its case have the find number: J14_Kh_3_498a_M113.

12. The technical aspects of this process and the analysis of the metals are described in detail by BARFOD, LARSEN, LICHTENBERGER & RAJA 2015.


15. Anyhow, it is not possible to identify the lamella script with Mandaic, personal communication from Christa Müller-Kessler.

16. GZELLA 2015, p. 281-329 provides a useful overview of Aramaic in this region in Late Antiquity.

17. An overview of the locations of the epigraphic material is found in DESREUMAUX 1998a, p. 10-11. Discussion and analysis of the script are found in DESREUMAUX 1998a, p. 8-9 and 1998b.

18. Contrary to a widespread earlier view in research, the more cursive serto script was already present alongside Estrangela in the first centuries CE and not a late derivation of Estrangela, see HEALEY 2000.


20. For examples of amulets without diacritics, see for instance SAVAGE-SMITH 1997a, no. 58 (p. 132), 70-72 (p. 136-137). There are also several examples of printed amulets without diacritics in SCHAEFER 2006.


22. KALUS 1981, no. 2.10 (p. 98 and pl. 16).

23. WOLTERING 2015.


25. SAVAGE-SMITH 1997a notes that “Pseudo-Kufic writing was (...) frequently employed for talismanic decoration” (p. 134) and reproduces a specimen: no. 60 (p. 132); several specimens of such undeciphered Kufic can be seen in PORTER 2011, p. 177-180. Pseudo-script is also found in KALUS 1981, no. 1.36 (p. 89-90 and pl. 14 —however, the author notes that undoubtedly it is of recent, and perhaps Western, production); KALUS 1986, no. 1.88 (p. 91).

26. SEGAL 2000, no. 121Ps-142Ps (p. 150 and Pl. 138-159); MÜLLER-KESSLER 2005, p. 5-6, 244-257.

28. Naveh & Shaked 1987, no. 2 (p. 44-49 and pl. 2), 4 (p. 54-60 and pl. 4), 5 (p. 60-63), 8 (p. 78-81 and pl. 7), 14 (p. 101-105 and pl. 12); Naveh & Shaked 1993, no. 18 (p. 57-60 and pl. 4), 19 (p. 60-66 and pl. 6-7), 20 (p. 67-68 and pl. 5a), 21 (p. 68-72 and pl. 8), 25 (p. 85-87 and pl. 11), 27 (p. 91-95 and pl. 13), 30 (p. 101-105 and pl. 16), 31 (p. 105-107 and pl. 17), 32 (p. 107-109 and pl. 18).


34. Savage-Smith 1997b, p. 60.

35. See the study on such modern amulets from Jerash: Mershen 1983.

36. See the introductions by Foss 2008 and Album & Goodwin 2002.

37. By Richard L. Gordon


39. Fernández Nieto 2010. These are written on bronze or stone.

40. I count about 35 'activated' amulets on papyrus in PGMag and SupplMag, discounting all the prescriptions for phylacteries in the receptaries and the Christian examples. A Jewish amulet in the Cairo Geniza to be written on deer-skin: Bohak 2008, p. 236.

41. On these texts on precious or semi-precious (i.e. copper, bronze) metal, see briefly Bevilacqua et al. 2010, p. 23-32. The Graeco-Egyptian magical papyri rarely prescribe the use of lamellae of gold or silver, but see e.g. PGMag III 297 (divination); X 26 (to allay anger).

42. Kotansky 1994. He had apparently intended to collect analogous texts on other Textträger, such as tin/pewter, lead, bone, ostraka or wood, but this volume has never appeared. In the relatively few cases where the provenience is known, they were found in tombs, i.e. had been buried with the deceased: Gelzer, Lurje & Schäublin 1999, p. 5.

(Gnathia, Campania, 2 gold lamellae, 4th cent. CE); ibid. 2065 (‘Christian’, tin (?), with ouroboros, late Roman); AE 2008: 778 (Oxford, gold lamella rolled, unusual amulet for a safe birth, 250-350 CE); ibid. 2011: 265-266 (S. Maria Capua Vetere, necropolis, 2 silver amulets against afflictions, late 4th-5th cent. CE); Britannia 24 (2013) p. 390-391 no. 21 = Tomlin 2014 (from the Thames in the City of London, pewter, partly metrical, against plague [λυμοῦ, l. 5], probably Antonine); ibid. 46 (2015) p. 406 no. 42 (City of London, pewter, charaktêres only). Faraone & Kotansky 1988, p. 257 n. 2 mention a cache of 19 unpublished silver lamellae (once) owned by the J. P. Getty Museum in Pacific Palisades, possibly from Turkey.


45. See the table in Kotansky 1994, xviii. He dates nos. 39, 28, 36 and 51 to between 1st cent. BC and 1st cent. CE. To my mind the strongest case for an early date is no. 36 (Amisus, Pontus, silver), intended to avert a lawsuit, which combines Egyptian and Jewish names of power.

46. Erotic: AE 2010: 597; to aid conception: Kotansky 1994, no. 61; aggressive: nos. 24, 62; astrological: Kotansky 1994, no. 54. Nos. 40, 58 and 60 are for favour and victory (no. 58 in an important hearing before the governor of Arabia). PGrMag IV 2154-55 enjoins hanging an iron lamella round a dying man as an amulet to force him to speak the truth. Kotansky 1994, no. 6 = AE 2002: 1063 (Badenweiler) seems to have been intended to protect three slaves threatened with punishment, e.g. interrogation by the family court, whipping or even torture (Kotansky, however, suggests a trial-context).

47. Charaktêres reject the limitation of script to a fixed set of forms but claim to retain a communicative intention, in that they forge a direct linguistic link with the Other World.


49. Bevilacqua 2003, p. 121-123 does what she can with these allusions/evocations. I am less convinced by her wish to see a divinatory purpose here, connected to Hermes (p. 123-125).

50. Kotansky 1994, no. 55 (gold, 3rd-4th cent. CE), to which he gives the title ‘Magical Logos’.


52. Kotansky 1994, no. 50 (gold), with a tentative reading beginning: αβη…ιυροι…βερβερ εχ βε…βιορβ…θε…η.....

ABSTRACTS

During the 2014 campaign of the Danish-German Northwest Quarter Project in Jerash a small metal capsule was found in a house destroyed by an earthquake in the mid-8th cent. CE. The capsule, which retained traces of textile fibres, was conserved and proved to contain a tightly-rolled strip of silver foil (lamella) which, on removal, turned out to be inscribed with letters of Semitic character. Since it could not be unfolded manually, it was submitted to computed tomography and ‘unfolded’ digitally by means of special software. This article presents the lamella and its capsule as well as the archaeological context, a private house sealed by an earthquake in the mid-8th cent. CE on the eastern terrace of the Northwest Quarter in Jerash. The lamella, which also contains a few charaktêres (magical signs), is interpreted as a magical amulet, which stands in a Semitic and Greco-Roman tradition but in this case surely stems from the Umayyad period.

Durant la campagne 2014 du projet dano-allemand « Quartier nord-ouest de Jérash », une petite capsule à lamelle de métal fut trouvée dans une maison détruite par un séisme au milieu du VIIIᵉ s. La capsule, qui conservait des traces de fibres textiles, était bien conservée et contenait une bande de feuille d’argent (lamelle) étroitement enroulée qui, extraite, se révéla porter des lettres d’allure sémitique. Comme elle ne pouvait pas être déroulée manuellement, elle fut soumise à une tomographie par ordinateur et « déroulée » numériquement grâce à un logiciel spécial. Cet article présente la lamelle et sa capsule ainsi que le contexte archéologique, une maison privée scellée par un séisme au milieu du VIIIᵉ s. sur la terrasse est du Quartier nord-ouest de Jérash. La lamelle, qui contient aussi quelques signes (des signes magiques), est interprétée comme une amulette s’inscrivant dans la tradition sémitique aussi bien que gréco-romaine mais qui, dans ce cas, appartient sûrement à la période omeyyade.

 خلال بعثة المشروع الدانماركي-الألماني عام 2014 في “الربع الشمالي-غربي من جرش”، عُثر على كبسولة صغيرة من صفيحة معدنية رقيقة داخل منزل ذُكر برزلال حصل في منتصف القرن الثاني للميلاد. الكبسولة التي احتفظت بها آثار نسيجية، كانت محفوظة جيداً واحتفظت بداخلها على شريط ملبس بشدة من زرقيق الفضّة “صفيحة”. وعند استخراجها كشفنا أنها مصنوعة بأحرف سامية، مما أنه لا يمكن أن تُعْتَبر بدويَّاً، لكنها تُ cháuُش بشكلٍ مبدِعٍ وْقائِلٍ رقمٍ من خلال برنامج خاص. هذا المقال يقدّم الصفيحة وكبسولتها بالإضافه إلى السياق الأثري، الذي وُجِّدت فيه، منزل خاص مسند بسبب الرمز الذي حصل في منتصف القرن الثاني للميلاد على الشريحة الشرقية من الربع الشمالي-غربي من جرش، الصفيحة التي احتفظت أيضاً ببعض إشارات (سحرية). فُسّرَت على أنها نمطية سحرية وردت في التقاليد السامية، كذلك النحوية الرومانية للكتب في هذه الحالة تتدفق بالتأكيد للفترة الأموية.
INDEX

Keywords: Jerash, early Islamic period, 749 ce earthquake, magical amulet, domestic context, pseudo-Arabic, digital readout, digital unfolding

Mots-clés: Jérash, débuts de l’islam, séisme de 749 apr. J.-C., amulette magique, habitat, pseudo-arabe, lecture numérique, déroulement numérique

AUTHORS

JOHN MØLLER LARSEN
Institute for Culture and Society, Aarhus University, Denmark

ACHIM LICHTENBERGER
Institut für Archäologische WissenschaftenRuhr-Universität Bochum, Germany

RUBINA RAJA
Classical Art and Archaeology

RICHARD L. GORDON
Erfurt University, Max Weber Center for Advanced Cultural and Social Studies, Germany