THE MERGER OF TWO CURRENCY ZONES IN EARLY ISLAM. THE BYZANTINE AND SASANIAN IMPACT ON THE CIRCULATION IN FORMER BYZANTINE SYRIA AND NORTHERN MESOPOTAMIA

By

STEFAN HEIDEMANN

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THE MERGER OF TWO CURRENCY ZONES IN EARLY ISLAM. THE BYZANTINE AND SASANIAN IMPACT ON THE CIRCULATION IN FORMER BYZANTINE SYRIA AND NORTHERN MESOPOTAMIA¹

By Stefan Heidemann

Friedrich-Schiller-Universität Jena

1 INTRODUCTION

The Islamic empire was founded and formed in the second half of the seventh century. The caliphate ruled over three different major political, cultural and economic spheres: the Visigothic, the Byzantine and the Sasanian one. The empire embraced at least three different currency zones, the western in North Africa and Spain, based on the late Roman tremissis, the Byzantine based on the gold solidus and the imperial standard copper coin, the follis, as well as the Sasanian based on the silver drahm.²

The Islamic conquest finally changed the region's political and monetary geography after the troubled decades of the Persian wars.³ For centuries, the Euphrates and the Tigris had served as border between the Hellenistic-Roman west and the Parthian-Sasanian east. The newly-established border at the Taurus Mountains set up a barrier between Syria and its traditional supply of coins, Byzantium. On the other hand, the conquest removed permanently the border with the former Sasanian empire. With the establishment of Damascus as capital, a steady influx of Sasanian silver coins into Syria was unleashed.⁴ Together with the consolidation of the empire, attempts at monetary reforms were made.

A brief glance at the coin types struck in the central areas of the empire shows the reform from pre-Islamic currencies to the Islamic coinage to be fairly clear-cut. After a brief period of experimentation in the year 77/696, ^cAbd al-Malik introduced the new, purely epigraphic, gold dīnār. In the following two years the first Islamic silver dirhams were put into circulation: a uniform coinage of fairly exact weight standard that circulated in the heartlands of the Islamic empire from North Africa to Transoxiana. But if one looks at coin hoards and archaeological finds, the picture turns out to be much more heterogeneous and varying from region to region.

How did the merger of these two pre-Islamic currencies—the Byzantine and the Sasanian—take place? How and in what stages were they adapted to the new political geography? The impact of both these pre-Islamic currencies on the early Islamic monetary system will be analysed. Both developed separately with little mutual interaction. The adaptation was different for each principal currency metal: gold, silver and copper. The region to be studied is the former Byzantine territories of the Islamic empire, sc. Syria and northern Mesopotamia.⁵ I will focus less on the succession of coin types, a topic that has been adequately studied by others.⁶ My main arguments will be drawn from coin hoards and archaeological finds.⁷

First, I will treat the Byzantine impact on circulation reflected in gold hoards of the seventh century with some remarks on the copper coinage. Then, I will turn to the new element in the Syrian circulation: the Sasanian coins as seen in silver hoards.

2 THE GOLD COINAGE

The coinage in Syria and northern Mesopotamia at the time of the Islamic conquest comprised the Byzantine copper follis and the Byzantine gold solidus, the last called *nomisma* in Greek papyri.⁸ Both were imperial coinages, struck mainly at the capital, Constantinople. In the period under consideration, no Byzantine coins were struck in Syria,⁹ and no Byzantine silver coinage was in circulation.

In Byzantine Syria, the gold solidi were the main means of payment for larger transactions and taxation. Taxes were levied in gold solidi, which were carried to the treasury in Constantinople.¹⁰ In order to control the quality of the tax-money, all coins were melted down to ingots. For government expenses the gold was reminted into new coins.¹¹ In order to maintain this fiscal circulation, the export of gold coins was prohibited from the late Roman period onwards.¹² Copper coins were the main means of exchange in daily purchases. Copper coinage was a vital constituent part of the fiscal gold circulation. It was produced to be sold to the public by money changers to yield additional gold for the treasury.¹³

One of the last gold issues of Heraclius that arrived in Syria before the conquest depicts Heraclius and his son Heraclius Constantine. This type is represented on the plate by a contemporary plated forgery found in Syria (no. 1, see Pl. XVI, 1).¹⁴ The last type reaching Syria under Byzantine rule shows three standing emperors, Heraclius and his two sons.¹⁵ The Heraclian gold coinage was widespread, so that it became the model for various imitations¹⁶ before the introduction of the first official Arab gold solidus in Byzantine style.¹⁷ The first gold solidi which can be assumed as commissioned by official Islamic authorities repeated the last type of Heraclius, the three standing imperial figures but without crosses. Michael Bates divides these into two sub-series, one with Greek letters and another with the Islamic creed in Arabic. He dates the beginning of this coinage, which bears no mint and date, to the year 72/691–2 parallel to the dated Arab drahms in Sasanian style from Damascus.¹⁸

In 636, following the battle of Yarmūk, Syria came under Arab sway. How did this affect the gold circulation? Some Syrian gold hoards provide us with a certain amount of information. They were buried in the period between the Islamic conquest and the coinage reforms of cAbd al-Malik. The earliest is a hoard of twenty-seven solidi struck between 607 and 649-50 from Palmyra.¹⁹ The second in the series is a hoard from Nablus, twenty-nine gold coins, struck between 607 and 668.20 The third, the Nikertai hoard, was excavated close to Qalcat Mudiq (Afamiya/Apamea). It comprises 534 Byzantine gold coins from the time of Mauricius Tiberius (582-602) up to Constantine IV (668-85).²¹ C. Morrisson determined the terminus post quem as 681. She observed an over-representation of the coins of Heraclius in these hoards for this late burial date in comparison to other hoards from Byzantine territory proper.

Two hoards analysed by W. E. Metcalf yield a result similar to what Morrisson established for the Nikertai hoard, but much more clearly. The earlier one came from a village called Daphne, five kilometers from Antakya. It was put down probably not much later than c. 60/680. It consisted of sixty-six coins. The majority of them were struck under Heraclius. Only ten solidi were minted later. One of the final coins is an obvious Islamic imitation of a Heraclian solidus but apparently made of fine gold. This coin was dated by Metcalf to the "decade or so after 670". Metcalf pronounces thus on the hoard: "The total of only seven coins of Constans (one a semissis) and two of Constantine IV is extremely low for a hoard that cannot have been deposited before 674 at the earliest. In fact, if one removes from consideration the last nine coins, what remains is an assemblage which would be perfectly reasonable for the last years of Heraclius." The second hoard described by Metcalf comprises fifty Byzantine solidi. It probably came from Damascus and was buried after 65/685. In this case also, Metcalf noticed the preponderance of the Heraclian and older solidi and the steadily diminishing representation of later issues. He also mentioned a nearly contemporary hoard from Baysān in Palestine which shows the same pattern. 22

These few hoards prove that Islamic Syria was not totally cut off from the gold supply from Byzantium.²³ However, the influx of new coins was restricted after 636. It seems that Syria had to rely mainly on the existing stock of gold coins left from the time before the Arab conquest. The coins arriving in Syria later on barely supplemented the existing stock. Their number was significantly lower compared to those to be found in the territory of the former Byzantine empire. The significance of this observation, with regard to the monetary organisation in the early Islamic period, is that payments and tax debts had to be financed with the old Byzantine, mostly Heraclian, gold coins.

^cAbd al-Malik introduced a regular gold coinage in Damascus nearly fifty-five years after the conquest, around 72/691–2. After some experimental issues with some Byzantine as well as Arab-Islamic features, this coinage received its final design in 77/696. In this year the caliph introduced the well known epigraphic coin type. The type is represented here (no. 2, see Pl. XVI, 2) by a contemporary plated counterfeit bearing the year 125/742–3.²⁴

Let us now turn to the gold hoards from Syria and northern Mesopotamia after 77/692. Eight Umayyad gold hoards are known from Syria and Palestine.²⁵ They have terminal dates between the years 103/721-2 and 132/749-50. None of these gold hoards includes any Byzantine or transitional gold issue or any silver coin.²⁶ They contain only Umayyad reformed gold dinārs.²⁷ This seems to be the case for early cAbbasid Dinar hoards as well.28 Why are these Umayyad gold hoards so uniform? The hoards seem to indicate that very soon after the introduction of the epigraphic dīnār, the existing stock of Byzantine coins in circulation must have been exchanged against new, purely Islamic coins. The metal for this vast emission must have come from the old Byzantine gold coins circulating in Syria.²⁹ They must have been melted down to re-appear as reformed Arab dīnārs. There are no contemporary reports commenting on the actual procedure of this decisive transformation in monetary history.³⁰ We can only provide a hypothetical explanation on the basis of parallel phenomena in the history of coinage.

How could such a total replacement be carried out? One possibility arises from an analogy to the Byzantine fiscal system. In order successfully to renew the whole stock of gold coins at a time when institutions were in transition and unstable, it is possible that the complete recall of the gold coinage in circulation might have been connected with a taxation system which channelled all levied gold through the treasury. This could have been combined with a reminting in a newly established central mint.

But unfortunately little is known about the early Islamic taxation system and its connection with the treasury and mints. We know that in Syria tax payments were levied in gold dīnārs.³¹ Non-Muslims in Syria and northern Mesopotamia had to pay their poll-tax (*jizya*) as protégés (*dhimmīs*) of the Islamic government in gold, whereas the Christians in Iraq had to pay in silver. Al-Balādhurī called these people *ahl al-dhahab*, people of gold.³² Aspects of the Umayyad taxation system in Syria have been analysed by W. E. Kaegi, Ulrich Rebstock and others. They have found that parts of the early Umayyad tax system in Syria, unlike the one in Iraq, were modelled on the late Roman-Byzantine tax organisation.³³

Another force behind this successful renewal could be seen in the effects of "Gresham's Law", according to which debased money drives out good money from circulation. The weight standard of the Byzantine solidus was 4.45 g. or 1/72 part of a Roman pound. The weight-standard of the dinar was slightly lighter, one mithqal or around 4.25 g. Al-Baladhuri explains the difference in the weight between both gold coins as follows: "Wahb ibn Kaisān said: I saw dīnārs and dirhams which were worn, before [the time] ^cAbd al-Malik minted them. The weight of the [worn] dīnārs was that which ^cAbd al-Malik [later] used."34 Taken literally, this explanation seems unlikely, because the loss in weight of the coins through normal circulation is usually not significant enough to come up to nearly 5 per cent. But al-Balādhurī's statement could be taken as an indirect reference to Gresham's Law and as an interpretation of a pre-scientific economic observation. In the late Roman period, the new, debased gold coins had to be taken at the same rate as the old, better gold solidi, and prices agreed upon before the debasement could be paid in the same amount of new solidi as well.³⁵ But we have also to take into account that we do not know the exchange rate between Byzantine solidi and Islamic dīnārs at this time. If new money contains more precious metal than the old currency it would tend to be undervalued in circulation. Then the new, better money would have been withdrawn from circulation for exportation, hoarding or melting, whence the reform would fail. So debased money—here the Islamic dīnār—has a better chance to succeed in circulation and it is better protected against exportation.³⁶ In the hoards we observe the success of the new gold coins.

However, some other Byzantine minting features were continued too.³⁷ All gold coins of the Islamic empire in the Umayyad period, except for the Far West and the Maghrib, were struck in a central mint, presumably in the capital Damascus itself. M. L. Bates suggests further that the mint was not attached to the capital but to the actual residence of the caliph as in the late Roman, Byzantine period.³⁸

The above-mentioned observations, the centralised striking of gold at the imperial residence and the uniform character of the coin hoards are reminiscent of the late-Roman Byzantine fiscal system in which taxes were levied in gold. All gold coins received were melted down into ingots, waiting to be reminted as new gold coins for government expenses.³⁹ But unlike at Byzantium, this revolving system does not seem to have been continued in Damascus.⁴⁰ After the recoining of the Byzantine money into Islamic dīnārs, there is no trace detectable of a further reminting, either in the coin hoards or in the coins themselves.

3 THE COPPER COINAGE

In the Byzantine empire, the circulation of coppers was closely connected with that of gold coins. What was the relation between them in the newlyestablished Islamic empire? The folles were an imperial not a locally-authorised coinage. Their production was centralised for the east of the empire at Constantinople from the reforms of $6\overline{29}/630$ onwards.⁴¹ The circulation of copper formed an integral part of the late-Roman Byzantine fiscal system. The treasury bought the additional gold coins needed for government expenses and which could not be drawn by taxes from the public with copper coins through money changers on the open market.⁴² On the other hand there was a popular demand for those copper coins for commonplace purchases. In the period immediately preceding the Islamic conquest, new copper coins, supplementing the circulation in Syria and northern Mesopotamia, came only from Constantinople. After the conquest, the source of the supply for copper coins now lay outside the boundaries of the Arab realm. How did this affect the monetary situation with regard to coppers?

The new frontier did not mean, however, that Syria and northern Mesopotamia were cut off from this stream of copper coins from Byzantium in the first decades after the conquest, in spite of the fact that the withdrawing army of Heraclius tried to create a stable front line facing the Arab occupied territories.⁴³ The effects are not visible in the same way that the region had suffered from the diminishing influx of gold supply. M. Mackensen states, on the basis of archeological coin finds, that the conquest of western and northern Syria in 636 had no immediate influence on the supply of Byzantine coppers in the regions concerned. He also provides several findspots for Constans II's coppers in Jordan and

Palestine.⁴⁴ Byzantine folles remained abundant in Syria and northern Mesopotamia, although struck in Constantinople during the reign of Constans II (641-68), after the Arab conquest. There are too many of them and they have been found too frequently in contemporary settlements to be only accidental stray finds. No. 3 (Pl. XVI, 3) illustrates one of the typical folles struck in Constantinople under Constans II and circulating in Syria.⁴⁵ Also, the author's own observations based on the coin finds of Isriya, al-Raqqa, Assur and on many Syrian single finds without specific provenance, confirm Mackensen's statement.⁴⁶ Some copper coin hoards, one from the Jordan Valley probably from about the late 680s published by Bates and Kovacs⁴⁷, one from "Syria" and one from Hama from the 680s,48 and some unpublished hoards in the American Numismatic Society of Constans II coppers,49 provide a similar picture. These hoards, together with one from the Irbid region, of Byzantine-type Arab coppers of the 690s⁵⁰ and one of reformed fulus from Gaza,⁵¹ show that before and even after the reform a copper-gold economy prevailed in Syria. Otherwise, some silver coins would have easily been substituted for a copper saving hoard.

These observations imply the following assumption: For the first two decades, we can assume for Syria and northern Mesopotamia a dependence on coin supplies from Byzantium, despite the defence line at the Taurus mountains. This means that the Byzantine treasury was still able to sell coppers in some way to the Arab-occupied territories. On the simple logic of accounting, it must have received in the end gold coins in return, in order to balance this trade. This could be an explanation for the diminishing influx of Byzantine gold coins struck after Heraclius in Syrian finds. We do not know how this trade was facilitated and who were the intermediaries, whether money changers, merchants or surviving local Byzantine institutions. We only observe the fact that it happened.

Mackensen claims that the influx of folles of Constans II dried up in about $660-5.^{52}$ On the basis of the numismatic material it is reasonable to pose the final end of the Byzantine copper supply earlier, between the years 655 to $658.^{53}$ The four post-658coins which Mackensen has mentioned as proof for his hypothesis are too few, compared with the rest of the material, to serve as evidence of a continuous influx of these later copper coins. The final date of 655-8 coincides with a peace treaty in the year $39/659-60^{54}$, the beginning of the Umayyad rule in Syria and the increasing importance of Syria within the Arab Islamic empire. The presumed exchange of copper from Byzantium for old Byzantine gold from the new Arab territories ceased.

^cAbd al-Malik did not reform the copper coinage until the 690s. During the first thirty-five years of Umayvad rule, the lack of Byzantine copper coins produced a shortage of small change. How was this shortage met? As the local authorities had done in the difficult times of the Persian occupation, some of them now tried to regulate the copper circulation by validating circulating Byzantine coppers, mostly dating from the reign of Constans II, with Arabic, and perhaps also with Greek, countermarks instead of the previously-used Byzantine marks.⁵⁵ Among the coins from Syria we encounter numerous imitations of Byzantine coppers from unstated, probably indigenous Syrian and northern Mesopotamian mints. Many of them had the most common and current Byzantine folles as models, especially those of Heraclius and Constans II. These imitations may well have remedied the shortages following the cessation of imports from Byzantium c. 655-8, before the reforms of ^cAbd al-Malik in the 690s. The coin no. 4 (Pl. XVI, 4) is an example of those imitations.⁵⁶ For the flan, a different technique was applied than for the imperial Byzantine follis. It is a cut piece from a flat strip of metal. The obverse depicts a Byzantine emperor, similar to the images of Constans II, with a cross in both hands. On the reverse, the name of a certain $sa^{c}id$ is applied beside the usual **m**. This may indicate an official, a mintmaster, or perhaps a merchant offering copper coins. The shortage and the overall acceptance of the Constans II imitations occasionally led to the overstriking of old Roman coins. The illustration Pl. XVI, 5 shows such a 400year-old coin overstruck with dies for a Constans II imitation.⁵⁷ The undertype is a Roman antoninianus from Diocletian (284-305). One can read [IMP DIOCLE]TIANVS PF AVG on the obverse and CONCORDIA [MILITVM] on the reverse.

Where were the mints located where these imitations were struck? And who was responsible for their emission? There was no central imperial Arab mint in Svria that might have been responsible for the supply; such a mint only came into existence for gold and silver with the reforms of ^cAbd al-Malik. Most of the imitations and Islamic folles in Byzantine style do not mention any mint name. That there must have been many different mints is visible in the different methods for the preparation of the flan used and the styles applied. Only for some of them do die links, comparisons of style and the knowledge of the findspots allow an attribution, as R. Milstein shows in her die study.⁵⁸ Probably many places in Syria and northern Mesopotamia served as mints: possibly as many as in the days of ^cAbd al-Malik, when over twenty mints were active in the region.⁵⁹ The imitative character of the coins, mostly without giving any mark of official control or regulation, may indicate locally organised, free-lance or coppersmith mints.⁶⁰ In order to include the anonymous issues, which may overlap sometimes with those naming mints, the succession of these coin types has to be analysed for each mint separately on the basis of die linkages.⁶¹ The probably later application of formulas like tayyib/KALON (good), $j\bar{a}$ '*iz* (current) or *al-wafā*' *lillāh* (fulfillment belongs to God) shows an increasing regulation by the authorities. Nearly at the same time, the application of mint names followed. Bates attributes these issues with mint names to the years of ^cAbd al-Malik's reform between 72/692 and 74/694.62 Lutz Ilisch dates these issues to about the year 70/689-90.63Bates pointed out in some of his lectures that the responsibility for the production of the later folles in Byzantine style was then at the level of the district administration (jund, pl. ajnād). He bases his arguments on similarities in types between the emissions of the different mints within one province.

Decisive for all further developments was the year 74/693–4. The standing caliph type was introduced in gold, silver and copper. On copper coins we now have a standing caliph on the obverse and the application of mint names on the reverse. This type was struck in more than twenty mints in Syria and northern Mesopotamia. Thirteen mints alone are known in the northern Syrian district (jund) of Qinnasrin and the district (*jund*) of al-Jazīra, for which we have no mint names on earlier coins. It can be suggested that these mints were not newly-established but engaged in the production of imitative types without mint names already before this time. Although the similar basic design for all standing caliph coins seems to indicate the control of central administration for the copper supply, the inscriptions and iconographic peculiarities again followed a recognisable provincial pattern.⁶⁴ This leads to the assumption that the production of the copper coinage was organised on a jund level but with some imperial supervision.

In the Byzantine empire, the copper coinage was highly centralised and tightly bound to the fiscal and military organisation.⁶⁵ Before the reforms of Heraclius, the Byzantine copper coinage was organised basically on the diocesan level with one mint for each diocese. In the case of Syria, the diocese was Oriens with its mint at Antiochia. This centralisation was obviously not the case after ^cAbd al-Malik's reforms, when we have a multitude of mints within one military district (jund). This mint organisation did not follow any Byzantine pattern. Why were there so many mints and why did not ^cAbd al-Malik adopt the Byzantine model of a central mint for the supply of copper coins? A central imperial influence remained remarkably small and is restricted only to northern Mesopotamia, Syria and Palestine, which shared a common coin type. It is not clear whether

all these mints first opened under ^cAbd al-Malik or earlier. It might be considered that they were mints before that, independent of the central government, which struck imitative coins for the local supply,⁶⁶ and that ^cAbd al-Malik acknowledged only the status quo and ordered the addition of the mint names to the standardised coin type. The system of copper coinage seems to have evolved directly from local responses to meet the need for small change. Later, these mints seem to have been organised on a provincial level. For all other regions of the Islamic empire, the copper coinage followed different patterns rooted in the local tradition.⁶⁷

To summarise the Byzantine impact on the copper coinage, one can say that one reason behind the coinage reforms of 72, 74 and those of 77-9 was to separate the economy of the Islamic empire from the Byzantine fiscal system, whether as an active policy or a mere response to a closed border. The first changes, concerning which we do not know who untertook them, what they included and where they occurred, must have taken place after 655-8. They resulted in a shortage of copper coins after several decades of continued copper supply from Constantinople. Several mint places subsequently evolved, producing imitative Byzantine folles. In several stages, these mints were regulated by provincial administrations, not by the imperial government. The reform of ^cAbd al-Malik in 74/693-4 introduced a new copper coin design for all the mints in Syria and northern Mesopotamia, the standing caliph. The central government tried to regulate the production centrally, but the organisation lay in the hands of the provincial administration.

This divergence from the Byzantine monetary pattern leads to the assumption that, in the early Islamic empire, the grip of the state on monetary matters was less tight than in the Byzantine empire, where the fiscal, monetary and military administrations were closely regulated by the central authorities.

4 THE SILVER COINAGE

Silver coins were not current in Byzantine Syria and northern Mesopotamia either, but they formed the principal currency of the Sasanian realm. First the Sasanian occupation (610–29) and then the Arab conquest removed the centuries-old border between the two currency regions. For the Persian period, we have until now no information—from literary sources or from archaeology—about the monetary organisation in Syria and northern Mesopotamia, with the exception of copper coinage.⁶⁸ But the sources tell us about a drain of precious metal.⁶⁹ Later, the Umayyad caliphs chose Damascus as the administrative centre for their empire. Silver coins flowed into Syria as booty and as taxes. The dominant position of the gold coinage in circulation might have been challenged by the influx of silver coins. These change in circulation is reflected in the papyri from ^cAwjā⁵ al-Ḥafīr near Gaza.⁷⁰ The bulk of these papyri date from before the reforms of ^cAbd al-Malik.⁷¹ Two papyri, which Kraemer dates for epigraphic reasons, to the seventh century and to the Arab period, mention an obviously current silver coin which was called *miliaresion* like the Byzantine silver coin.⁷² However, the Byzantine miliaresion was not in use in Egypt or Syria at this time. The name refers probably to the Sasanian drahm.

From the Umayyad period, four silver hoards from the region concerned are known. None of them include any gold coin. The restriction in gold and silver hoards to one single metal has never been plausible explained. One of the hoards has a terminal date of from 119/737 and all the others have a terminus post quem between 130/747-8 and 131/748-9, the years of the cAbbasid Revolution. Only two of them are well recorded and analysed: the so-called Damascus hoard from the Sāhat al-Tahrīr in Damascus by Abu 'l-Faraj al-CUshsh73 and the Bab Tuma hoard from Damascus by Rika Gyselen and Ludvik Kalus.⁷⁴ For comparative purposes, we can add one Umayyad hoard from southern Iraq and four further early cAbbasid hoards from the regions concerned-all with terminal pieces from c. 200/815-16, the years of the war between al-Ma'mūn and al-Amīn. The additional Umayyad hoard comes from Nippur and was buried after 126/743-4.75 One of the cAbbasid hoards was buried in northern Syria, two in the Jazīra and one in Iraq: the Denizbaci with a terminal date of 196/811-12,⁷⁶ the Umm Hajara hoard from 193/808-9,77 the Qamishlī hoard from 200/815-1678 and the Babylon hoard from 204/819-20.79

None of these later hoards contains any gold coin either. All silver hoards lack the uniformity of the gold hoards from the same period. Common to all silver hoards is a considerable quantity of ancient Sasanian drahms beside some Sasanian-style⁸⁰ and Umayyad dirhams. But the proportion of the Sasanian coins is different from hoard-to-hoard. So far, we have no firm evidence for the exact date when the influx of Sasanian coinage into Syria occurred. The first firmly datable evidence for the significance of Sasanian coinage in Syria is the Sasanian-type coins struck by cAbd al-Malik in Damascus in the year 72/691-2.81 Michael Bates has argued that the workshop for those dirhams as well as for the dinārs must have been transferred from Iraq to Damascus after ^cAbd al-Malik's victory over ^cAbdallāh ibn al-Zubair in 72/691-2.82 The first silver coin from Damascus was purely an imitation of a Khusru II drahm, except for the mint, the date and the Islamic creed. These coins were struck in Damascus between 72/691-2 and 74/693-4.83 But

the influx of Sasanian silver must probably have begun earlier with the transfer of the capital to Damascus. The city became the seat of the *bayt al-māl*, the Islamic treasury. Tax payments and the fifth of the booty (*khums*) from the rich Sasanian east reached Damascus. State expenditure might have stimulated the use of silver coins in the circulation in the capital as well as in Syria as an element previously foreign to it.

According to Göbl, the Sasanian drahms have a theoretical standard weight identical to that of the light Attic drahm of 4.12 g. But he admits that the usual peak in frequency tables is about 4.00 g.84 Gyselen gave a much more differentiated picture of the metrology of the coinage of Khusrū II, based on the hoard of Susa buried after 638.85 For her study, she selected the obvious uncorroded specimens. The bulk of the coins had a weight above 4.00 g., but a few coins weighed less, if without any outstanding peak.⁸⁶ The average weight was 4.028 g., the peak in the frequency table lies at 4.17 g. with a sub-peak at 4.14 g. Gyselen's study makes it obvious that there are significant differences in weight during the reign of Khusrū II according to the regnal year⁸⁷ and to the mint place. With the beginning of the Sasanian-style coinage after the Arab conquest, the weight of the drahm was slightly reduced. Walker gives the standard weight for Sasanian-style coins as 3.91 g.88 and Miles as 3.98 g.⁸⁹ Gaube confirmed Walker and gave 3.906 g.⁹⁰ as the average weight for the Sasanian-style drahm. The above-mentioned transitional drahm in Sasanianstyle minted in Damascus suggests a further weight reduction intended by cAbd al-Malik, but unfortunately these coins are too few in number in order to establish a frequency table. All known, unmutilated coins of this type have a weight between 3.50 g. and 3.70 g.⁹¹ In 78–79/697–9 ^cAbd al-Malik introduced the well-known Arab dirham type with a standard weight of 7/10 mithqāl of about about 2.90 g.⁹² The basis for this silver mithqal was the Sasanian drahm rather than the gold mith qal of 4.25 g.⁹³

On the assumption that a uniform, circulating silver coinage was an intended goal, cAbd al-Malik's administration was much less successful than with the gold coinage. It is a common feature of early Islamic silver hoards that a high proportion of the coins consists of clipped Sasanian coins. The broad margin was clipped around the coin, sometimes down to the outer circle which framed the images. In publications of hoards and single coin finds, clipping is not always indicated. However, in his description of the Babylon hoard, Hermann Simon states that nearly all Sasanian drahms in the hoard are clipped; but he did not analyse this phenomenon further. Gyselen and Kalus only observed that the average Sasanian coins in the Qamishlī hoard from around the year 200 A.H. are lighter than those in the Bāb Tūmā hoard, which was buried about 130 A.H., but neither went into further details. As far as I know, no-one has made much effort to analyse the weights of the clipped coins and to answer the question why these coins were clipped and whether there is any relation between the prevailing weight standards and the function which the clipping might have had. In the following remarks, I will analyse the weight distribution of Sasanian and Sasanian-style coins in the hoards mentioned as a source for the understanding of the merging of the two currencies.

The Bāb Tūmā hoard (Fig. 1) was acquired on the antiquities market in Beirut by the Bibliothèque Nationale. It is said to have been discovered in Damascus in the Bāb Tūmā quarter. Gyselen and Kalus have studied this hoard. The terminal date of the Bāb Tūmā hoard is the year 130/747–8 and is thus from the end of the Umayyad Period. The hoard embraces 83 per cent Sasanian, 8 per cent Sasanian-style and only 9 per cent Umayyad coins. The latter were all minted in Damascus and Wāsit. The unexpectedly small content of Umayyad coins, restricted to only two mints, raises some doubt about the completeness of the hoard. However, the Sasanian share seems to be unaltered.⁹⁴

The other contemporary hoard is the so called Damascus hoard which was unearthed at the Sāhat al-Tahrir in Damascus (Fig. 2). It is preserved in the National Museum in Damascus. Abu 'l-Faraj al-^cUshsh studied this hoard in the late sixties and early seventies. One-third (33 per cent) of it are Sasanian coins, 3 per cent Sasanian-style and around twothirds are Umayyad dirhams from various mints. The terminal year 131/748-9 is represented by sixty-two coins from the mint of Damascus itself. For the purpose of this study, we can presume that both the Damascus and the Bāb Tūmā hoard fairly represent the Sasanian coins circulating in Damascus, one hundred years after the conquest of the Sasanian empire.95 From purely Sasanian hoards we know that the standard weight of the drahm should be between 4.00 g. and 4.15 g. Most of the coins which correspond to the Sasanian standard seem to have been taken out. In the Damascus hoard, coins above 4.00 g. amount to not more than 5 per cent, and about 9 per cent in the Bab Tuma hoard.

The main cluster seems to be between 3.76 g. and 4.00 g. Here we find more than one fourth (530 out of 1,971=27 per cent) of all Sasanian drahms from both hoards: 24 per cent in the Damascus hoard and 32 per cent in the Bāb Tūmā hoard. The peak in the Damascus hoard is at 3.90 g. and in the Bāb Tūmā hoard at 3.85 g., both much less than the standard Sasanian coin weight. Although the weight of 3.85 g.-3.90 g. is not the standard weight for the Sasanian drahms, it is close to the one for the

Sasanian-style coins struck in the former Iraqi territories of the Sasanian realm. John Walker and Heinz Gaube found the standard weight to be 3.91 g. A look at the Sasanian-style coins in both hoards confirms this assumption even further. Fig. 3 shows the weight distribution of Sasanian-style coins of both hoards combined. The Sasanian style share of both hoards fits well into the normal pattern. The weights are clustered, too, between 3.76 g. to 4.00 g. with a peak at 3.90 g. Summarising, we can assume that in the period after the conquest and before the reform in the year 78–79 heavier coins went slowly down in weight, clipping and selection made them approach the standard of the Sasanian-style coinage.

Let us take a look at the second bell-shaped curve in the frequency tables (Figs. 1 and 2). The peak can be roughly defined between 2.66 g. and 3.05 g. A quarter (477 out of 1,971=24 per cent) of all Sasanian coins of both hoards are embedded under this curve: 27 per cent of the coins of the Damascus hoard and 19 per cent of the coins of the Bab Tuma hoard. There is no clear-cut peak as we would expect. The peak of the Damascus hoard lies at 2.75 g. and the peak of the coins of Bab Tuma lies at 3.05 g. If we combine both graphs, the new peak lies at around 2.90 g. This is slightly less than the intended dirham weight. Here again we have to assume that the original weight of a considerable proportion of the Sasanian coins in circulation was brought down to this weight by selection and clipping. These categories are only a preliminary outline because the analysis does not take into account possible local developments and we do not know where these coins were clipped. With more material available, frequency tables for the clipped Sasanian coins might be possible according to the different mints. This might yield an answer to the question, in which region were they clipped and which standards were locally applied. Recently S. Sears has confirmed a note of the historian al-Balādhurī about the weight standard of 8/10 silver *mithqāl* (=3.1 g.-3.3 g.) applied in Ādharbayjān with some numismatic evidence.⁹⁶

However, looking again at the weight distribution of the Arab dirhams in Sasanian style of both hoards, we are surprised (Fig. 3) because we would have expected them to be brought down to the rough dirham weight too. But there is no outstanding peak within the 2.66 g. to 3.05 g. range. Obviously the Sasanian-style coins of both hoards were not clipped down to the same extent as the Sasanian ones. This may be a random coincidence. At this point I am not able to offer any convincing explanation for this phenomenon. These preliminary considerations in regard to the Sasanian portion of the coin finds around 130/747–8, are confirmed if we look at the coin finds some seventy years later, from about



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Fig. 2. The Sāḥat al-Taḥrīr hoard, Damascus.

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200/815-16 (Fig. 4). One hundred and forty years after the fall of the Sasanian empire, its coins were still in circulation. The Sasanian share of several hoards are combined in this graph: the Qamishlī hoard, the Umm Hajara, both situated in the northeastern corner of the Syrian Arab Republic, and the Babylon hoard. Although the latter is not from northern Mesopotamia, it shares the same features. It can thus be included in this sample. The distribution of the bell-shaped curves seems similar to the distribution of the Bāb Tūmā and the Damascus hoards. However, far fewer coins fall under the 3.90 g. bell-shaped curve. Unlike the hoards from the end of the Umayyad period, when a good third of all Sasanian coins fall into this cluster, now only 12 per cent of the Sasanian coins are between 3.76 g. and 4.00 g. Instead, the coins under the bell-shaped curve between 2.66 g. and 3.05 g. now total 30 per cent. The peak lies again at 2.90 g. This graph shows that the process of selection and clipping of heavy coins was very slow, but finally affected more or less all coins in circulation during the first two centuries of Islam. One hundred and twenty years after the introduction of the dirham standard, clipping and selection brought a considerable quantity of coins down to the new weight standard. But the overall impression is that these standards, even when they were intended, they were not very closely observed.

That the clipped Sasanian drahm was an overall accepted feature and more common in the third/ninth century than the full sized one, is proved by a curious piece of evidence. A. H. Morgan in 1974 published a part of a counterfeiter's hoard which he had acquired in the bazaar of Tabriz and which came probably from that region. It embraced several hundred silver-plated dirham forgeries. Dirhams from the Umayyad up to the cAbbasid period were imitated. The coin type with the terminal date bear the year 260/873-4. This can be regarded as terminus post quem for all the coins in the hoard. The hoard, as described by Morton, comprises only sixteen different types, all made with the same counterfeiting technique. The coin types are represented in different quantities from a few up to several hundred specimens. Every coin type was produced with one single pair of dies. It can thus be assumed that all the coins were produced in the same workshop within a short span of time after 260/873-4. Counterfeiters generally choose coin types which are easily accepted by the public and which do not arouse suspicion at first glance. After Morton's publication, several groups of coins obviously belonging to this hoard turned up on the market.⁹⁷ An unpublished part of this hoard contains also a new type: a counterfeit of a clipped drahm of Khusrū II of the type struck during regnal years 11 to 39(no. 6, see Pl. XVI, 6)⁹⁸. The coin is not

in perfect condition, but a thorough examination reveals that this plated coin imitates a clipped one, not a complete, full size unmutilated Sasanian drahm. It is not a forged Sasanian drahm, which was afterwards clipped—perhaps to test it—but a plated forgery, which pretended to be mutilated. The pretended clipping reaches the outer circle of the image.

How can we interpret and summarise all these observations? The long-lasting circulation of Sasanian silver in comparison with the circulation of Byzantine gold coins leads to the presumption that a recall of all old Sasanian silver coins was not, as presumed in the case of the gold coins, officially enforced, and also that they were not driven out by market forces. If monetary separation from the non-Islamic world was an intended goal of the reforms in order to stop the drain of precious metal coins, then there was no need for an enforced unification of the silver coinage because silver was the money of the conquered east.

With the transfer of the capital to Damascus, tax income and booty from the former Sasanian territories reached Syria and influenced the circulation. These silver drahms reached Syria at a time when the new standard of 3.90 g. for the Sasanian-style coinage had been introduced into Iraq. Heavier coins of the Sasanian standard of 4.00 g. were obviously mostly drawn out of circulation or clipped down. The same happened after the reform of the dirham in 78-9/697-9. Slowly the share of the coins of around 2.90 g. increased while, by contrast, the share of coins of around 3.90 g. decreased. Who was responsible for the selection of coins and the clipping? The high proportion of clipped coins in circulation shows that the public accepted this phenomenon. Probably the clipping was due to the interaction of private people and officials concerned with the financial administration. The intentions of both sides might be assumed to be attempts to profit from the surplus metal during the progressive debasement. So it may be that, through taxation, heavier coins were taken out of circulation and more likely reminted than clipped. Private people lacked the means to melt heavier coins down to remint them, but they could easily clip them. The deviation from the peaks around 3.90 g. and 2.90 g. in the frequency tables indicates that some payments are likely to have been done by weight, at least in the case of the Sasanian coins. On the other hand, there must have been an economic incentive to clip the coins down to the prevailing weight standard, and that incentive may be some payments by tale.⁹⁹

Al-Balādhurī noted several cases of clipping *darāhim fars* by private people at this time.

Mālik [ibn Anas, d. 179/795] and Ibn Abī Dhi'b and their followers said: "We disapprove of the cutting of the





dirham (*nakrahū* qaț^c al-dirham) when they are of full weight (*idhā* kānat ^calā ⁵l-wafā⁵) and we forbid (*nanhī*) it because it is immoral (*min al-fasād*)".¹⁰⁰ And al-Thawrī [d. 161/778] and Abū Ḥanīfa [d. 150/767] and his followers said: "There is no objection to their cutting ($l\bar{a}$ ba⁵s biqaț^cihā), when that does not harm Islām nor its people."

^cAmr al-Nāqid [d. 232/846–7] told me from Ismā^cīl ibn Ibrāhīm from Ibn ^cAwn from [Muḥammad] Ibn Sīrīn [d. 110/729] that Marwān ibn al-Hakam [caliph 64–65/684–5, having previously held several offices in the Hijāz and Baḥrayn] arrested a man for cutting dirhams and cut off his hand. That came [to the knowledge] of Zayd ibn Thābit [d. first/seventh century in Medina]. He said "[It is good, that] he had punished him". Ismā^cīl said: "That is a matter of *darāhim fars*."

Muḥammad ibn Sa^cd [d. 230/845] said according to al-Wāqidī [d. 207/823] that Abān ibn ^cUthmān [ibn ^cAffān, d. 105/723–4] when he [governed] Medina, punished someone who cut dirhams with thirty strokes and paraded him [as a public example]. This is [the right punishment] in our [opinion] for one who cuts them and produces plated forgeries (*wa-dassa fīhā almufarragha*) and counterfeits (*al-zuyūf*).

Muḥammad told me from al-Wāqidī from Ṣāliḥ ibn Ja^cfar from Ibn Ka^cb, in his saying "Or can we not do with our own what we like [Qur⁵ān, XI, 87]" he means: the cutting of dirhams.

Muḥammad ibn Khālid ibn ^cAbdallāh told us from Yazīd ibn Hārūn from Yaḥyā ibn Sa^cīd [d. 144/761–2]. He said: A man was mentioned to al-Musayyib who cut dirhams and Sa^cīd said: This is part of wreaking evil in the land (*min al-fasād fi 'l-ard*).

^cAmr al-Nāqid told us from Ismā^cīl ibn Ibrāhīm from Yūnus ibn al-^cUbayd from al-Hasan: Men when they were still unbelievers knew [well] the place of the dirham amongst the people. They improved and purified it. But when it came unto you [i.e. the Muslims], you debased (ghashshashtumūhu) and spoiled it (afsadtumūhu)."¹⁰¹

These notes seem to be almost all from the region of the Umayyad Hijāz. However, some general conclusions can be drawn from them. Clipping was at the time of Mālik and Abū Ḥanīfa still a legal problem. It was done illegally and sometimes severely punished by the authorities. But clipped (Sasanian) coins were obviously an accepted feature in the circulation. Mālik ibn Anas disapproved of the practice. Abū Ḥanīfa and al-Thawrī added that they had no objections as long as it did not harm the interests of the Muslims. However, under certain conditions it was not forbidden to use such coins for payments.

Where were these drahms clipped, in Syria or in the former Sasanian realm? Clipped coins are found in the Iraqi Babylon and Nippur hoard as well as in the East European and Khurasanian hoards. Furthermore, al-Balādhurī mentioned clipping in Medina. Until further evidence emerges, we cannot say where it happened.

The question raised above remains: why was the

unification of the silver coinage less successful or less rigidly enforced than that of the gold coinage? At the present stage of research, this question cannot be satisfactorily answered. A probable reason may be that the Byzantine taxation system, based on copper and gold coins, which were farmed and reminted at a central mint, had a different implication for the coinage than the Sasanian monetary system, which was based on taxes levied in silver drahms and which supported a multitude of mints.¹⁰²

5 SUMMARY

In the first decades after the Islamic conquest until the onset of Umayyad rule, the region of Syria and northern Mesopotamia remained in regard to its monetary organisation mainly a dependent Byzantine province. Copper coins were provided from Constantinople until 655–8. On the basis of the gold hoards, only a diminishing number of post-Heraclius solidi can be observed. On logical grounds, it might be assumed that the treasury in Constantinople was able to draw (through unknown intermediaries) gold from the Arab-occupied, former Byzantine territories in exchange for imperial copper coins in order to balance the trade. Perhaps with the rise of Umayyad rule in Syria, imitation of Byzantine copper coins occurred. It can be regarded as an indication of a shortage of copper coins. We do not know exactly what were the measures applied, but they led step-bystep to a monetary independence of Syria and northern Mesopotamia from the Byzantine money supply.

The demand for small change was met by a multitude of mints. At first they produced mere imitations, but their iconography and their inscriptions more and more abandon the Byzantine models. Finally, ^cAbd al-Malik's reforms-beginning with silver and gold around 72/691-2-separated both currencies through the introduction of an indigenous Islamic coin type. The gold coinage was struck only in one imperial mint, except for the far western parts of the empire. The organisation of the gold and copper coinage in Syria did not follow the Byzantine pattern. Although the stock of Byzantine gold circulating in Syria was very efficiently reminted, there are thus far no traces of a continuous reminting of the coinage as in Byzantium. But it can be assumed that the reminting of the entire existing gold stock in Syria was somehow connected with the taxation system.

In Byzantium, the copper coinage was part of the central imperial fiscal system, but for the Islamic empire that does not seem to have been the case. ^cAbd al-Malik tried to regulate the copper coinage, at least in Syria and northern Mesopotamia. He introduced a fixed pattern—the standing caliph—but the

details of the coins show that the organisation of the minting was on the level of the military district (*jund*).

There are no hints in the literature that silver in Syria and northern Mesopotamia was part of the early Islamic fiscal system there. But the various silver hoards examined reveal that there had been a massive influx of silver coinage in the region. It probably reached Damascus as tax payments in Sasanian drahms. These coins, which originally weighed 4.15g, were temporarily selected and clipped according to the prevailing weight standards, first to 3.90 g. then to the dirham weight of 2.90 g. The standardisation of the silver coinage in circulation was not enforced to the same degree as was done in the case of the dīnārs.

- ¹ The original version of this paper was presented at an international symposium held by the Forschungsstelle für islamische Numismatik, Tübingen, under the title "Coinage and Monetary Circulation during the pre-Islamic/Islamic Transition Period" in September 1993 and organised by Lutz Ilisch. I am particularly grateful to Stephen Album, Rudi Matthee, Christian Müller, Hans-Christof Noeske and Sh. Qedar for critical comments and suggestions and for revising the language of the English draft.
- ² However, within the Byzantine and within the Sasanian empire, different local currency areas can be defined.
- ³ For the political history, cf. Kaegi 1992.
- ⁴ Nothing is known about the monetary situation in Persian Syria, except for the copper coinage. But a drain of precious metal rather then an influx can be assumed. Cf. Morony 1987.
- ⁵ For the developments in Syria under the Byzantines cf. Stratos 1968–80; Kennedv 1985.
- ⁶ Michael Bates has established a framework for the transition of coinage in Syria in analysing the sequence of coin types and their probable date of introduction: Bates, M.L. 1975, 1986a, 1989a; Morrisson 1992; Bates, M.L. 1992. Cf. Hahn-Nebehay 1993. For earlier literature, cf. Stickel 1870; Walker 1941; Grierson 1960; Miles 1957, 1967. For the immediately preceding Byzantine period, cf. Morrisson 1989, and Hahn *MIB III*, pp. 108–11, 140f.
- ⁷ Early Islamic coin hoards have thus far only been the subject of general study. Thomas Noonan, 1980, concentrated on the circulation of Arab money in eastern Europe. He looked at indigenous Islamic coin finds only for comparative purposes. Ludvik Kalus and Rika Gyselen have added to their joint publication of the Bāb Tūmā hoard a general analysis of the early Islamic coin hoards within the Islamic empire. Regarding the Sasanian proportion of the early Islamic coin finds, Kalus has emphasised the theory that in Umavvad times treasures from old Sasanian families came into circulation, when they were forced to disperse the wealth they had accumulated over centuries. He explains this hypothesis by stating that Sasanian drahms, which were sometimes over 200 years old have been found in hoards together with Umayyad dirhams. Bates, however, has rejected this explanation by drawing comparison with the Viking hoards. Gyselen-Kalus 1983, pp. 75f.; Kalus 1988-9, pp. 55-7. Bates, M.L. 1986b.
- ⁸ For example see the index of Kraemer 1958. The Nessana papyri are from 'Aw jā' al-Hafīr in southern Palestine.
- ⁹ Hahn *MIB III*, pp. 108–10, has suggested that a follis naming Jerusalem and the emperor Heraclius was produced during the Sasanian siege of the city in 614. M. Bates has argued convincingly during various lectures, that this coin was struck in the late seventh century. It fits well into the numismatic context of the large size folles in early Islamic Palestine. For

example, such large-size folles with an old Byzantine coin type as model were struck in Skythopolis/Baysān. The same might hold true for the peculiar Jerusalem issue and for a parallel Nablus issue as well. Cf. Bates, M. L.-Kovacs 196, p. 162.

- ¹⁰ The renewal of the gold coinage was much regular in Syria than in Egypt, where in the early Islamic period Valentinian gold was still in circulation. Communication from H.-C. Noeske.
- ¹¹ Kent 1956; Hendy 1970.
- ¹² Corpus juris civilis IV, 63,2, vol. 5, p. 670. Hendy 1985, p. 257.
- ¹³ Cf. Kent 1956, pp. 196f.
- ¹⁴ Private collection. The model for this gold-plated copper core forgery was a solidus type struck between c. 616 and 625 according to Hahn MIBIII.
- ¹⁵ Cf. *ibid.*, pp. 85f, type 39.
- ¹⁶ The term *imitation* refers to a copy of a well reputed coin type in circulation by an authority or an individual not entitled to use that specific image. It thus differs from the terms counterfeit or forgery. Imitations are not produced in order to deceive the public but only to set money in circulation for various reasons. Imitations are usually of a known quality, counterfeits are not. An example for a counterfeit is the goldplated copper dinār of Heraclius illustrated here (no. 1).
- ¹⁷ Cf. Miles 1967, pp. 207f. Metcalf, W. E. 1980, p. 96.
- ¹⁸ Miles 1967, pp. 209f.; Bates, M. L. 1986a, pp. 240f.; *idem* 1989a, pp. 96f.
- ¹⁹ Michalowski Palmyre. Fouilles polonaises (Warsaw, The Hague and Paris, 1960), cited in Morrisson 1989, p. 198.
- ²⁰ Dajani 1951. Cf. Morrisson 1989, p. 198.
- ²¹ idem 1972: Mauricius Tiberius (582–602) 3 solidi; Phocas (602–10) 57 solidi; Heraclius (610–41) 276 solidi and 9 semisses; Heraclonas (641?) 2 solidi; Constans II (641–68) 155 solidi and 4 semisses; Constantin IV (668–85) 22 solidi and 5 semisses.
- ²² 1980. The hoard from Rehov (Baysān) comprises 27 solidi, struck between 625 and 685 (Heraclius 16, Constants II 7, Constantine IV 3, Justinian II 1). Avraham Paltiel, "A Hoard of Byzantine Gold Coins from the City of Rehov", ALON— Internal Quarterly of the Israel Numismatic Society, vol. III, no. 4,— April 1969, pp. 101–6 (Hebrew), cf. Morrisson 1989, p. 198.
- ²³ Cf. *idem* 1989, pp. 198–9.
- ²⁴ Private collection.
- ²⁵ The hoards are listed in Gyselen-Kalus 1983, p. 66 n. 66. Four of them were made during excavations or were retrieved by the police and are now preserved in museums, whereas the other four turned up on the market. It could be argued for the latter that perhaps the Byzantine coins were picked out by dealers. For example, see Toueir 1966; this hoard contained 136 dīnārs, with the years 79/698–9 to 126/742–3. ^cUshsh 1960, describes 546 dīnārs from the years 78/697–8 to 103/721–2. 2.45 g; 20 mm; die-axis 12 h.
- ²⁶ There was a probably small hoard of at least two dīnārs of the standing caliph type. It appeared early in 1860s on the antiquities market of Beirut. Both coins were bought by the collector Péretié. The specimen of the year 76/695–6 is now located in the Bibliothèque Nationale in Paris; the specimen of the year 77/696–7 in the Oriental Coin Cabinet in Jena; Sauvaire 1860, and Stickel 1870, p. 43, no. 34.
- ²⁷ The hoards seem to represent the money in circulation. If we assume saving hoards, we have to expect heavier Byzantine solidi pulled out from the circulation instead of the lighter dīnārs. Cf. Kalus 1988–9, p. 51.
- ²⁸ Kirkbride 1951. 56 dinārs were found in the Kingdom of Jordan. Their dates range from 79 to 171. Among them there are four contemporary forgeries.
- ²⁹ Stratos 1968–80 V, 72, suggests that also gold from monasteries and churches came into circulation as means to meet the poll-tax.
- ³⁰ The sources do not inform us about the institutional realisa-

tion of the reform, but tell us mere stories about an argument between the Byzantine emperor Justinian II and ^cAbd al-Malik which led to the separation of the currencies. Cf. al-Balādhurī, *Futūh*, pp. 465–70; Theophanes, *Chronographia* I, p. 367, trans. Turtledove, p. 63, or Ibn Qutaiba, ^cUyūn I, pp. 198f. For other sources see, Bates, M. L. 1986a, p. 251 n. 33. ³¹ Cf. Duri 1979, p. 39.

- ³² *Futūh*, p. 174.
- ³³ Rebstock 1989. Cf. Kaegi 1985, 1989 for the continuity in financing the army, and Gibb 1958, especially pp. 231f.
- ³⁴ *Futūh*, p. 467; cf. trans. Murgotten II, p. 264.
- ³⁵ Corpus juris civilis XI, 10,1,3, vol. 5, pp. 547f. I owe this citation to the courtesy of H.-C. Noeske. We do not know if this law was applied in seventh century Byzantium or early Islamic Syria or whether market forces ruled out this law.
- ³⁶ Grierson 1960, p. 248–60. Al-Balādhurī, Futūh, p. 465f; trans. Murgotten II, pp. 263f. Philip Grierson's explanation for the reduced weight is also based on al-Balādhurī's text: The Arab administration reduced the weight of the dīnār, in order to fit better into the Qurashī system of measurement: the Byzantine solidus has the weight of 22 qirāt minus a fraction. Instead of this inconvenient scale, the dīnār-mithqāl standard was applied. The Qurashī mithqāl has a weight of 20 qirāt. From the viewpoint of economic history, the adaption of the Qurashī system can only be a secondary argument for debasement.
- ³⁷ Although the Sasanians struck gold coins, the model for the Islamic gold system was the Byzantine coinage. The Sasanian gold coins were only issued occasionally, according to standards which are apparently related to the Byzantine solidi. However, the Arabic name dīnār itself derived from the Middle Persian word *denar* which itself came from the early Roman expression for gold coins *denarius aureus*. Göbl 1968 pp. 28f. Walker 1956, p. cxlix.
- ³⁸ 1989a, p. 199.
- ³⁹ Kent 1956, p. 199. A system of melting down and recoining had several advantages. Forgeries and mutilations could be easily detected. Ingots are much safer to store and to protect from disloyal officials; it is not possible to remove them easily from the treasury like single coins or to switch them for forgeries.
- ⁴⁰ Another indicator for the abandoning of the revolving system may be seen in the greater amount of surviving contemporary forgeries of the Umayyad dīnār than of Byzantine solidi of this time. One reason behind the revolving system was the suppression of counterfeits, see previous note.
- ⁴¹ Hahn *MIB* III, pp. 14f. For the Syrian mint of Antiochia cf. Pottier, H. 1979, and Bates, G. B. 1970.
- ⁴² Hendy 1970, pp. 138f. Cf. also Kaegi 1982.
- ⁴³ For the Byzantine efforts to establish a stable front, cf. *idem* 1992a, 1992b.
- ⁴⁴ 1984, pp. 29f, n. 98. He refers in northern Syria to the excavation in Antiochia (Waagé 1952) and nearby Déhès (Morrisson 1980) and al-Mīnā as well as Tell Rif^cat 50 km from Aleppo. In northern Mesopotamia he mentions the excavation of Bālis-Meskene (Hennequin-^cUsh 1978). For central Syria he reports coins of Constans II from the excavation of Hamā (Hammershaimb-Thomson 1969) and Afāmiya/Apamea (Balty-Napoleone-Lemaire 1969, 135–37, 148, pls. LXXVII, LXXVIII) and for Palestine and al-Urdunn coins from Jerash, Kerak and four other places; for example see Metcalf, D. M. 1964, p. 96 (stray finds from Tall al-Duwayr). Cf. Morrisson 1989, pp. 193f, and Bates, M. L. 1976, p. 27 n. 26, where he mentions seven bronze hoards, acquired by the American Numismatic Society, comprising folles of Constans II as well as Arab issues.
- ⁴⁵ Follis of Constans II struck in Constantinople, years 1–2 (642–4), Hahn *MIB* III, type 162; private collection.
- ⁴⁶ Beside the findspots mentioned by Mackensen, the author can add from his own observations the following places where

coppers of Constans II have been found: al-Raqqa (German Archeological Institute, Prof. Dr. Michael Meinecke), Isriye (German Archeological Institute, Dr. Rüdiger Gogräfe), Tall Biya (Deutsche Orient-Gesellschaft, Dr. Eva Strommenger-Nagel), Assur (Deutsche Orient-Gesellschaft, Dr. Walter Andrae; Heidemann-Miglus 1996). Al-Raqqa/Tall Bi'a is located in northern Mesopotamia, near the border of the Byzantine realm, but Assur had been under Sasanian sway since the middle of the third century.

- ⁴⁷ 1996, p. 171, date this find to post 72–74/691–4, on the basis of Bates' assumption that minting in the Arab realm took place only contemporary to the Sasanian-style drahms of Damascus; cf. Bates, M. L. 1989, pp. 203f.; this is an assumption which is to be rejected in its strict sense, on the basis that the copper production was probably not done on caliphal order, but on demand from the regional markets. The last Byzantine coins in the hoard are from Heraclius, year 613. In certain areas of Palestine, namely Baysān, and Jarāsh, there was obviously a strong preference for large-size copper coins. For suggestions about the reasons for such preferences, cf. Metcalf, D. M. 1964, p. 86.
- ⁴⁸ Phillips-Goodwin 1997, decribe a group of 298 Syrian copper coins. They are said to have been found in an earthenware pot "near Hamā". It consists mostly of Constans II coppers. The last Byzantine group dates to 655/6–657/8. The patina of the coins is described as "thin patchy green", a result usually found on coins which have been bathed in citric acid or other acids. Therefore, it is not proven that they all belong to one hoard and one has to take into account additions by the dealer. Goodwin 1994, 60 copper coins of Constans II, imitations of it and imitations of Cypriot prototypes.
- 49 Bates, M. L. 1976, p. 27 n. 26.
- ⁵⁰ Milstein 1988–9. The 158 Arab coins of Byzantine type, which are included in the study, are the remains of a far larger hoard, which was for some time circulating in trade. It is not excluded that the Byzantine coins proper were separated.
 ⁵¹ Qedar 1984–5.
- 521984, pp. 29f, n. 98. There are only four coins, which Mackensen mentions for the period after 658. For Antiochia (Waagé 1952, p. 162), there is one coin (no. 2249) of Hahn MIB III, type 175 (659-63); a second (no. 2250) of idem. MIB III, type 177 (665-6). The half-follis (no. 2252) belongs to Heraclius, cf. idem MIB III, p.139, n. 30. For the excavation of Hamā (Hammershaimb-Thomson 1969, p. 165-70) Mackensen cites a half follis of Hahn MIB III, type 185 (659-68) and a follis from Sicily of Constantine IV c. 670-80. For dating the end of the influx, see also Ilisch, L. 1980, p. 23. Also in the above-mentioned excavations in which the author took part (see above) there was no contemporary coin later than 658. In addition to that, later folles of Constans II are extremely uncommon among the bulk of Constans II coppers which came from Syria without provenance.
- ⁵³ The final coin types are then Hahn *MIB* III, pp. 172–4. Album 1993, p. 9, as well as Phillips-Goodwin 1997, looking independently at almost the same evidence, came to a similar conclusion but gave the final date as a clear cut 658.
- ⁵⁴ There is a confusion in the exact date of the treaty, cf. Stratos 1968–80, vol. III, pp. 187–9, 278; Caetani 1907–18, vol. X, pp. 266–9; *idem* 1912–23, vol. I, p. 444f.; Haase 1975, pp. 38f.
- ⁵⁵ Goodwin 1993. Hahn *MBI*III, p. 140–1. Qedar 1984–5, nos. 46 and 72. See also for Greek countermarks on Umayyad coppers from Syrian finds, Ilisch 1979; Gromotka 1988; Pavlou 1991.
 ⁵⁶ Private collection.
- ⁵⁷ Private collection.
- ⁵⁸ 1988–9. On the basis of a thorough die analysis of a hoard found in Jordan, Milstein was able to attribute many anonymous coppers to the mint of Damascus. See Goodwin 1994.
- ⁵⁹ Qedar 1988–9, lists all mints in Syria for the early Islamic coin types.

- ⁶⁰ Cf. Hahn *MIB* III, pp. 108f.
- ⁶¹ In addition to the study of Milstein see successful attempts for mint attribution in the cases of Palestine and Hims; Ilisch, 1980, and *idem SNA Tüb IV a.*
- 62 1989a, pp. 203-5.
- 63 SNA Tüb IVa.
- ⁶⁴ For example, the minuscule **m** was only used on coppers from the southern provinces (*ajnād*), sc. Palestine and in part Jordan, whereas in the other mints an Φ-shaped object on steps was applied.
- ⁶⁵ For the Roman Byzantine fiscal administration, cf. Hendy 1972, and *idem* 1989. For the close relation between the military and fiscal organisation, see Kaegi 1982, 1989.
- ⁶⁶ Cf. Milstein 1988–9; the group of Byzantine-type coins is very homogenous, which indicates only a local circulation. I owe this argument to discussion with L. Ilisch.
- ⁶⁷ Another possibility which should be considered is a decentralisation according to a Sasanian model. However, Sasanian copper coinage is still far from being well understood, so that such a comparison is not yet possible.
- ⁶⁸ Cf. Hahn *MIB* III, pp. 108–10.
- 69 Cf. Morony 1987.
- ⁷⁰ Kraemer 1938, and 1958. ^cAwjā⁵ al-Hafir was the ancient city of Nessana.
- ⁷¹ idem 1938, 242, states that the dates range from 549 to 767, but if the extremely late papyri are excluded, the great bulk comes from before 689.
- ⁷² idem 1938, documents no. 71, p. 245 (7th century) and no. 158 (Arab period), p. 322.
- ⁷³ 1972a.
- ⁷⁴ 1983, p. 66, provide a list of all Umayyad hoards within the Islamic lands known to them. Kalus added there two further hoards: one from Godhlaniya in Syria, 125 Umayyad coins from the years 85–119 (Coin Hoards II, no. 364). The second is from en-Nebk in Syria, 101 Umayyad dirhams between the years 86 and 130 with an additional revolutionary anti-Umayyad issue (Coin Hoards III, no. 277). There is a strong suspicion about both hoards that the dealers set aside the Sasanian share.
- ⁷⁵ Sears 1994. The hoard consisted originally of about 200 coins. However, only ninety-seven survived cleaning. Eight of them were Sasanian of Khusrū II; twenty-one are Sasanian-style coins; the rest are Umayyads. Most of the Sasanian coins are clipped.
- ⁷⁶ Artuk 1966. The hoard embraced 5,305 dirhams, among them 2,505 Islamic coins. Artuk was only interested in the Islamic coins and therefore did not describe the Sasanian portion.
- ⁷⁷ ^cUshsh 1972b.
- 78 Gyselen-Kalus 1983.
- ⁷⁹ Simon 1976, published only the Sasanian share of the entire hoard excavated by Koldewey in Babylon.
- ⁸⁰ The more adequate term Sasanian-style coin instead of Arab-Sasanian coin was introduced by Stuart Sears. There was never anything like an "Arab-Sasanian" joint administration, which could justify the term.
- ⁸¹ Miles 1957, p. 191, no. 6. Bates, M. L. 1986a, p. 244.
- ⁸² "Coinage", 202.
- ⁸³ Miles 1957. Bates, M. L. 1986a, pp. 243f., mentions also a probable issue of Hims.
- ⁸⁴ Göbl 1968, p. 25.
- ⁸⁵ Gyselen 1989.
- ⁸⁶ Ibid. 1989, p. 8, has argued that some of these drahms might also have been corroded despite an effort to select them for full weight.
- ⁸⁷ Ibid. 1989, p. 8. The average weight during the regnal years 23 and 37 of Khusrū II oscillated between 3.98 g. and 4.17 g.
- ⁸⁸ 1941, p. cxlvii.
- ⁸⁹ Grierson 1960, p. 248.

⁹⁰ 1973, p. 3.

- ⁹¹ Miles 1957, no. 6 (Damascus 72, fire-altar, 3.65 g., Azizbeglou coll.), 7 (lance in mihrāb, 3.50 g., Azizbeglou coll.), 8 (lance in mihrāb, 3.70 g., Azizbeglou coll.). Grierson 1960, p. 248, adds specimens from the literature: 3.54 g.; 3.16 g. (much worn); 3.55 g. (clipped).
- ⁹² For the discussion of different mean weights of Umayyad coinage in different years, cf., Gyselen-Kalus 1983, pp. 27f, 39f, and the weight peaks of selected years in ^cUshsh 1972a, pp. 298f. The main emission started in 79/698–9. But there are three different issues which were struck in the year before, namely, in the year 78: Armenia 78 published by al-Naqshabandī-al-Bakrī 1974, p. 46, no. 3; Adharbayjān 78 published by Broome, "Rare Umayyad Dirham." The third issue is from Shaqq al-Taymara in Fars from the year 78; Bates, M. L. 1989b, p. 94.
- 93 Cf. Sears 1995, pp. 12f., 16. Ilisch 1996, p. 26.
- ⁹⁴ One has to assume that all commercially-interesting coins, i.e., all Umayyad except the ones from Damascus and Wāsit, were picked out before the dealer offered the hoard to the Bibliothèque Nationale. But for the Sasanian part, a completeness of its contents can be assumed, because the later Sasanian coins were not usually selected according to mints and dates in the 1950s. There was no specialised market for them at that time.
- 95 Gyselen and Kalus devote a lengthy discussion to this disproportion of Sasanian and Umayyad coins between these nearly contemporary hoards from one city. Beside the doubts regarding the completeness of the Umayyad portion, there are also further differences in the weight distribution of the Sasanian coins. The original owner of the Bāb Tūmā hoard seems to have preferred heavier coins than the owner of the Damascus hoard. One has to be aware that in a capital city, coins of different origins and different weights can accumulate, depending on the sources whence they were gathered. Such differences can be explained by different spheres of circulation within one city, the market for local supply and the market for long-distance trade. In spite of these differences, they can be regarded as being drawn from the same stock of coins circulating in the city of Damascus around the year 130 A.H. Gyselen-Kalus 1983, pp. 65f. Kalus 1988-9, p. 52.
- ⁹⁶ 1995. Balādhurī, Futūh, p. 326, and Qudāma ibn Jacfar, Kitāb al-Kharāj, p 326.
- ⁹⁷ An unpublished part of around thirty coins are in the ANS collection and another part of eight coins were in the stock of S. Album, Santa Rosa (in May 1994). An additional fifty-four specimens are now in a private collection (most of them excollection D. Schnädelbach, Berlin, ex-S. Album. Santa Rosa, and ex-collection H. Westphal, Berlin), one further specimen in Dr. Busso Peus Nachf., Frankfurt, Auction 345, 1.–3. November 1995, no. 893.
- $^{98}\,$ Private collection. 1.02 g; 23 mm; die-axis 12 h.
- ⁹⁹ Similar phenomena occurred in Byzantium. Cf. Hendy 1985, pp. 315–19.
- ¹⁰⁰ Cf. Lohlker 1991, p. 173, concerning the Mālikite position.
- ¹⁰¹ Futuh, pp. 470; cf. trans. Murgotten II, p. 268.
- ¹⁰² In comparison with the pattern for the minting of gold coins which we have already examined, we can say that for Syria there was only one imperial mint for dirhams too, sc. Damascus. But for silver, we face in the whole Islamic empire a multitude of different mints. Although they all produced the standard dirham, the actual organisation of the mints remained on the provincial level, as proven by Bates, M. L. 1989b, and DeShazo-Bates 1974. In this regard, ^cAbd al-Malik continued the Sasanian model. But there were different attempts to centralise the minting of silver coins. For example, the production of the dirham was concentrated between 83/702–3 and 89/707–8 mainly on two mints, one in the capital Damascus and one between the garrison cities al-

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Kūfa and al-Baṣra, sc. in Wāsit. But this model was abandoned after a couple of years. In the year 90/708-9, many old and new mints opened again. Reasons for the failure of the centralisation could be manifold but lie beyond the scope of this paper.

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(1) plated forgery of a Heraclius, solidus, Constantinople, c. 616–25

 (2) plated forgery of a dīnār of Damascus, 125



(3) Constans II, follis, Constantinople, 642–4



 (4) imitation of a Constans II – follis with the name Sa^cid



(5) imitation of a Constans II – follis, struck on a Roman coin of Diocletianus (6) plated forgery of a clipped Khusrū II, drahm (years11–39)

Pl. XVI. Syrian and northern Mesopotamian coinage at the time of the Islamic conquest (scale 1:0.5 cm).