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The Circulation of North African Dirhams in Northern Mesopotamia – The Dirham Hoard of Tall al-Bīʿa/al-Raqqa (t.p.q. 186/802)

Summary – The Tall al-Bīʿa hoard of ten silver dirhams and one copper coin (t.p.q. 186) probably constitutes a cash deposit drawn from circulation in the urban market of al-Raqqa. It seems to be a negative selection. The hoard reflects the preponderance of the North African dirhams in circulation at the time of Hārūn al-Rashīd. New silver from North African mines and the trade network of the Ibādī movement provided for cheap supply whereas a shortage of silver coins in the central lands created a huge demand. The lesser weight and presumably slightly lesser amount of intrinsic silver led to a discrimination of North African dirhams in circulation, especially in saving hoards. The overvaluation allowed the application of Gresham's law and suggests the acceleration of velocity of circulation. These forces allowed for a rapid movement of North African dirhams to the central lands of Islam.

Résumé – Le trésor de dix dirhams d'argent et une monnaie de bronze (t.p.q. 186) trouvé à Tall al-Bīʿa est un dépôt d'espèces retirées de la circulation sur le marché de la ville d'al-Raqqa. C'est apparemment une sélection négative. Il reflète la prépondérance des dirhams nord-africains dans la circulation à l'époque d'Hārūn al-Rashīd. Le métal neuf des mines d'Afrique du Nord et le réseau commercial du mouvement Ibādī en permettait une offre bon marché tandis que le centre du califat connaissait la pénurie et avait une forte demande. Leur poids – et probablement leur poids de fin – inférieurs amenaient à les discriminer dans la circulation et particulièrement dans les trésors d'épargne. Cette surévaluation entraînait l'application de la loi de Gresham et l'on suggère une accélération de la vitesse de circulation. Ces mécanismes amenèrent à un flux rapide de dirhams nord-africains vers le centre du califat.

1. Introduction¹

In the summer of 1982, a team from the German Oriental Society (Deutsche Orient-Gesellschaft) under the direction of Eva Strommenger discovered a small *dirham* hoard within a late Roman cemetery situated on top of the church

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1. A first appraisal and description of the hoard are included in the excavation report: „Die Fundmünzen vom Tall al-Bīʿa bei al-Raqqa und ihr Verhältnis zur lokalen Geschichte“, HEIDEMANN 2008. A first draft was presented at the symposium on 'Kufic Coins' held in Damascus November, 5-7, 2007. I am particular grateful to the Fitzwilliam Museum and Wolfson College in Cambridge which awarded to me the Robinson Visiting Fellowship in 2008 allowing me to finalize the paper. I owe gratitude to Alan Wamsley for a final revision of the English draft.



hill, Tall al-Bī'a, close to the modern city of al-Raqqā on the Euphrates (see map).² The archaeologists retrieved eleven coins, among them one copper coin; seven of the ten silver *dirhams* came from North Africa with the last minted in 186/802. The hoard was buried in the heyday of the 'Abbāsid empire in the 2nd/8th century. This period was marked by light-weight and slightly debased *dirhams* from western North Africa, the Maghreb.³ North African mints exported these *dirhams* in enormous quantities to the central lands of the caliphate (Syria, Northern Mesopotamia, Iraq and Western Iran); directly or via the caliphate they reached Byzantium⁴ and probably via northern Italy the Carolingian empire.⁵ North African *dirhams* also flowed to the shores of the Baltic Sea via the Caucasus and the Volga trade routes.

Why had these North African *dirhams* suddenly become so widespread? What made them economically that successful? Furthermore, what were the impacts on the economy of the caliphate and beyond? To answer these questions, mining, economic pattern, and political and legal factors must be taken into consideration. As literary evidence is scarce, the distribution and composition of hoards form the main source of information. The hoard from Tall al-Bī'a in al-Raqqā sheds some light on the circulation of North African coins in northern Mesopotamia.

2. Al-Raqqā, the Imperial Metropolis

What was the economic importance of al-Raqqā in those days? In 155/772, the second 'Abbāsid caliph Abū Ja'far al-Manṣūr (r. 136-158/754-774) built a fortified garrison city west of the existing city of Qalliniqos/al-Raqqā in order to stabilise the fragile 'Abbāsid power in northern Syria, Cilicia and northern Mesopotamia. The caliph named the new city al-Rāfiqa, literally 'the companion'. Al-Raqqā became the motor of dynamic economic growth within the region and one of the fastest growing urban agglomerations in the entire 'Abbāsid empire.⁶ Twenty-five years later, in 180/796-7, the speed of urban development increased further when Hārūn al-Rashīd (r. 170-193/786-809) transferred his residence and government to al-Raqqā. He built up a vast area with palaces, canals, and gardens north of the twin cities. Between the two cities markets were set up – beginning in the 160s/780s – and vast industrial facilities were added.

2. For the project in general see KREBERNIK, STROMMINGER 1999.

3. Debased local *dirhams* were known in the Islamic empire before, but only as a regional coinage apart from and parallel to the empire wide circulation of Arabic *dirhams*. These regional coinages usually show a Sāsānian design.

4. Clipped North African *dirhams* were used as flans for Byzantine *miliaresia*; for example see MILES 1960, nos. 11, 12. This was first noticed by ILISCH 2005, p. 70.

5. Ilisch 2005, p. 86-87.

6. For an outline of the urban development of al-Raqqā see HEIDEMANN 2003, chapter II, and HEIDEMANN (forthcoming), *Defining an Imperial Metropolis*.

The agglomeration al-Raqqā was by then the largest urban complex in the Islamic empire west of Baghdad until the foundation of Sāmarrā'.

Since late antiquity parts of an ancient settlement mound located north of Qalliniqos/al-Raqqā, today called Tall al-Bī'a, were used as a cemetery and at the beginning of the 6th century AD, overlooking the bustling city, a monastery had been built on top of it. Its ruins are identified with the Zacchäus monastery or Dayr al-Zakkā mentioned in the sources. The monastery continued to flourish until 4th/10th century. Its end came presumably with the devastation of the region caused by the Ḥamdānids.⁷

3. The Composition of the Hoard

The late Roman burial IIIa in hill B on top of Tall al-Bī'a (map) included a small, but important hoard of eleven coins with one last struck in 186/802, providing for the closing date.⁸ This date fits within the period of Hārūn al-Rashīd's residence in al-Raqqā. If one considers not only individual reasons to hide a small fortune, but is looking for a political event that might have caused it, then the unrest that followed the fall of the Barmakids in al-Raqqā during the year 187/803 might be suggested. The earliest coin of the group is a late Roman copper *nummus* of Marcian (r. 450-457 AD). Whether it belongs at all to the hoard can be questioned. The copper *nummus* might be part of the original burial, while the silver *dirhams* entered the tomb later as part of a disturbance.

The earliest silver coin is a Sāsānian *drahm* of Khusrū II's 37th regnal year (627-8 AD) probably minted in Azerbaijan (mint abbreviation AT). The rim is clipped almost to the stars on the margin. Clipped Sāsānian coins circulated until the 3rd/9th century in the Middle East. They remained a regular feature of hoards until the coinage reform of al-Ma'mūn, and vanished after it. They no longer appear in hoards from the Jazīra in the middle decades of the 3rd/9th century, but were probably much longer circulating in the east.⁹ The closing coin of the hoard is an Aghlabid *dirham* of 186/802 from the North African mint of Ifrīqiya which denotes the provincial capital Qayrawān.¹⁰ There are seven North African *dirhams*. A gap of thirteen years lies between the latest and the next to latest coin; the latter belongs to the abundant emission from al-ʿAbbāsiyya dated 173/789-790.

7. KREBERNIK 1991; KALLA 1991, 1999, 2004.

8. Hill B: WOLSKA 1983; STROMMINGER 1984.

9. ILISCH 1990. Until the second half of the 3rd/9th century Sāsānian *drahms* may have occasionally circulated in Iranian parts of the empire. A hoard of forged plated *dirhams* with *t.p.q.* of 260/873-874 from western Iran is a late witness for the circulation of Sāsānian coins. One type imitated a clipped Sāsānian *drahm*. HEIDEMANN 1998, p. 105. For the hoard see also MORTON 1975; VLACHOU, McDONNELL, JANAWAY 2002.

10. M. TALBI: Kairawān. In: EI2 IV, p. 824-832.

Surprisingly, only two Iraqi coins are present. The first is an almost – at the time of the burial – twenty year old coin from the ‘Abbāsid palace city Qaṣr al-Salām in ‘Īsābādh¹¹, east of Baghdad, struck in 167/783-784. The second Iraqi coin dated 141/758-9 belongs to the abundant emissions from al-Baṣra which are known for their high fineness. It is noteworthy that *dirhams* belonging to the vast emissions of good quality coins from the central mints – that is Madīnat al-Salām and al-Muḥammadiyya – are not part of the Tall al-Bī‘a hoard. Since 179-180/795-797, *dirhams* had been struck again in both main imperial mints in sizeable quantities – at least six to seven years before this hoard was sealed. The composition of the Tall al-Bī‘a hoard is exactly to the opposite of what one would expect in a period of a renewed massive output of the major mints in the central lands. It seems to be asynchronous because of its high proportion of North African *dirhams*. Accordingly, the hoard gives the impression that it was formed as a mostly negative selection from *dirhams* in contemporary circulation.

4. Changes in the Pattern of Coin Production and Circulation

To understand the peculiar composition of the hoard, the major shifts in coin production during these decades provide some general context:

- Since about 151/768-769, *dirham* production increased in the North African mints al-‘Abbāsiyya and Ifrīqiyya under the governors of the Muhallabī family, first continuously, then production soared massively in the years between 164/780/s and 178/795-796. Those *dirhams* were exported in large quantities to the central lands of the caliphate. In 171/787-788, their share in the total annual *dirham* production peaked at an estimated high of 86 %.¹²
- In the year 165/781-782 the silver coin production in Madīnat al-Salām dropped almost instantly.¹³
- In 166/783-784, the main mint of the imperial palace city of Madīnat al-Salām was transferred to the new imperial residence ‘Īsābādh / Qaṣr al-Salām.¹⁴

11. This new city was built by the caliph al-Mahdī Muḥammad (r. 158-169/775-785); YĀQŪT, Buldān III, p. 752-753. For the history of Qaṣr al-Salām in the sequence of ‘Abbāsid residence cities see HEIDEMANN (forthcoming), *Defining an Imperial Metropolis*.

12. NOONAN 1986, p. 145-154, 168; FOMIN 1990; SAVAGE, GORDUS 1998; ILISCH 2005, p. 67-70.

13. NOONAN 1986, p. 186.

14. For the transfer of the caliphal residence and mint see ṬABARĪ III, p. 502, 517; trans. KENNEDY, p. 218, 234. It is said that al-Mahdī paid 50 million *dirham* from the state coffers for the construction of Qaṣr al-Salām. How this massive spending influenced coin circulation is hard to discern. In general, it can be presumed that massive public spending went together with an increase in coin emissions. But this was not the case here. In comparison the later construction of the palace area in al-Raqqā fell in a time of increased *dirham* production after 180/796-797. Cf. ṬABARĪ III, p. 509-510; trans. KENNEDY, p. 227; YĀQŪT, Buldān III, p. 752-753.

There, in 167/783-784, the mint workshop started with only limited quantities of *dirhams*. It operated until 169/785-786.

- With a little delay, from 167/783-784 onwards, the second main imperial mint, al-Muḥammadiyya in Jibāl, western Iran, decreased its output to an unprecedented low.
- Since about 166/782-3 – parallel to the above mentioned developments and probably related to them – copper coins were produced in enormous quantities in southern Iraq and imported to the Jazīra and Syria. In about 169/785-786, the massive importation seems to have stopped. The imported coppers were soon locally imitated, also in huge quantities, to supplement the circulation.¹⁵
- In 176/792-793, a turn in the minting politics can be discerned and the *dirham* production resumed in the main mints. In the same year Jaʿfar al-Barmakī had taken over the administration of the most important mints in the central lands of the empire.
- After about 178/794-795, coinciding with the end of the governor dynasty of the Muhallabīs in North Africa, *dirham* production in North Africa dropped significantly to such a low, it seems to have almost only served the regional circulation.
- Finally in 179/795-796, Madīnat al-Salām and in the following year 180/796-797, al-Muḥammadiyya increased their output with extensive *dirham* emissions.

All these developments seem to be interrelated, but it seems hard to discern the push from the pull factors, and what were causes and what were impacts.

The hoard from Tall al-Bīʿa with the *t.p.q.* 186/802 is the first hoard from Syria and northern Mesopotamia witnessing these monetary changes. It was buried at least six years after the end of the massive production and importation of North African *dirhams*. Coins of the renewed emissions from Iraq and the Jibāl were to be expected in the Tall al-Bīʿa hoard of 186/802, yet they are absent. A likely *terminus ante quem* for the hoard can also be determined. After the fall of Jaʿfar al-Barmakī, reforms in organisation of mints presumably became necessary. In 188/803-804, they resulted in both main mints of the caliphate, al-Muḥammadiyya and Madīnat al-Salām, in an even higher level of *dirham* production. Both mints started an emission which included the mint mark *hāʾ* in the reverse design. In the same year regular silver minting in al-Rāfiqa started with a sizeable output. The hoard from Tall al-Bīʿa seems to belong to the period immediately before this reform.

15. For a discussion of the importation of copper coins from southern Iraq and their local imitations see HEIDEMANN 2003, chapter X. The copper coin circulation is well known for present-day Syria due to several archaeological missions. Almost no archaeological data are available for the copper coin circulation in present-day Iraq and western Iran.

5. The North African *Dirham*

The most notable feature of the Tall al-Bīʿa hoard is the preponderance of North African *dirhams*. They differ in certain aspects from those minted in the central lands of the caliphate. Whereas *dirhams* from the central lands have usually a well regulated weight standard of about 2.9 g, the weight of North African *dirhams* lie within notable deviations, at about 2.6 to 2.8 g. In any case their weights are significantly lower – about 10 % – than those of *dirhams* from the central lands.¹⁶ In 1845, Johann Gustav Stickel (1805-1896) in Jena was the first who noted these differences in weight and he accounted for it in his coin descriptions.¹⁷

A XFA-study by the Forschungsstelle für Islamische Numismatik of Tübingen University measured intrinsic silver content of North African *dirhams*. Within the samples the silver fineness alternates between 80 and 91 %. A NAA-study by Adon Gordus resulted in a measured fineness between 88 and 100 % with an average of 95.8 % (± 1.4 %) for Ifrīqiya and 96.0 % (± 2.6 %) for al-ʿAbbāsiyya. NAA tends to yield a higher silver content, in case of a silver enriched surface. Both results, nevertheless, concur that the fineness of North African *dirhams* is slightly lower (2-3 %) than that of *dirhams* from the central lands, especially from Madīnat al-Salām. The fineness of coins from these mints lay constantly between 92 and 97 in the first (XFA method) or between 93 and 100 % in the second study (NAA, average 98.7 %, ± 1.4 %).¹⁸ It should be remarked that some of these differences may be due to the non-destructive measurements which analyses only thin surface layers. More precise data could be provided either by new technologies which go into the depth of the coin¹⁹ or by destructive methods. Surfaces of Maghribī *dirhams* can yield up to 10 to 28 % of mercury due to a regular coating process of these coins at the mint. The coating may possibly also have raised slightly the weight.²⁰

16. ILISCH 2005, p. 68.

17. As far as measurements of a limited number of coins went at that time, J. G. STICKEL believed also to have observed that ʿAbbāsid *dirhams* from the North African mint al-ʿAbbāsiyya were tightly regulated in weight. This observation is wrong, but what is important he noted that the *dirhams* were markedly lighter than those from Asian mints; STICKEL 1845, p. 29-32.

18. For metal analyses of coins of the years 162-173 h. see ILISCH *et al.* 2003, p. 111 nos. 3117-3124 (al-ʿAbbāsiyya) and p. 108 nos. 2994-2996 (Madīnat al-Salām). The testing was done with the X-ray fluorescence analysis (XFR) between 1996 and 1998. I am grateful to L. ILISCH for explaining the systematic error in the measurement due to the almost regular mercury coating of *dirhams*. The second figures are from the Neutron Activation Analyses (NAA) by A. GORDUS in SAVAGE, GORDUS 1995 which tend to be slightly higher than the actual fineness. For the usual elevated residual gold content of the *dirhams* from the central lands see also GORDUS 1972.

19. For example the Laser Ablation Inductively Coupled Mass Spectrometry (LA-ICP-MS), See BLET-LEMARQUAND *et al.* 2009.

20. KACZMARCZYK, HEDGES, BROWN 1977; ILISCH, LORENZ, STEUER 2003, p. 110-111.

In addition, during the long reign of Yazīd ibn Ḥātim al-Muhallabī (r. 154-170/771-787) the quality of the die-engraving became markedly inferior. North African *dirhams* can be easily distinguished from those of the central lands.

Many factors contributed to the success of the inferior North African *dirham*. The discovery of new mines and their exploitation in the western Maghreb allowed for a massive expansion of coin production in the mints of Ifrīqiya and al-ʿAbbāsiyya. The silver from the newly discovered mints used for the *dirham* production in the time of the Muhallabīs was different from that used in the preceding Umayyad and or in the later Aghlabid period. The silver is characterized by an extremely low residual gold content.²¹ Tadeusz Lewicki and Elizabeth Savage emphasise the political and economic role of the Muhallabī family in production and export. Long before the fall of the Umayyads, the Muhallabī family – once governors in Iraq – had supposedly close ties to the Ibādī movement. The Ibādīs originate from an anti-Umayyad opposition movement in al-Baṣra. Later, they controlled Berber tribes in the Maghreb while maintaining a trade network throughout the empire. Important newly discovered mines lay in the western Maghreb in Berber territory. New mints opened in their vicinity. The Ibādīs also exported Sudanic slaves from North Africa to Syria and Iraq as their other main commodity. The caliphs al-Manṣūr and al-Mahdī favoured the Muhallabī family. Members acted as governors in various provinces all over the empire.²² With the first Muhallabī governor ʿUmar ibn Ḥaṣṣ (r. 151-154/768-771) coin production in North Africa increased. After suppressing a Berber rebellion, Yazīd re-established relations and economic ties to the Berber tribes and the Ibādīs as one of his first acts as governor.²³ With him the *dirham* production soared. In 171/787-788 it reached a peak with the governorship of his brother Rawḥ. Almost all of Rawḥ's coins were issued posthumously in the name of his deceased brother Yazīd. With Yazīd the style of the *dirhams* changed from the well executed Imperial style which is typical for ʿUmar's *dirhams* to the rough inferior provincial style (compare no. 5 with nos. 6-10) suggesting a rapid local die-engraving to process enormous quantities of silver. In 178/794-795, the end of increased *dirham* production and export coincided almost with the death of Rawḥ ibn Ḥātim, the last of the Muhallabī governors of Ifrīqiya. A number of factors contributed to the massive influx of North African *dirhams* into eastern markets. For a commodity, such as silver coins of inferior quality, only the price is relevant. Prolific mines and an efficient distribution network kept prices low in times in which transportation costs were usually high. These are important factors on the supply side; factors on the demand side will be dealt with after a discussion of a possible legal treatment of North African coins and a comparison with other hoards.

21. EUSTACHE 1970-1, p. 91-102 (mines). GONDONNEAU, GUERRA 2002, p. 582-583 fig. 4 (silver analyses).

22. LEWICKI 1971; SAVAGE 1990, 1992, 1997, esp. p. 67-87; SAVAGE 1998.

23. SAVAGE 1997, p. 39-42.

6. The Legal Treatment of North African *Dirhams*

What might be the legal treatment of light-weight and slightly debased North African *dirhams* in comparison to the almost pure full weight *dirhams* from the mints of the central lands? The status of North African *dirhams* was certainly considered in al-Raqqā – as evidenced by the Tall al-Bī‘a hoard. For a legal appraisal a famous authoritative contemporary witness living in al-Raqqā at the time can be called in: Muḥammad al-Shaybānī (d. 189/805). He is one of the three influential founding fathers of the Ḥanafī school of law. He came to al-Raqqā with Hārūn al-Rashīd who appointed him to be chief *qāḍī* of the city, the second largest urban agglomeration of the west. While he treated the issue of alloyed *dirhams* in general – al-Shaybānī did not address the light weight and slightly debased *dirhams* of North African origin in particular. In the “Chapter about *dirhams* which are alloyed with copper (*ṣufr*)” he wrote: “And if there are *dirhams* in which two thirds or more are silver, then they can only be sold equivalent for equivalent (*lam yuba‘ illā mithlan bi-mithlin*).” According to him, if differences in fineness between different kinds of *dirhams* are confined to that mentioned range, then these differences can be legally neglected and did not affect the validity of contracts and their fulfilment with any of these coins. That means a *dirham* for a *dirham*. Contracts could be legally fulfilled with regular *dirham* coins, as long as their content was more than two thirds silver. Even in the case that their content was only just more than half of the required amount of silver, contracts could be legally fulfilled with them, but then only on the basis of their intrinsic quantity of silver. Al-Shaybānī distinguishes the exchange value²⁴ of the coin from the weight of the intrinsic metal. Above two thirds of intrinsic silver, the exchange value is dominant; below this mark the intrinsic silver is treated as commodity. His opinion stood in the tradition of legal reasoning of Hellenistic antiquity²⁵, where the wish prevailed to prevent individual testing of coins in order to smooth and facilitate commercial exchange. Al-Shaybānī’s discussion of the equal value of *dirham* coin above two thirds of silver applies in cases of fluctuating content of intrinsic precious metal. These resulted frequently from insufficient application of smelting and refining technology or from manipulations by the issuing authorities.²⁶ The metal analyses of the North African *dirhams* suggest a lower intrinsic metal

24. Al-Shaybānī as one of the first legal authors did, of course, not use the term for exchange value (*qīma*) which became only current in the middle Islamic period; but he describes exactly this quality in his treatment of silver coins in purchase contracts; SHAYBĀNĪ, Kabīr, 340-341.

25. WOLTERS 1999, p. 350-362, esp. p. 357-358.

26. SHAYBĀNĪ, Kabīr, 340-341 (*bāb min al-darāhim allatī khalāṭahā ṣufr*); WICHARD 1995, p. 100-101. In his discussion al-Shaybānī concentrates on the fineness of *dirhams*. If the amount of silver is less than 50 % then the *dirhams* are legally treated almost like copper *fulūs*. Compare the character of money in Islamic law: SAMARQANDĪ, Tuḥfa, ed. Beirut I, 264-265; KĀSĀNĪ, Badā‘ī‘ II, 17-18; V, 195-198; BRUNSCHVIG 1967; WICHARD 1995, p. 94-102.

content than that of the ones from the central lands. The lowest recorded fineness touched the 80 % mark. Over the centuries also the Sasanian *drahm* alternated between 80 and 100 %.²⁷ This might indicate that Shaybānī's consideration stood in a long tradition of legal reasoning. North African *dirhams* were legally overvalued. Nevertheless the lesser weight and fineness of the North African *dirham* was still above the range of the two thirds mentioned by al-Shaybānī for reduced fineness which required then a different legal treatment. It can be presumed that North African *dirhams* passed in circulation – for small amounts – as legally fully valid *dirhams*, going by tale rather than by weight.

In reality, how did contemporaries treat North African *dirhams* in circulation? It can certainly be assumed that substantial amounts of money were usually weighed in commercial transactions.²⁸ Weighing of coins was always a feature of pre-modern currency systems, however weighing of small amounts of silver coins only became customary – as far as we know – in the second half of the 3rd/9th century, when copper coinage almost ceased to circulate and coins were cut into tiny fractions. But even in the first centuries, money changers discriminated between coinages. This is evident from a note of the chronicler al-Balādhurī (d. 279/892). He reports that in the early period of the Islamic monetary system, people discriminated between different emissions of Umayyad *dirhams* which had legally all the same value.²⁹ In hoards, however, all kinds of Umayyad *dirhams* were lumped together without any visible distinction. In the case of the North African *dirham* the discrimination in circulation is mirrored in the practice of hoarding.

7. Comparison to Contemporary Hoards

From the period of Hārūn al-Rashīd few hoards are known for comparison. The Tall al-Bī'a hoard falls between two periods where we have clusters of 'Abbāsīd *dirham* hoards: first, between 126/743 and 131/749, the time of the 'Abbāsīd usurpation,³⁰ and second, between 196/811-812 and 209/824-825, the period of succession wars between al-Amīn and al-Ma'mūn followed by unrest in the Jazīra.³¹ Three hoards are close enough in time and place to the Tall al-Bī'a hoard.

27. GORDUS 1972, p. 132.

28. Al-Shaybānī emphasized in the mentioned treatment (fn. 25) that the weight of the intrinsic silver determines the value for *dirhams* with more than 50 % silver up to two thirds of silver.

29. BALĀDHURĪ, Futūḥ, p. 469; DESHAZO, BATES 1974.

30. Bāb Tūmā hoard (GYSELEN, KALUS 1983); Sāḥat al-Taḥrīr hoard ('USHSH 1972a); both are found in Damascus. Another Nippur hoard (SEARS 1994). En-Nebk hoard Syria (Coin Hoards III, no. 277); possibly the Sāsānian share was already extracted from it in the market.

31. Closing year 196/811-812: Denizbacı hoard (ARTUK 1966). Closing year 200/815-816: Qamishlī hoard (GYSELEN, KALUS 1983). Closing year 204/819-820: Babylon-hoard (SIMON 1976). Closing year 208/823-824: Jazīra hoard (GYSELEN, NÈGRE 1982).

- N. Lowick recorded a hoard of 493 *dirhams* from Syria in trade with a closing date of 169/785-786. It antedates the Tall al-Bī'a hoard by at least 17 years.³²
- M. Bates listed a purse of 76 *dirhams* from the controlled excavation in Nippur in northern Iraq. It has a closing date of 177/793-794, ten years before the Tall al-Bī'a hoard. All coins were carefully stacked as a roll and wrapped in cloth.³³
- And finally Abū l-Faraj al-'Ushsh described a hoard of 409 *dirhams* from Umm Ḥajara, about 40 km north-west from Hassake, with a closing date of 193/808-809, about six years or less after the Tall al-Bī'a hoard.³⁴ Possibly, this hoard may even already belong to the following period of military conflict.

The Syrian and the Nippur hoard seem to be carefully selected. The Syrian hoard was buried at the apogee of North African minting activity. Among the 493 coins, however, only 20 (4 %) came from North Africa (2 × Ifrīqiya 165-166 h.; 18 × al-'Abbāsiyya 151-166/7 h.). Sāsānian coins are entirely missing among those recorded. It has to be admitted that they could have been removed from the hoard before recording. Among the 76 *dirhams* of the Nippur hoard only five (8.6 %) came from North African mints, among them the closing piece (3 × Ifrīqiya, 170-177 h.; 1 × al-'Abbāsiyya, 159-164 h.; 1 × Walīla, 174 h.). The bulk of coins was old 'Abbāsid *dirhams* of high quality from the period before 165/781-782. In the year of the closing coin, in 177/793-794, Madīnat al-Salām and al-Muḥammadiyya had not yet resumed minting on a large scale. The inclusion of only one coin from the very prolific mint of al-'Abbāsiyya³⁵ among the five North African *dirhams* suggests that the original owner excluded deliberately all those light-weight al-'Abbāsiyya-*dirhams* which were easily recognisable in circulation by their crude style. The lack of Sāsānian *drahms* – except for a later *dirham* from Ṭabaristān³⁶ – also points to this conclusion.

The Umm Ḥajara hoard gives a different picture. It followed the Tall al-Bī'a hoard by about six years. Among the 409 coins were 109 North African *dirhams* (26.7 %) and 154 Sāsānian *drahms* (37.7 %), most of them clipped at the rim, all together 263 pieces (64.4 %).³⁷ Comparable and higher shares of North African *dirhams* can also be found in the large hoards from the period of military unrest between 196/811-812 und 209/824-825.³⁸

32. Hoard found before 1985 in Syria without known provenance. Nicholas Lowick, British Museum, recorded it in trade. Thomas Noonan used his notes. I am grateful to Lutz Ilisch who kindly allowed me access to the manuscript.

33. BATES 1978.

34. 'USHSH 1972b.

35. NOONAN 1986, p. 150-151, 168.

36. ṬABARĪ *dirhams* not only have a high fineness but constitute also a major part in the mentioned later hoards from the period of the war of succession between al-Amīn and al-Ma'mūn and its aftermath.

37. 'USHSH 1972b; HEIDEMANN 1998, p. 104.

38. ILISCH 2005, p. 69.

The comparison suggests that North African *dirhams* were discriminated against eastern *dirhams* in circulation. One can argue, that on the one hand groups of coins which were extracted from the daily market circulation comprise a greater portion of North African and clipped Sāsānian *dirhams* because the people wanted to dispose of them; whereas on the other hand groups of coins which the owner presumably carefully selected for savings contain fewer North African *dirhams*. The Tall al-Bī'a hoard on the one hand and the two hoards from Syria and Nippur on the other hand, represent opposing principles of hoarding in times of peace. In regard to the Umm Ḥajara hoard, it might be argued that it already belonged to the period of unrest in the Jazīra, and as a large hoard which was buried in times of need the depositor was less selective because of unknown pressing circumstances.

Similar phenomena of equality in legal validity and practical discrimination in circulation and hoarding can be shown with much more evidence in hoards of Egyptian *tetradrachms* from the 1st to the 3rd century: If coins of the same nominal and legal value differ in their intrinsic content of precious metal and circulate side by side – usually the more recent ones have lesser intrinsic precious metal than the previous issues –, then the older more substantial coins are preferred for hoarding, or respectively the coin with a lesser amount of precious metal but with the same legal value will be more readily spent, meaning it was preferred in daily circulation.³⁹

8. Conclusion: Prevalence of North African *Dirhams*

Why did the North African *dirham* become so widespread in the east? The prevalence in circulation of under-weighted and overvalued North African *dirhams* in the 'Abbāsīd east was presumably due to three factors: First was the cheap supply of North African *dirhams*. It was organised by the Muhallabī governors which were in control of the mints, and by the Ibāḍiyya which executed some control over the Berber tribes and the mines and which maintained a wide trade network. This presumably allowed for a substantial profit in their export being in turn an incentive to increase further the production. Secondly, it should be considered whether the eastern *dirhams* could not compete anymore with the cheaper North African coinage and thus was no longer produced in large quantities. The sudden drop of the *dirham* production in the East might then be a result of the soaring production of *dirhams* in North Africa and their ample supply in the East. The resulting shortage of eastern produced silver coins and their supply might have stimulated further demand of North African coins in the East. Thirdly, the impact of the so-called 'Gresham's law' should be considered: 'Bad money drives good money out of circulation, when both monies have the same legal value.' The Asian *dirham* and the North African

39. NOESKE (forthcoming), *Die Münzfunde von Abu Gud*.

dirham might have shared the same legal value, but the latter was obviously discriminated in circulation and accordingly the owners tried to disburse these coins as quickly as possible. This in turn increased the velocity of circulation and allowed for a rapid movement of coins throughout the empire and beyond.

CATALOGUE

The hoard is currently preserved in a blue steel ‘tool-box’ containing all coin finds from the excavations of the Deutsche Orientgesellschaft and the German Archaeological Institute in al-Raqqā. The inventory number of the hoard is Bi82-26/34-10. The coins are brittle. Photos dating to 1982 and 1990 show a progressive deterioration of the coins especially at the margins. Therefore the author abstained from weighing them.

Roman Empire

MARCIAN (r. 450-457 AD)

Nummus, eastern mint, [450-457]. Compare LRBC, no. 2247.

*1. Bi82-26/34-10.9b. 10 mm.

Sāsānian Empire

KHUSRŪ II ANŪSHĪRWĀN (591-628 AD)

Drahm, AT (Āturbādagān, Azerbaijan), regnal year 37 (627-8 AD).

*2. Bi82-26/34-10.10. 27 mm. The margin is very brittle. Nevertheless the coin seems to be clipped down to the stars.

‘Abbāsids

AL-MANŞŪR, caliph (136-158/754-775)

Dirham, al-Baṣra, 141 h. ‘USHSH 1984, no. 1422; LOWICK 1996, p. 134-135 no. 990.

*3. Bi82-26/34-10.9. 26 mm.

AL-MANŞŪR

‘UMAR IBN ḤAḤṢ AL-MUHALLABĪ, governor of Ifrīqiya (151-154/768-771)

Dirham, al-‘Abbāsiyya, 153 h. TIESENHAUSEN 1873, no. 713;

‘USHSH 1984, no. 1444; LOWICK 1996, 4-5 no. 11.

*4. Bi82-26/34-10.7. 25 mm.

AL-MAHDĪ MUḤAMMAD, caliph (158-169/775-785)

Dirham, Qaṣr al-Salām, 167 h. TIESENHAUSEN 1873, no. 1026;

LOWICK 1996, p. 180-181 no. 1473.

*5. Bi82-26/34-10.8. 25 mm.



1



2



3



4



5



6



7



8



9



10



11



YAZĪD IBN ḤĀTIM IBN AL-MUHALLABĪ, governor of Ifrīqiya (154-170/771-787), posthumous

Dirham, (al-ʿAbbāsiyya), 16(1-9) h. Compare ʿUSHSH 1984, nos. 1516-1519, 1631; NÜTZEL 1898, nos. 818-830; LOWICK 1996, p. 48-61.

Obv. field in two circles. Rev. central field in two circles: $\circ/-/-/\circ$ يزید

*6. Bi82-26/34-10.2. 27 mm.

Dirham, (al-ʿAbbāsiyya), (161-170) h.

Compare ʿUshsh (1984), nos. 1516-1519, 1631; Nützel (1898), nos. 818-832; Lowick (1996) 48-61.

Obv. number of circles? Rev. central field in one circle: $\circ/-/-/\circ$ يزید

*7. Bi82-26/34-10.6. 24 mm.

Dirham, al-ʿAbbāsiyya, 171 h. ʿUSHSH 1984, nos. 1227-1228;

LOWICK 1996, p. 62-63 no. 201.

*8. Bi82-26/34-10.5. 25 mm.

HĀRŪN AL-RASHĪD, caliph (170-193/786-809) (I)SMĀʿĪL, official

Dirham, al-ʿAbbāsiyya, 172 h. LOWICK 1996, p. 64-65 no. 225.

Obv. central field in two circles. Rev. central field in dotted circle: $\circ/-/-/\circ$ سمعیل

*9. Bi82-26/34-10.4. 26 mm.

Commentary: The name (I)smāʿīl on these coins is consistently written defectively – without the initial *alif*. It may be a vernacular form of the name. The person is otherwise unknown. The governor of the province Yazīd died in Ramaḍān 170/February-March 787. Rawḥ ibn Ḥātim al-Muhallabī became his successor. On 1 Rajab 171/16 December 787, he arrived in Ifrīqiya (Ṭabarī III, 606; Ibn Khallikān II, 306). In the collection of Tübingen University are following coins which mention this (I)smāʿīl: dirham, al-ʿAbbāsiyya, 171 h., same Rev. as the present example (Tübingen University, Ilisch deposit); the same protocol is also found for the year 172 h. (Tübingen University, inv. no. AF4-D1). A further related type exists: dirham, al-ʿAbbāsiyya, 1(7)1 h.?, Rev.: $\circ/-/-/\circ$ سمعیل يزید, Ashmolean Museum (LOWICK 1996, 62-63 no. 205) and for the year 172 h. in a private collection (LOWICK 1996, 64-65 no. 229).

YAZĪD IBN ḤĀTIM IBN AL-MUHALLABĪ, governor (154-170/771-787), posthumous.

Dirham, al-ʿAbbāsiyya, 173 h. ʿUSHSH 1984, no. 1631; NÜTZEL 1898, no. 1067; LOWICK 1996, p. 64-65 no. 237.

*10. Bi82-26/34-10.1. 25 mm.

Aghlabids

IBRĀHĪM IBN AGHLAB, governor (184-196/800-811)

Dirham, Ifrīqiya, 186 h. ʿUSHSH 1982, no. 173.

*11. Bi82-26/34-10.3. 23 mm.

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