A NUMISMATIC HISTORY OF THE EARLY ISLAMIC PRECIOUS METAL COINAGE OF NORTH AFRICA AND THE IBERIAN PENINSULA

VOLUME 1

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Trent Jonson

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ABSTRACT

This dissertation uses all of the available evidence provided by coins to construct a numismatic history of the early Islamic precious metal coinage of North Africa and the Iberian Peninsula.

The dissertation begins with a review of the analysis undertaken by earlier scholars, followed by an explanation of the adopted methodology, including the approach to the primary and secondary sources and the description of the methods used in the metrological, metallurgical, and die estimation analyses.

The balance of the dissertation is divided into three sections. The first section is the typology, which divides the coinage into four series: Series 1, the Two Imperial Bust type; Series 2, the Latin Epigraphic type; Series 3, the Bilingual type; and Series 4, the Post-Reform type. The typology analyses each series in detail. This section also discusses the iconographical elements of the coinage, with a further chapter providing an analysis of certain anomalous examples that do not readily fit into the typology.

The second section encompasses the analysis of the metrological and metallurgical aspects of the coinage and the estimation of the number of dies for each series. The final section combines the numismatic evidence and the historical record provided by a variety of secondary sources into a numismatic history of the two regions. This section includes a discussion of the historical context prior to, during, and after the Muslim conquest of North Africa and the Iberian Peninsula, as well as a discussion of find spots and circulation.

The dissertation concludes with a comparison of the evolution of the precious metal coinage in North Africa and the Iberian Peninsula to the evolution of Islamic coinage in other regions of the Umayyad Caliphate and an exploration of the underlying nature of the coinage (i.e. regional, Imperial, etc.).

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INTRODUCTION

It is widely recognised that money is a conservative medium, with its primary purpose being the facilitation of economic transactions.[1] These transactions can only occur when there is public confidence in the medium of exchange; therefore, resistance from merchants, moneychangers, and the public will often derail any radical shift in the iconography, size and/or fineness of a society's currency.

The need for a stable mechanism of exchange explains why the Muslims initially made few changes to the monetary system in the first decades after they conquered the Byzantine and Sasanian territories. In the former Byzantine lands of Greater Syria and Egypt, the new rulers struck imitations of Byzantine copper issues to supplement the continued importation of gold and copper coins from the Byzantines.[2] In the *Mashriq* (Iraq and Iran), a network of mints produced silver coins patterned on Sasanian models. These issues, while continuing to bear legends in Pahlāvī and images of Sasanian kings, were distinguished from their predecessors by the addition of validating words or phrases in Arabic, such as *bism Allāh* (in the name of God) or *jayyid* (good) in the margin (see Figure 1 below).[3]

1 BACHARACH 2010a, pp. 2-3.

2 HEIDEMANN 2010a, p. 163; FOSS 2008, pp. 19-55.

3 The Muslims first copied the coinage of Yazdgard III (r. 632-651), but the model soon changed to that of Khusrū II (r. 591-628). See BACHARACH 2010a, p. 4; and FOSS 2002, p. 360.

Figure 1: Khusrū II type, Arab-Sasanian Drachm, bism Allāh in lower right obverse margin. icaL21, L:1. Image courtesy of Baldwin's Auctions, Ltd. (3.38 g) (scale x2)

The conquered populace of the *Mashriq* accepted the validating marks, but changes to the iconography of the precious metal coinage, such as the modification of the crosses on a Byzantine solidus struck during the reign of the first Umayyad Caliph Mu'āwiya b. Abī Sufyān (r. 41/661-61/680),[4] appear to have been rejected by the Umayyads' Syrian subjects (Figure 2).[5]

Figure 2: Anonymous solidus of Mu'āwīya based on a Heraclian prototype, without mint or date (ca. 41-61/661-680). icaL11, L:13. Image courtesy of Baldwin's Auctions, Ltd. (4.42 g) (scale x2)

A series of political and economic difficulties following the death of Mu'āwiya in 61/680 necessitated changes to the conservative nature of the Islamic monetary

4 Dates are given in both *hijri* and Christian calendars wherever possible.

5 The Maronite Chronicle records the rejection by the population of Mu'āwiya's monetary reforms of the gold coinage, as the Caliph removed the crosses from the busts on the obverse of the coinage, and removed the cross-bar of the cross on the reverse of the coin. The Caliph derived these issues from the coinage of the Byzantine Emperors Phocas (r. 602-10) or Heraclius (r. 610-641), and they are similar to their Byzantine prototypes except for the modification of crosses on the obverse and reverse or blundered inscriptions. See PALMER ET AL 1993, p. 32; Bates disputed this attribution, arguing instead that these coins were early issues of 'Abd al-Malik. See BATES 1986, p. 260.

system.[6] It was during these difficulties that the Zubayrid administration first appeared to have used coinage for propaganda purposes, such as coins minted in Ibn al-Zubayr's name in Kirmān that show that he had assumed the title of '*amīr* of the believers', or Zubayrid drachms that added the legend *Muḥammad rasūl Allāh* (Muḥammad, the messenger of God) (Figure 3).[7]

Figure 3: Above: Arab-Sasanian drachm with Pahlāvī legend 'amīr of the believers', struck in Jahrum and dated year 60 YE (72/692). Jena 2005-15-004. Image courtesy of Jena University. (4.15 g) Below: Kharijite Arab-Sasanian drachm, struck in Kirmān and dated 72/691-2. P401, L:806. Image courtesy of Dr. Busso Peus Nachfolger. (4.05 g) (scale x2)

The internal difficulties faced by the Caliphs lessened with 'Abd al-Malik's (r. 65-86/684-704) triumph in the second Muslim civil war (the Second *Fitna*, from 61/680-72/692). With his victory, 'Abd al-Malik embarked on a monetary reform program in order to assist in legitimizing his rule and meet the continuing ideological (and military) challenge of the Kharijites.[8] Unfortunately, 'Abd al-Malik's tasks were

6 ROBINSON 2005, pp. 23-29, 39-44; BACHARACH 2010a, pp. 15-19; HEIDEMANN 2010a, p. 166.

7 HEIDEMANN 2010a, pp. 166-69.

8 IBID., p. 170.

compounded by the fact that the early Islamic monetary system of imitation and importation, which had proved both prudent and convenient in the first decades of Islamic rule when monetary stability was essential had become increasingly unwieldy as the administrative system matured.[9] The conquest of both Byzantine Greater Syria/Egypt and the Sasanian Empire had erased a political and fiscal border, but the distinctive gold-based Byzantine and silver-based Sasanian monetary systems remained in place.[10] Although hard to measure, the now unnecessary monetary border undoubtedly restricted the growth of trade and complicated the fiscal system in the central Islamic lands.

'Abd al-Malik's program to eliminate the iconographic and denominational differences of the Byzantine and Sasanian coinage and meet his political challenges involved the striking of several experimental issues.[11] The Caliph first issued a solidus based on a Heraclian prototype that featured the removal of Christian iconography (the crosses) while adding the *shahāda* in the reverse margin (Figure 4).[12]

9 The extent of the sophistication of the Muslims' governing system in the years prior to the ascension of 'Abd al-Malik is hotly debated. It appears, based on the increasing amounts of material evidence becoming available, that the Islamic state evolved over many decades. 'Abd al-Malik's administrative reforms, which were not limited to the currency, are only one stage, albeit an important one, in the evolutionary process. See FOSS 2002, pp. 353-65; and HOYLAND 2006, pp. 395-416. For an opposing view, see JOHNS 2003, pp. 411-36.

10 HEIDEMANN 1998, p. 95.

11 Heidemann has provided a comprehensive overview of the evolution of the iconography of the early Islamic coinage, as well as a broader discussion of the changes to the monetary system after the conquest of the Sasanian Empire and parts of the Byzantine Empire. See HEIDEMANN 2010a, pp. 149-195; and HEIDEMANN 1998, pp. 95-112; Bacharach focuses on the evolution of the legends on the early Islamic coinage. See BACHARACH 2010a, pp.1-33; Treadwell has discussed the pivotal role of the Damascus mint in 'Abd al-Malik's reforms, as well as two detailed studies of two of the transitional coin types. See TREADWELL 2009, pp. 357-382; TREADWELL 2005, pp. 1-28; and TREADWELL 1999, pp. 223-69. Grierson's study of the metrology of 'Abd al-Malik's reforms is also still relevant. See GRIERSON 1960, pp. 241-264.

12 MILES 1967, pp. 205-229; BATES 1986, p. 243.

Figure 4: 'Shahāda' solidus, dated ca. 72/692. NG6, L:285. Image courtesy of Numismatica Genevensis S. A. (Scale x2)

A series of more innovative experiments began the following year, including the introduction in 74/693 of the 'Standing Caliph' series (Figure 5 below). The obverse of this coin features a representation of the Caliph, while the reverse includes a cross, transformed into a 'globe on pole on steps' (the same as the reverse of the 'Shahāda' solidus). The inscription on the obverse margin is the *shahāda,* while the reverse bears the date, for example: *bism Allāh ḍuriba hādhā 'l-dīnār fī sanat sab' wa-sab'īn* (in the name of God, this dinar was struck in the year 77).[13]

Figure 5: 'Standing Caliph' dinar, dated 77/696-7. SICA1, 705. Image courtesy of the Ashmolean Museum, Oxford. (4.45 g) (scale x2)

The Caliphal administration may have found the Standing Caliph dinar to be more acceptable than either the Byzantine coinage or the Shahāda solidus, as they minted it for four years (74/693-4 to 77/696-7).[14] Nevertheless, the use of only a single obverse die on the surviving issues from each of the years in which the Muslims minted these

13 TREADWELL 2005, p. 8.

14 ALBUM AND GOODWIN 2002, p. 107.

coins suggests that they struck this type in small numbers and the Muslims did not initially intend to replace the still circulating Byzantine coins with the Standing Caliph type.[15] At the same time, the Umayyad Caliphate continued to struggle with the problem of integrating the new Islamic iconography (i.e. the Standing Caliph) into the previously Sasanian silver-based monetary system. This struggle led to several, ultimately unsuccessful silver experiments, including an attempt to combine the Byzantine and Sasanian iconography into one issue, resulting in a clumsy hybrid.[16]

'Abd al-Malik's unsuccessful experiments culminated in the introduction in 77/696-97 of an extraordinary type of gold coin (dinar) that replaced all imagery with the written word (Figure 6). The following year saw the minting of silver coinage (dirhams) in the same style and by 79/698 the Umayyads were striking epigraphic ('Post-Reform') precious metal coinage in Damascus and in over 40 mints in the *Mashriq*. The mass production of these coins and the proliferation of the epigraphic design were unprecedented in the history of a coinage and 'Abd al-Malik's monetary reform was so successful that the format of the epigraphic coinage in the Islamic world remained essentially unchanged for five and a half centuries.[17]

15 TREADWELL 2009, p. 370.

16 Two other experimental issues were struck outside of the capital. In Iraq, Bishr b. Marwān, 'Abd al-Malik's brother and governor of Kūfa, and al-Ḥajjāj, the Caliph's chief lieutenant in the East, also struck innovative issues during the period when 'Abd al-Malik was experimenting with the design of the Caliphal coinage in Damascus. Bishr minted the so-called Orans drachms in Kūfā over a period of three years beginning in 73/692-93 (and in Baṣra in 75/694-95). The obverse of this type bears Arab-Sasanian iconography as well as the *shahāda*. The reverse shows, instead of the Zoroastrian fire altar with two attendants that we would expect, a standing praying figure flanked by two attendants or guards. The identity of the praying figure is debated, but is likely either an image of the Caliph or the *khaṭīb* leading Friday prayer. Al-Ḥajjāj, in 76/696-97 and 77/697-98 at the mints of Bīshāpūr and Ardashīr Khurra, struck an Arab-Sasanian drachm with the *shahāda* arranged in short segments radially around the obverse margin. These two issues were at least loosely bound to the reforms of 'Abd al-Malik, and likely targeted the Umayyads' Kharijite opponents. See TREADWELL 2001, pp. 223-269; and ALBUM AND GOODWIN 2002, p. 29.

17 TREADWELL 2009, p. 358; see also BACHARACH 2010b, pp. 110-15.

Figure 6: Post-Reform dinar of 'Abd al-Malik, dated 79/698-9. CNGEA325, Lot:785. Image courtesy of Classical Numismatic Group, Inc. (4.31 g) (scale x2)

The extraordinary nature of 'Abd al-Malik's reforms obscures the fact that their initial impact on the Umayyad monetary system outside of Greater Syria was limited. Throughout the Umayyad period, local authorities continued to strike copper coins (*fals*, pl: *fulūs*) in a myriad of styles,[18] while in both the *Mashriq* and on the far eastern frontier of the Caliphate dirhams continued to deviate from the monetary standards introduced in Damascus.[19]

Issues in gold, however, remained firmly attached to the Caliphal mint, with two notable exceptions: North Africa and the Iberian Peninsula. It is in these two regions that we see the evolution of some of the most distinctive types of early Islamic coinage. The transitional gold issues in North Africa and the Iberian Peninsula clearly show the influence of the Caliphal mint in Damascus, as many of them display an abbreviated version of the *shahāda*.[20] However, despite this important similarity, the

18 For an understanding of Umayyad copper issues, see TREADWELL 1986, pp. 6-8; TREADWELL 2008, pp. 331-81; ALBUM AND GOODWIN 2002; and GOODWIN 2005.

19 Ilisch provides an excellent survey of the regional coinage of the eastern Umayyad Caliphate. See ILISCH 2008, pp. 167-179; for Ṭabaristān, see MALEK 2004; for Sīstān, see SEARS 1999, pp. 18-28; and ALBUM 1998, pp. 11-30. In addition, Album provides a comprehensive overview of all of the pre-reform silver coinage, including Ṭabaristān and Sīstān, in ALBUM AND GOODWIN 2002, pp. 27-45; for the Bukharkhuda dirhams in Transoxiania, see TREADWELL 2007, pp. 24-39; and NAYMARK 1999, pp. 1-2.

20 The *shahāda* is one of the five pillars of Islam. It is the Muslim creed or declaration of faith - *lā ilāha illa Allāh, Muḥammad rasūl Allāh* (There is no God but God, Muhammad is the messenger of God).

precious metal coins of North Africa and the Iberian Peninsula are quite different in all other respects; as we shall see they use local fabric, language and metrology.[21]

The early Islamic precious metal coinage of North Africa and the Iberian Peninsula has fascinated scholars for nearly 200 years (see the discussion of previous scholarship beginning on p. 45). Unfortunately, the long history of scholarship has not resulted in an in-depth and comprehensive analysis of the precious metal monetary system as whole. This is due to the rarity and widely scattered locations of the surviving examples of these coins. They are also small (10-13 mm in diameter for the earliest gold coins) and frequently struck off flan from poorly engraved dies, making their analysis difficult, particularly the reading of their often-illegible legends.

This dissertation constructs a numismatic history of the precious metal coinage of North Africa and the Iberian Peninsula during the Umayyad Caliphate. The precious metal coinage of these two regions is complex, and it is easy to become disoriented in the detailed discussions necessary to clearly explain the various issues. I have therefore chosen to provide a brief overview of the Islamic coinage struck in the two regions from c. 79/698-99 (the date of the second conquest of Byzantine Carthage) until 132/749-50 (the date of the overthrow of the Umayyad Caliphate by the Abbasids) before proceeding further. It is hoped that this overview will familiarize the reader before the in-depth analysis that will follow in subsequent chapters.

21 ‘Fabric' is the sum of details that make up the physical characteristics of a coin. In the case of the early Islamic coins of North Africa, they have a smaller diameter than Byzantine solidi and the dinars of the rest of the Umayyad Caliphate, resulting in a thicker fabric.

AN OVERVIEW OF THE EARLY ISLAMIC PRECIOUS METAL COINAGE OF NORTH AFRICA AND THE IBERIAN PENINSULA

The overview of the Islamic precious metal coinage of North Africa and the Iberian Peninsula begins with a discussion of the Byzantine monetary system in place in North Africa prior to the conquest of the region, followed by a description of the prototype for the earliest Islamic coinage struck after the conquest. The overview then continues with descriptions of each of the main Islamic precious metal issues.

THE BYZANTINE MINT IN CARTHAGE

By the seventh century, Carthage was one of several western Byzantine mints striking gold regularly, issuing solidi from 533 to 695.

Byzantine Carthaginian issues in the seventh century differed in several respects from those in the rest of the Byzantine Empire. First, the denominational structure was unusual. The North African gold coinage consisted almost entirely of solidi; semisses and tremisses were very rare.[22] This was in contrast to the rest of the Empire, which struck fractionals in abundance. Carthaginian semisses are known only for Heraclius and Constans II (r. 641-668); tremisses only for the latter. Silver coins from Carthage in the seventh century are also rare, except in the reign of Heraclius. Copper, on the other hand, was stuck in abundance until the end of the reign of Constans II, but only rarely thereafter.[23]

Carthaginian gold was also all of a fabric not found outside of North Africa.[24] Beginning in the reign of Maurice, the solidi steadily decreased in diameter and

22 MORRISSON 2003, p. 54.

23 GRIERSON 1966, p. 43.

24 The Carthaginian silver of Heraclius, for example, features peculiarities of design found only at Carthage, i.e. designs enclosed within a dotted circle within a wreath. The most common type features on the obverse a bust of Heraclius; the reverse features Heraclius Constantine and Eudocia. Two other Heraclian types are so rare that they are likely commemorative or ceremonial. See IBID., p. 235.

increased in thickness until they assumed a characteristically 'globular' form.[25] The early Islamic mint in North Africa retained this globular form when they first began striking their own gold coins.

The Muslim conquest of Greater Syria and Egypt meant the end of coin production for the Byzantines east of Constantinople. This increased the importance of those mints in the exarchates of Africa and Italy and by the reign of Constans II the Carthage mint had become the second most important in the empire.[26] Production at the mint of Carthage continued to be robust during the reign of Constantine IV (r. 668-685). At some point prior to the capture of Carthage by the Muslims in 76/695, however, the Byzantines moved part of the mint to Sardinia. The exact date of this move is unclear, although we have identifiable Sardinian coins during the first reign of Justinian II and a date of 73/692-3 has been suggested.[27] In Carthage, the Byzantine mint appears to have ceased production in 76/695, coinciding with the initial Muslim seizure of the city (an example of the last solidus type minted in Carthage prior to the Muslim conquest is in Figure 7 in below).[28]

25 The solidi declined in diameter under Maurice to 20-17 mm; under Phocas to 15 mm; and under Heraclius to 11 mm. This decline was not regular and it is sometimes possible, especially under Heraclius, to find coins of quite different sizes struck in the same year. See IBID., p. 43. The globular form has puzzled numismatists and historians for years. The most plausible explanation is that of Delamare and Montmitonnet, who have argued that the Carthage mint altered the fabric of the gold coins because the manufacture of globular coins required less labour than a normal coin and because they did not wear out as quickly as normal coins when in circulation. There was no need to hammer out a flat flan before striking it between dies, as just a light tap with a hammer was sufficient to strike it. The introduction of this new coin shape seems to have coincided with the accelerated frequency of re-striking gold in the mint, which began in the reign of Maurice (r. 582-602). See DELAMARE AND MONTMITONNET 1984, pp. 253-71.

26 GRIERSON 1966, p. 412.

27 HENDY 1985, p. 19. Sear suggests that an auxiliary mint was established in Sardinia during the reign of Constans II. See SEAR 1987, p. 19.

28 MORRISSON AND KAMPMANN 1979, p. 515.

Figure 7: Example of last solidus of Justinian II minted in Carthage, dated 75-6/694-5.[29] *(4.29 g)(scale x3)*

THE BYZANTINE PROTOTYPE FOR THE EARLIEST ISLAMIC PRECIOUS METAL COINAGE OF NORTH AFRICA

The Islamic mint in North Africa did not model its earliest issues on the coinage of Justinian II. Instead, the mint adopted the design of solidi struck during the reign of Heraclius (r. 610-641), an example of which is in Figure 8 below. The reason the Islamic mint chose to model their coinage on the Heraclian solidi is not entirely clear, although the mint may have simply followed the example of the Damascus mint, which had also used Heraclian coinage when it had struck experimental gold issues (see p. 22 and p. 25 above).

Figure 8: Byzantine solidus of Carthage, dated 620-1. A. Tkalec AG. October 27, 2011, L:261. Image courtesy of A. Tkalec AG. (4.48 g) (scale x3)

On the obverse, the solidus features busts of the Emperor and his son and co-emperor Heraclius Constantine and on the reverse a cross-potent on steps, with Latin legends in both margins. These legends varied little throughout the Byzantine Empire

29 IBID., p. 514.

either chronologically or geographically throughout the seventh century, being practically limited to the imperial name and title on the obverse and some stereotyped formulae on the reverse. They were still normally in Latin, although from the beginning of the seventh century some Greek letters began to be used.[30] The obverse legend features the two emperors' names, prefaced by DN (for *Dominis Nostris* (plural, dative case) and followed by some abbreviation of *Perpetuus Augustus* (normally PP AVC, or PPAV, PPA, PA, etc.). The traditional legend formula on the reverse of the solidi and semisses was VICTORIA AVCC(C) and the full VICTORIA AVGVSTORVM on the tremisses. The Byzantines greatly curtailed these inscriptions by the second half of the seventh century, as the small size of the flans and the increased size of the busts left little room for more than small groups of letters.[31] As I will show, the early Islamic mint in North Africa appears to have experienced the same problem, with many of the legends on the various issues truncated due to lack of space.

PRECIOUS METAL COINAGE IN NORTH AFRICA AND THE IBERIAN PENINSULA

I divide the precious metal issues of North Africa and the Iberian Peninsula into four series based on the major design changes that took place during the evolution of coinage. The first series (Series 1) adapted the local Byzantine iconography of the Heraclian prototype discussed above. Series 1 was followed by a Latin Epigraphic type without images (Series 2); evolved further to an Arabic/Latin bilingual type (Series 3); and finally merged with the Post-Reform coinage struck elsewhere in the Caliphate (Series 4).

30 SEAR 1987, p. 33.

31 GRIERSON 1966, pp. 99-103.

SERIES 1 – THE TWO IMPERIAL BUST TYPE

Series 1 is found in three denominations of gold (tremissis, semissis and solidus) and is closely modelled on the Byzantine gold solidi of Heraclius (r. 610-41) (see Figure 8 above and accompanying description) struck in Carthage. Examples of this series bear neither a mint nor a date, but the evidence suggests that the Islamic mint in North Africa began to strike these coins after they seized Carthage the second and final time in 79/698-9.

Figure 9: Series 1 solidus of North Africa, adapted from Byzantine iconography, undated (c.80/699-84/703). CNGNo2, L:230. Image courtesy of Classical Numismatic Group, Inc. (4.27 g) (scale x3)

Series 1 clearly shows the influence of its Byzantine prototype (compare Figure 8 and Figure 9).[32] The examples of this series retain the globular form of Byzantine Carthaginian gold issues, and continue to feature on the obverse the busts of the Emperor and his heir Heraclius Constantine, although they become increasingly stylized. Some of the crosses found on the obverse of the Byzantine coinage were removed, while the crosses found atop the diadems were replaced by a less offensive trefoil. On the reverse, the mint modified the Byzantine cross-potent to a T-bar or globe on pole on steps. This is not unlike the evolution of the Arab-Byzantine coinage in the Central Umayyad lands, where the mints also took the existing coinage of the region and over time modified or removed the Christian symbols.

32 WALKER 1956, p. 54. The early Islamic mint in North Africa used the Byzantine type illustrated in Figure 8 above (MIB 90) as their model, but the trefoil atop the diadem could have been borrowed from Constans II and Constantine IV solidi dated between 654/655 and 659/660 (MIB 67-69).

The Islamic mint in North Africa also adopted the weight standard of Byzantine Carthage, but only for the solidi, with weights of the semisses and tremisses lower than what would be expected (see p. 301). The gold content of the Series 1 examples, and the Series 2 coinage struck prior to the invasion of the Iberian Peninsula, is significantly lower than the Byzantine coinage, suggesting that the Islamic mint supplemented the gold supply in North Africa with another source (see p. 335). The denominational makeup of Series 1 also changed from that of the Byzantine mint, with semisses and tremisses now making up the bulk of the coinage when under the Byzantines they appear to have been rare.[33]

It is in the legends of Series 1 that we see the greatest deviation from the Heraclian prototype. Although the legends are still in Latin, the Arabs replaced the typical Byzantine legends with Islamic religious references, either variations of the *shahāda* or invocations to God, such as *in nomine tuo deus omnipotens* (In thy name, O God, the omnipotent). The variety and content of the legends found on Series 1 are unprecedented in the monetary history of the Umayyad Caliphate and are discussed in detail beginning on p. 92.

SERIES 2 – THE LATIN-EPIGRAPHIC TYPE

The Umayyad administration in North Africa continued to modify their issues, introducing innovations while still maintaining the basic fabric of the Byzantine coinage. The first innovation was introduced in 84/703-4, when the Umayyad administration in North Africa discontinued Series 1 in favour of Series 2. This series, also struck in three denominations, was minted in three phases: the first beginning in 84-7/703-6, the second in 89-92/707-11; and the last in 95-6/713-15 (an

33 Walker emphasized the similarity in the denominational makeup of the Byzantine and early Islamic coinage of North Africa. The Byzantines only occasionally struck semisses and tremisses in Carthage, however. See GRIERSON 1966 and JONSON ET AL FORTHCOMING, fn. 7.

example of the earliest phase is found in Figure 10). In the Iberian Peninsula, Series 2 was struck from 93-5/711-13 (Figure 11), although only solidi.

Figure 10: North Africa Series 2 solidus, dated Indiction IIII (86-7/705-6). KC AV1113. Image courtesy of the Khalili Collection. (4.28 g) (scale x3)

Figure 11: Iberian Peninsula Series 2 solidus, dated Indiction XI (93-4/712-13). TC 93SPN3. Image courtesy of the Tonegawa Collection. (3.54 g) (scale x3)

As can be seen in Figure 10, the Islamic mint in North Africa removed the two Imperial busts found on the obverse of Series 1, instead ending the marginal legend in the obverse field of the coin. The mint also standardized the obverse religious legend, while introducing on the reverse a legend bearing a mint (Africa)/date formula. Series 2 is thus epigraphic, like the Post-Reform coinage introduced five years earlier by ‘Abd al-Malik, but retains Latin as the language used for the legends.

In most cases, the earliest North African Series 2 examples bear abbreviated variations of *deus eternus, deus magnus, deus omnium creator* (God the Eternal, God the Great, God the Creator of all) in the obverse field and margin, with a mint/date formula engraved on the reverse. In 89-90/708-9, the Islamic mint began to strike Series 2 coinage that once again featured an abbreviated Latin version of the *shahāda*

(as had been the case in Series NA 1): *non est deus nisi unus deus cui non socius alius similis* (There is no God but the One, to whom no other is similar).

On the reverse, the solidi of Series 2 have a mint/date formula in the marginal legend ending in the field, while the tremisses and semisses retain the globe on pole or T-bar on steps found on the Series 1 coinage. The Islamic mint in North Africa chose to re-introduce the Indiction dating system last used by the Byzantine mint in Carthage in 76/695. This dating system evolved from the Roman, and later Byzantine, practice of periodically reassessing the annual tax rate. The Indiction taxation cycle, initially used to reset the tax rate every five years, probably began under the Roman Emperor Diocletian at the end of the third century. At some point, this changed to a fifteen-year cycle, and by the early fourth century, the Romans used the cycle as a method of dating. The Carthage mint used the Byzantine system of Indiction dating during the reigns of Maurice, Phocas and Heraclius. In the reign of Constans II a partial breakdown occurred, with the Indiction date disappearing from some classes of solidi. Several issues of Constantine IV are also undated.[34] The Arabs first struck Series 2 coinage in Indiction II (84-5/703-4). Further North African examples exist for the Indiction years III, IV (IIII), VII, IX (engraved as Θ), and XIII, with examples from the Iberian Peninsula bearing in the majority of cases Indiction years X, XI, and XII.

The Iberian Peninsula Series 2 coins (solidi only) are similar to the North Africa Series 2 examples struck prior to the invasion of the Iberian Peninsula. Like North Africa, there was a distinct coinage already in place prior to the Muslim invasion of the Peninsula - that of the Visigoth kingdom. The Muslim invaders did not follow the normal pattern of adopting and then adapting the local coinage, however. Instead

34 GRIERSON 1966, pp. 412, 520, 571.

they continued the fabric and style of the Islamic gold coinage of North Africa, but with several modifications to the coinage, such as the introduction of a star in the obverse field and insertion of a *hijri* date alongside the Indiction date. Most importantly, several secondary mints, possibly travelling with different elements of the army, appear to have been established during the initial conquest. The multiple mints, whether main or secondary, struck coins with a large variety of weights, lower gold content and corrupt legends.

SERIES 3 – THE ARABIC/LATIN BILINGUAL TYPE

Series 3 consists of bilingual (Arabic and Latin) solidi (Figure 12), as well as a small number of unilingual Latin-Epigraphic semisses and tremisses that were struck alongside the Iberian Peninsula Series 3 coinage (Figure 13). Series 3 was struck in North Africa from 97/715-16 to 99/717-18 and in the Iberian Peninsula in 98/716-17, 20 years after the introduction of Post Reform coinage in Damascus.

Figure 12: Above: Series 3 North Africa solidus, dated 97/715-16. W C.16=Ø55. Image courtesy of the National Museum, Copenhagen. (4.26 g) Below: Series 3 Iberian Peninsula solidus, dated 98/716-17. CNGIX, L:1804. Image courtesy of Classical Numismatic Group, Inc. (4.16 g) (scale x3)

Figure 13: Series 3 Iberian Peninsula Semissis, undated. MAN 2004.117.19. Image courtesy of Museo Arqueológico Nacional, Madrid. (1.94 g) (scale x3)

As can be seen by the examples in Figure 12 and Figure 13 above, substantive changes took place in the layout of the coinage with the introduction of Series 3. On the North Africa Series 3 solidus, the obverse field in all three years bears the first statement of the *shahāda* - *lā ilāha illa Allāh* (There is no God but God). The obverse margin drops the Indiction date, and instead exhibits the following legend with little variation: *solidus feritus in Africa anno …*, followed by the *hijri* date. The reverse field of Series 3 bears the second statement of the *shahāda – Muḥammad rasūl Allāh* (Muhammad is the Messenger of God). The reverse marginal legend, which should equate to the abbreviated Latin version of the *shahāda* found on Series 2, Phase 3 coinage, is now full of errors and, in most cases, untranslatable.

The Iberian Peninsula Series 3 solidi are significantly different from the North African examples. This issue reintroduces the star symbol found on the Iberian Peninsula Series 2 solidi in the obverse field, while both of the marginal legends provide the date and mint name, once in Latin (obverse) and again in Arabic (reverse). The only religious reference on the coin is in the reverse field, with *Muḥammad rasūl Allāh*, the same as on the North African examples. The Series 3 semisses and tremisses, in contrast, have on the obverse the mint/date formula in Latin and the star, and have on the reverse a globe on pole or T-bar on steps and either repeat the Latin mint/date formula or the corrupt Latin religious formula.

SERIES 4 – THE POST-REFORM COINAGE

Series 4 consists of Post-Reform precious metal issues. The Muslims minted dirhams from 97/715-16 in North Africa and from 103/721-22 in the Iberian Peninsula, while dinars were struck from 100/718-19 in North Africa and from 102/720-21 in the Iberian Peninsula (Figure 14).

Figure 14: Left: Series 4 North African dinar, dated 102/720-21 and with the mint name Ifrīqiya. BNF 1966.341.4. Image courtesy of the Bibliothèque nationale de France, Paris. (4.30 g); Right: Series 4 Iberian Peninsula dirham, dated 104/722-23 and with the mint name al-Andalus. ANS 1952.80.14. Image courtesy of the American Numismatic Society, New York (2.91 g) (scale x2)

Although the North Africa and Iberian Peninsula dirhams differ in only small ways (e.g. annulet patterns) from those struck elsewhere in the Caliphate, the dinars continue to feature different legends from the Damascene type until approximately 114/732-3.

Included in Series 4 is a perplexing Post-Reform series of gold fractionals (*nisf* (half dinars) and *thulth* (one third dinars)) that the Muslims probably struck in North Africa and/or the Iberian Peninsula beginning in 91/709-103/720-21 (Figure 15). The

fractionals bear legends similar to those found on the Series 4 North African and Iberian Peninsula dinars struck prior to 114/732-33. Unfortunately, they do not bear a mint name, but the balance of evidence suggests that the Muslims minted these coins in North Africa (see p. 246).

Figure 15: Series 4 nisf (half dinar) dated 100/718-19 (2.13 g) and without a mint name. IcaL15, L:100. Image courtesy of Baldwin's Auctions, Ltd. (2.13 g) (scale x2)

The above overview of the Islamic precious metal coinage struck in North Africa and the Iberian Peninsula during the Umayyad Caliphate highlights some features of these issues, but the uniqueness of these issues needs to be emphasized. Although the North African and Iberian Peninsula coinage imitated certain aspects of the coinage struck at the Byzantine mint in Carthage, from the earliest period innovative changes were being made, primarily through the introduction of legends that are either variations of the *shahāda*, or annunciation of the attributes of God. These coins are the only case where the *shahāda* has been translated into a language other than Arabic, except for a short-lived Sijistān copper series with the *shahāda* in Pahlāvī, dated 72/691-2.[35] But unlike the Sijistān coin, the North African and Iberian Peninsula transitional coinage was minted for an extended period of time.

Although the metrology of the earliest Islamic solidi is similar to that of the solidi struck at the Byzantine mint in Carthage, both the denominational makeup and the gold content changed substantially. Innovative design changes continued to be introduced, and it was only in 114/732-33, over 35 years after the introduction of

35 HEIDEMANN 2010a, p. 169.

Post-Reform coinage in Damascus, that the outputs of the North African and Iberian Peninsula mints fully aligned with those in the rest of the Umayyad Caliphate.

GENERAL ARRANGEMENT AND SCOPE

In order to begin to unravel the mysteries surrounding the North African and the Iberian Peninsula precious metal coinage, I will first review the analysis undertaken by earlier scholars (Previous Scholarship, beginning on p. 45). I follow the scholarship review with a chapter explaining my approach to the primary and secondary sources. This chapter also includes a description of the methods used in the metrological, metallurgical, and die estimation analyses (Methodology, beginning on p. 62).

Three sections follow the Methodology chapter. The first section is the Typology (beginning on p. 80). I begin the Typology section with a general discussion of the denominational makeup, epigraphy and legends. This discussion is followed by a description of the dating systems used on the Islamic precious metal coinage of North Africa and the Iberian Peninsula and the mints where the striking of the coinage in these two regions took place.

The typology of the early Islamic precious metal coinage is presented chronologically, beginning with Series 1 (p. 90), the Two Imperial Bust type, struck only in North Africa, and then continuing to Series 2 (p. 111), Series 3 (p. 194), and finally Series 4 (p. 220), the Post-Reform precious metal coinage. This section also includes a discussion of certain aspects of the iconography (p. 207) and a chapter analysing those issues likely struck at irregular mints or judged to be modern fakes (p. 254).

The second section (Technical Analysis, beginning on p. 273) encompasses the analysis of the metrological and metallurgical aspects and the estimation of the

number of dies for each series. The final section of the dissertation is an attempt at a numismatic history of the early Islamic coinage of North Africa and the Iberian Peninsula (p. 367). Using a variety of secondary sources (see p. 66), it retells the complex story of the evolution of this coinage. It includes a discussion of the historical context prior to, during, and after the Muslim conquest of North Africa and Iberian Peninsula. This section also includes a discussion of find spots and circulation.

The appendix of the dissertation is divided into two sections. The first section (Appendix A, beginning on p. 453) lists every coin included in my typology, and provides the legends, weights and die number. The second section (Appendix B, beginning on p. 540) provides the metallurgical information from the specific gravity tests I conducted, along with the unpublished tests conducted by Oddy and the previous published elemental analyses of the Centre Ernst Babelon.

TERMINOLOGY AND ABBREVIATIONS

Various terms are used as convenient descriptors in this dissertation, some of which require explanation. I primarily use the geographic terms 'North Africa' and the 'Iberian Peninsula' when referring to the two regions that are the focus of this dissertation. For my purposes, North Africa encompasses the region located in modern day Libya, Tunisia, Algeria, and Morocco. In some cases, especially when discussing the Series 4, Post-Reform coinage, I replace North Africa with '*Ifrīqiya*'.

The use of the geographic term 'Iberian Peninsula' is more problematic, as the area eventually conquered by the Muslims in Western Europe included certain areas of southern France east of the Pyrenees (primarily *Septimania*). There is no evidence, however, that the Muslims who resided in this area established a mint there. When I discuss this area, I will refer to the appropriate geographic regions and settlements.

Similar to North Africa, I will at times replace Iberian Peninsula with '*al-Andalus*', again primarily when discussing the Post-Reform coinage of the region.

A potentially contentious term is 'Muslim'. I will use this term when discussing the people that conquered and eventually settled in North Africa and the Iberian Peninsula. Although a large part of the army that invaded the Iberian Peninsula was comprised of Berbers, some of whom may not have converted to Islam, the army itself was Muslim in the sense that the leaders of the army were Muslims. When referring to the coinage, I will use the term Islamic, versus Muslim. As I have already outlined on p. 33, the coinage, especially in the earliest period, retained the characteristics of the Byzantine coinage, but removed or modified the Christian iconography and introduced Islamic religious formulae into the obverse and reverse margins.

ABBREVIATIONS

This dissertation establishes a new nomenclature when describing and referring to the early Islamic coinage of North Africa and the Iberian Peninsula. I divide the precious metal coinage of the two regions into four series:

Series	Description	North Africa	Iberian Peninsula
Series 1	Two Imperial Bust	✓	✗
Series 2	Latin Epigraphic	✓	✓
Series 3	Bilingual	✓	✓
Series 4	Post-Reform	✓	✓

The Islamic mint(s) only struck Series 1 in North Africa, while striking Series 2 through Series 4 in both regions. When discussing the North African coinage I will insert the abbreviation 'NA', and when I discuss Iberian Peninsula coinage I will insert the abbreviation 'IP'. For example, if I refer to Iberian Peninsula Series 3, I will refer to this group of coins as 'Series IP 3'. For the controversial *nisf* and thulth that do not bear a mint name, I will use the abbreviation 'NM', for no mint.

The following is a list of abbreviations used in this dissertation:

Coll. Ref.	Collection Reference. The references are abbreviated, with a complete list of abbreviations found beginning on p. 453
Den	Denomination
E	Eastern
Hor	Horizontal. Used when describing the horizontal lines found above the obverse and reverse field legends on Series 2
IP	Iberian Peninsula
NA	North Africa
N/A	Not applicable
NM	No mint. Refers to the Series 4 gold fractionals struck without a mint name (i.e Series NM 4)
NW	No weight
OD	Obverse Die
PB	Pellet below
PL	Pellet left
PR	Pellet right
RD	Reverse Die
RG	reverse gamma
Sol	Solidus
Sem	Semissis
Tre	Tremissis
W	Western

Technical Terms and Abbreviations:

AVG	Average (i.e. the Mean)
LA-ICP-MS	Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry
MEAN	Strictly the arithmetic mean; the sum of a set of values divided by the number of individual values in the set
MED	Median. When a set of values is ranked in ascending order the median is the middle value
MODE	The value that occurs the most within a set of values
MAX	Maximum
MIN	Minimum
PAA	Proton Activation Analysis
Parameter	Population parameter, i.e. a value which is accurate for the population as a whole. The statistical analysis in this dissertation is largely concerned with estimating population parameters from sample data
SG	Specific Gravity
STDV	Standard Deviation. A measure of the dispersion of a dataset from the mean; the standard deviation is the root mean square of the difference between each individual value in the dataset and the mean value for the dataset
CI	Confidence Intervals. A range of values so defined that there is a specified probability (always 95% in this dissertation) that the value of a parameter lies within it
WT	Weight (always in grams)

PREVIOUS SCHOLARSHIP

As I outlined on p. 28, several factors, including small size and rarity, create a number of problems associated with studying the early Islamic precious metal coinage of North Africa and the Iberian Peninsula. Despite these difficulties, the uniqueness of these coins appears to have caught the interest of collectors and academics from an early period.

Scholars first published examples in general catalogues at the end of the eighteenth century. This was followed approximately thirty years later by a period of intense investigation of the coins, particular their legends. By the end of the nineteenth century, many of the great European museums had published comprehensive catalogues of Islamic coins, greatly increasing the number of coins available for study. The earlier analysis, combined with the larger number of specimens available for study, provided modern scholars with the foundation to embark on a more detailed analysis of the coinage, beginning in the 1950s.

EARLIEST RECORDINGS

The scientific study of coinage began over 500 years ago, but it was not until the beginning of the nineteenth century that Islamic coinage became an object of study, with the publication of the first major catalogues.[36] Given the relative scarcity of the North African and Iberian Peninsula coins it is interesting how often they appear in the earliest works, with examples in Adler (Figure 16 below),[37] Marchant,[38] and Marsden.[39]

36 BACHARACH 1997, p. 9.

37 ADLER 1792.

38 MARCHANT 1818.

39 MARSDEN 1823.

Figure 16: Series NA 3 solidus, dated 98/716-17. Image from ADLER 1792, Tav. VII, Cat CXI. Adler read the date as (7)98 CE and misinterpreted the obverse legend as the name of the Byzantine emperor Constantine VI. (scale x3)

The earliest works published were general studies of Islamic numismatics and/or antiquities. At the same time as the publication of the above works, however, we see the beginning of a separate scholarly tradition in Spain that focused exclusively on Islamic coins of the Iberian Peninsula. This tradition began with José Antonio Conde, a member of the Spanish Royal Academy, who published a monograph on Islamic currency in 1817.[40] Two other prominent Spanish figures, P. Artigas and Don Antonio Cabrera, also compiled information on Spanish Islamic coinage. Although their work was never published, the information collected helped to inform a new generation of Spanish scholars who had access to their work later in the nineteenth century.[41]

40 CONDE 1817.

41 CANTO 2001, pp. 11-20.

EARLIEST ANALYSIS

European scholars began to place the early Islamic precious metal coins of North Africa and the Iberian Peninsula into their historic context and make a concerted effort to decipher the difficult legends beginning in the 1830s. The efforts of de Saulcy, Longpérier, and Lavoix were particularly instrumental in the analysis of the coins, although the work of John Walker and others later supplanted their efforts (see p. 50 below).

De Saulcy began this movement, when at the urging of a colleague he scrutinized the coinage in various numismatic cabinets, and 'discovered' a group of coins that he described as "une série de charmantes petites monnaies d'or et de cuivre", and that had until his examination been classified as barbaric Byzantine issues. De Saulcy's work on the 'charming little coins' provided some of the first interpretations of the Latin legends on the North African precious metal issues. [42]

Longpérier, and Lavoix, aided by newly accessible specimens, built on the work of de Saulcy, analysing and debating the meanings of the highly abbreviated legends found on the coins in various academic journals. Importantly, these two scholars, besides providing the basis for interpretations of the legends by later scholars, identified the mint names for the Series 2 coins as *Spania* and *Africa*, and eventually determined that the Series 2 solidi were dated by Indiction year.[43]

In Spain, the separate academic tradition that had begun at the beginning of the nineteenth century continued, although the Spanish scholars had access to the French scholars' work. The most significant Spanish scholar for this period is Antonio Delgado y Hernández, whose publications, although not numerous, are immensely

42 SAULCY 1839-41, pp. 347-362; 499-512; 385-398.

43 LONGPÉRIER 1851, pp. 725-729; LONGPÉRIER 1852, pp.135-141; LAVOIX 1851, pp. 671-679; LAVOIX 1852, pp. 61-4.

important. Delgado published two catalogues of important private collections in the 1850s, the first that of Garcia de la Torre and the second of Gustav D. Lorichs.[44]

Delgado's most important work was *Estudios de numismática Arábigo-hispania considerada como comprobante histórico de la dominación Islámica en la Península*.[45] This study can be considered the first truly comprehensive analysis of the Islamic coinage of the Iberian Peninsula. Delgado organized the division of the currency into appropriate series and phases. He also framed each period in its historical context, while cross-referencing it with other Islamic coins of the period. This work was a great step forward for Spanish numismatics, and not surpassed until the publication of Walker's catalogue. Unfortunately, this work was not published until 2001 but like the earlier work of Artigas and Cabrera, later Spanish scholars were able to access his manuscripts.

The work of Josef Karabacek completed the initial phase of analysis of the early Islamic coinage of North Africa and the Iberian Peninsula. Karabacek once again tackled the difficult legends on the coins, using as his basis for interpretation both the earlier Byzantine coinage and the contemporary epigraphic coinage struck elsewhere in the Caliphate.[46] Unfortunately, as Walker noted, many of Karabacek's interpretations are far-fetched, despite the author's assertion that with the writing of his essay "die einfache Lesung aller Legenden sei zu einem befriedigenden Abschluss gelangt."[47]

Although many of the interpretations of the abbreviated legends by the above scholars have now been proven wrong, their foundational ideas, particularly their recognition of the Latin version of the *shahāda* and other pious phrases on the

44 DELGADO 1852; DELGADO 1857.

45 DELGADO ET AL 2001.

46 KARABACEK 1870, pp. 455-493.

47 IBID., p. 457.

coinage, proved to be a huge step forward in the study of the monetary systems of North Africa and the Iberian Peninsula.

CATALOGUING THE GREAT EUROPEAN MUSEUM COLLECTIONS

The above theoretical work that laid the foundations for the study of Islamic currency was followed by the publication of catalogues and inventories of the large collections and numismatic cabinets. The last few decades of the nineteenth century saw a second wave of mostly institutional collections published.[48] Stickel's work in this regard is particularly interesting, as he appears to have been the first scholar to establish separate categories for the regional coinage of the Umayyad Caliphate. He divided the peripheral currencies of the Islamic world into an eastern and a western zone and referred to the coinage within the zones as "Landes Münzen", noting that these monetary systems developed separately from the coinage in the central lands of the Caliphate.[49]

Leading institutions completed several other important catalogues during this period. In Germany, Nützel catalogued the collection of the Museen zu Berlin (today's Berliner Münzkabinett); in Copenhagen, Østrup published a similar work for the National Museum of Copenhagen.[50] Additional catalogues were completed in Paris by Lavoix (Bibliothèque Nationale, Paris), in London by Lane-Poole (British Museum, London) and in Spain by Codera and Vives.[51] Later related works include that of Del Rivero and Brèthes.[52]

48 The first two of these catalogues published were STICKEL 1870 and TIESENHAUSEN 1873.

49 STICKEL 1870, pp. 68-79,

50 ØSTRUP 1938; NÜTZEL 1902.

51 LAVOIX 1887; POOLE 1875-90; CODERA 1879; VIVES 1893.

52 DEL RIVERO 1933; BRÈTHES 1939.

Although not adding substantially to the analysis of the coinage of North Africa and the Iberian Peninsula, the catalogues did give contemporary and later scholars the opportunity to scrutinize many more examples of the coins of every series. Unfortunately, some of the catalogues contain multiple errors and poor illustrations (e.g. Del Rivero and Brèthes) while others provide only brief descriptions (e.g. Codera). The lack of descriptions or very brief descriptions can be especially frustrating, as they make collating the same coins found in different catalogues more difficult. This is especially the case with the Spanish catalogues, where there is substantial overlap.[53]

THE 1950s

We can consider the 1950s to be the beginning of the period of modern scholarship for the early Islamic precious metal coins of North Africa and the Iberian Peninsula, with the publication of four important works.

The Coinage of the Umayyads of Spain (1950), by George Miles, was the first of these studies.[54] Although the nineteenth-century catalogues contain many examples of Series 4 dinars and dirhams of North Africa and the Iberian Peninsula, it was not until the publication of Miles's monograph that a detailed study of a portion of this coinage took place. His work included a general survey of the coinage, as well as a discussion of the inscriptions, epigraphy, and metrology. It also attempted to compile not only the examples found in the American Numismatic Society, but also those found in other collections, and it is still the only significant work providing a detailed discussion of the Series 4 precious metal coinage of North Africa and the Iberian Peninsula.

53 For example, the Museo Arqueológico Nacional in Madrid bought the Vives collection, which previously had absorbed other collections that Vives had made reference to in his work. MILES 1950, p. ix.

54 MILES 1950.

Miles's monograph was followed by John Walker's second volume of his *Catalogue of Muhammadan Coins in the British Museum*, published in 1956.[55] Like Miles's work, the catalogue includes not only the early Islamic precious metal coins of North Africa and the Iberian Peninsula housed in the British Museum, but also those coins found in many of the earlier catalogues. Walker not only published the most comprehensive compilation of the coins to date,[56] but also undertook a thorough re-examination of the legends on the coins of Series 1 through 3. In many cases, Walker continued to rely on the foundational work of the nineteenth century, but he provided his own readings of the coins in the British Museum and, where appropriate, corrected the earlier interpretations.[57]

Walker's catalogue was preceded by a lengthy article by André Guillou, who focused his attention on the transitional Arab-Latin coinage of North Africa and the Iberian Peninsula.[58] The importance of Guillou's paper appears to have been forgotten, likely due to the publication of Walker's catalogue, which failed to cite the paper. Guillou sketched out a monetary history of both North Africa and the Iberian Peninsula, summarizing the important historical events and describing the main coin types. Guillou also included a detailed discussion of the mints, legends and Indiction dating system.

The last significant work from this period is Navascués's article analysing the collection of Series IP 2 and IP 3 coins found in the Museo Arqueológico Nacional

55 WALKER 1956, pp. xxxix-li, 55-81.

56 Walker's status as the standard reference work for Series 2 and 3 Iberian Peninsula gold coins was supplanted with the publishing of BALAGUER 1976c. The now standard reference for Umayyad dirhams of all regions is KLAT 2002; Michael L. Bates has also compiled an unpublished database of the Series 1 to 4 North African and Iberian Peninsula coins (primarily gold with some North African copper coins). Bates kindly provided me a copy of his database and I compared my database to his in order to ensure the former's completeness.

57 WALKER 1956, pp. xcviii-ci.

58 GUILLOU 1955, pp. 52-95. This article was preceded by a shorter work. See GUILLOU 1953, pp. 58-65.

and the Instituto Valencia de Don Juan (both in Madrid).[59] This paper provided a detailed analysis of the legends, dating, and epigraphy of the two collections, and laid the groundwork for further efforts on Series IP 2 and IP 3, particularly the work of Balaguer (see Page 53 below).

The four major works from this decade laid the foundation for all of the scholarship that has since taken place. Miles's monograph, although touching on Series IP 3 bilingual coinage and providing at the time a comprehensive catalogue of Series IP 4, focused more on the Umayyad Emirate (138/756-316/929) and Caliphate (316/929-422/1031). Walker's catalogue is still significant but it suffered from the fact he did not have direct access to the majority of the coins he was describing, nor even, in approximately 30% of the cases, to illustrations. In addition, the typological organization of the catalogue ignored geography and chronology, making the sequence of the coins difficult to understand.[60] Guillou's paper provided a more thorough analysis than Walker did, but focused on fewer examples. Navascués's detailed study, especially with regard to the epigraphy, pointed the way forward to understanding the Series IP 2 coins, but there are numerous errors in his discussion of the metrology and interpretation of the legends.

Despite these flaws, the four publications opened the door to new interpretations of the typology and chronology of the precious metal North African and Iberian Peninsula coins, the most important of which are the works of Balaguer and Bates.

59 NAVASCUÉS 1959, pp. 5-66.

60 BATES 1986, pp. 235-37.

BALAGUER

Anna M. Balaguer contributed in several important ways to the study of the coins, particularly Series IP 2 and IP 3.[61] Her first contributions came in 1976, when she published two papers that, in addition to summarizing many of the important points from Walker, revealed multiple new examples of the various North African and Iberian Peninsula coin types and discussed the find locations of these coins.[62]

That same year also saw the release of her most significant work, *Las emisiones transicionales árabe-musulmanas de Hispania*, which has supplanted Walker's catalogue as the standard reference for the Series IP 2 and IP 3 issues. Although the book focused on the coins of the Iberian Peninsula, the fact that the fabric and legends of the Iberian Peninsula coins are derived from a North African prototype also meant that Balaguer had to delve into the history of the North African coins.[63]

Balaguer's work is important for this dissertation for several reasons. First, it provides a full explanation of the Indiction dating system and its interaction with the *hijri* dating system, a key component to the understanding of the Series 2 coins of both North Africa and the Iberian Peninsula. Secondly, Balaguer challenged the widely held belief that errors riddle the Series 2 coins. Instead, she correctly pointed out that the majority of the errors seem to occur at the end of the obverse inscriptions (those composed of religious phrases)**.** In her view, the religious nature of the inscriptions allowed for a certain degree of variation in their content, as it was the meaning that was important, not the precise wording. As we will see, this characteristic is found not only in the Iberian Peninsula coins that she focused on, but also in the North African coins prior to the Muslim conquest of the Iberian Peninsula.

61 BALAGUER 1976a, pp. 27-41; BALAGUER 1976b, pp. 32-51; BALAGUER 1976c; and BALAGUER 1976, pp. 225-41.
62 BALAGUER 1976b, p. 48.
63 BALAGUER 1976c, p. 161.

In 1988, Balaguer returned to the subject of the North African and Iberian Peninsula coinage. The resulting article is a summary of the chronology and typology of the Iberian Peninsula coinage (although again touching on the North African issues). She did, however, provide new findings, the most important of which is her discussion of a small group of Series 2 Iberian Peninsula solidi that she argued are examples of the very first precious metal coins struck on the Iberian peninsula (See p. 182).[64]

BATES

Michael L. Bates, the second important recent contributor towards our understanding of these coins, has a long association with the topic. Bates first touched on the subject when he reviewed Walker's catalogue in a paper that was critical of the overall state of the Islamic numismatic field. Bates levelled detailed criticism at certain aspects of Walker's catalogue, including his treatment of the North African and the Iberian Peninsula coins, pointing out that Walker's emphasis on typology ignored the geography and the chronology of the coins.[65] In his critique of Walker, Bates also touched on the problem of the mint attribution of the *nisf* (half dinars) and *thulth* (one third dinars) that the Umayyads minted between 91/709-10 and 103/721-22, challenging Walker's assertion that the coins were struck in *Ifrīqiya*. He instead argued, based on the chronology of the Series 2 and Series 3 coinage in North Africa and the Iberian Peninsula, that they should instead be attributed to the caliphal mint in Damascus.[66]

64 BALAGUER 1988, pp. 11-28.

65 BATES 1986, pp. 233-5.

66 IBID., p. 259.

Bates provided his most important contribution in 1992, focusing on problems of chronology, typology, and mint location.[67] Bates divided the early Islamic precious metal coinage of North Africa into four distinct series and although this typology is now superseded by the typology found in this dissertation, his categories still form its basis. In addition to the typology, Bates provided an overview of the history of the North African mint and its movement to Spain in 92-3/711-12 under Mūsā b. Nusayr, then governor of *Ifrīqiya*, pointing out the close link between the North African and the Iberian Peninsula solidi.

Bates wrote a second article on the North African coins in 1996. This largely reiterates his remarks from the 1992 article, but provides some interesting discussion regarding the legends on the Series NA 1 coinage. His conclusion that for a time the Muslim conquerors of North Africa struck the coins of Series 1 and Series 2 in parallel should be disregarded, as evidence instead suggests that only one mint operated in North Africa in the first decades after the conquest.

MODERN CATALOGUES

In the last 15 years, institutions have published a large number of high-quality catalogues that include significant numbers of Umayyad coins from both North Africa and Iberian Peninsula. The majority of these publications once again come from Spain, including the collections of the Real Casa de la Moneda,[68] the Real Academia de la Historia,[69] and the Museo de la Alhambra.[70] Modern catalogues covering the collections found in North Africa, meanwhile, are still scant. One catalogue of great

67 BATES 1992, pp. 271-89; BATES 1996, pp. 9-16.

68 CANTO AND IBRĀHĪM 2004.

69 CANTO ET AL 1997.

70 CANTO AND IBRĀHĪM 1997.

importance, however, is that of the collection of the Banque Centrale de Tunisie.[71] The publication of the specimens of this collection in a modern format with good photos provides important information, as we can assume that the majority of the coins come from the North African region.

The above catalogues make many more examples of the various specimens accessible, but contribute little in the way of analysis.

METALLURGY

There have been several studies of the metallurgy of the early Islamic coinage of North Africa and the Iberian Peninsula. Unfortunately, in nearly all cases, this has involved only a handful of coins and most have concentrated on the Iberian Peninsula issues.

In 1859, Quiepo undertook the first foray into the metrology of the Islamic coins of *Hispania* by conducting assays in Paris and Madrid.[72] Quiepo's work was followed by that of Ehrenkreutz, who, using the Specific Gravity method (see p. 74 for a description of this method), published the fineness of two Series IP 4 dinars from the Iberian Peninsula and 19 Series NM 4 fractionals.[73] This effort was followed by that of Gordus, who undertook a comprehensive analysis using Neutron Activation Analysis (NAA) of Umayyad dirhams from several collections. Unfortunately, Gordus only ever published a small portion of his data and I have therefore not included the dirhams in my metallurgical discussion.[74]

The 1970s and 1980s saw the beginning of a golden era in metallurgical testing, with the refinement of techniques, the application of new testing methods, and the

71 FENINA 2007.

72 This analysis consisted of a half dozen coins, only two of which are of interest for our study. QUIEPO 1859, pp. 165-7; 394-7.

73 EHRENKREUTZ 1959, p. 156.

74 GORDUS 1970, pp. 543-4; GORDUS 1972, pp. 127-48; and GORDUS 1974, pp. 141-62.

testing of a larger number of examples. Several studies during this period are relevant for this dissertation. In 1979, Balaguer published the results of Specific Gravity tests conducted on 33 early North African and Iberian Peninsula specimens located at the American Numismatic Society in New York.[75] This work provided a glimpse into the metallurgy of the North Africa and Iberian Peninsula coinage, but the majority of the examples tested were from Series 2, with few examples from Series 1, 3 and 4.

The 1980s saw the application of more sophisticated metallurgical testing techniques. In 1983, Morrisson et al. published the composition and fineness of 20 gold coins from the Byzantine mint in Carthage, spanning the entire period of issue (533 to 695).[76] In this paper the authors noted the consistent fineness of the Byzantine North African coins up until the Muslims' first seizure of Carthage in 695. They further noted, on the basis of the results of an analysis of three coins (struck between approximately 79-80/698 and 91-2709), that a devaluation of the coinage occurred once the Muslims began striking their own gold coins subsequent to their conquest of North Africa. Additional research on the composition and fineness of the gold coinage of the early Muslim mint in North Africa has been published in the last 15 years, but in most cases the analysis has focused on the same specimens first discussed by Morrisson et al 1983.[77]

Two further studies should be noted. In 1994, Canto provided an overview of the fineness of Series 4 dirhams and dinars of the Iberian Peninsula, referencing the work of Gordus and Balaguer.[78] The forthcoming study by Jonson et al comprises the most comprehensive metallurgical analyses yet undertaken for both the Byzantine mint in

75 This paper also published the results of SG tests conducted by W. Oddy on 12 coins in the Fitzwilliam Museum, Cambridge. I retested the ANS coinage as part of my study. The results of the tests conducted by Bates for Balaguer's paper and those conducted for this dissertation were similar. See BALAGUER 1979, p. 225-241.

76 MORRISSON ET AL 1983.

77 See ROUX 2000, GONDONNEAU ET AL. 2000 and GONDONNEAU AND GUERRA 2002.

78 CANTO 1994: p. 129-137.

Carthage and the early Islamic mint in North Africa up until the invasion of the Iberian Peninsula.[79] I rely extensively on this work in my discussion of the metallurgy of the precious metal coinage for the earliest coinage of Umayyad North Africa.

CIRCULATION

The scholarship dealing with the circulation of the early Islamic coinage of North Africa and the Iberian Peninsula can best be described as geographically and typologically uneven, with the most detailed work focusing on the Iberian Peninsula and southern France.

We have the already mentioned earlier work of Balaguer (see p. 53 above), who has summarized the finds of the gold transitional (Series 1 through 3) coinage in the Iberian Peninsula.[80] Dirhams finds have also been extensively analysed, with Martín conducting an analysis of all of the hoards in the Iberian Peninsula and North Africa.[81] For southern France, we have the work of Parvérie, who has compiled a corpus of all of the Islamic coin finds in that region.[82]

Barceló has published two important papers on the circulation of gold and silver coinage of North Africa and the Iberian Peninsula. The first paper, using data accumulated by Linder Welin and T. S. Noonan, discussed the significance of the finds of *al-Andalus* dirhams in Europe from 98/716-17 to 403/1012-1013.[83] He argued that, after the initial conquest of the Iberian Peninsula, there was a massive importation of silver coinage from the Orient, possibly for military stipends (*ʿaṭā'*). He also revealed that Post-Reform dirhams from North Africa and the Iberian

79 JONSON ET AL forthcoming.

80 BALAGUER 1976b. Belda reproduces Balaguer's work in BELDA 2003.

81 MARTÍN 2005.

82 PARVÉRIE 2014.

83 BARCELÓ 1983, pp. 5-18.

Peninsula never were a major part of the flow of silver from the rest of the Umayyad Caliphate to Eastern Europe. In a second article, Barceló analysed the apparent loss of access to a gold supply by the Muslims of the Iberian Peninsula, and the interaction and/or influence of the other contemporary monetary systems in the Western Mediterranean basin (e.g. Merovingian) on the North African and the Iberian Peninsula coinage.[84]

Little research has been conducted on circulation in North Africa, with the exception of Martín's description of the silver hoards. In 1979, a hoard of 700 Byzantine coins found in North Africa came on the market. The majority of this hoard, described by Morrisson, comprised coinage of Constantine IV, but one Series NA 2 solidi was included in this find.[85]

FURTHER ANALYSIS

Several additional publications have contributed to our understanding of the early Islamic precious metal coinage of North Africa and the Iberian Peninsula. The first is that of Pliego, who published a small hoard (4 coins) of Series IP 2 solidi found near Seville.[86] This article provides a detailed description of the coinage, as well as a discussion of the location of the early Iberian Peninsula mint. The second article is one that this author published in 2012, and provides an analysis of Series NA 2.[87] This work is important as it provides the first detailed description of the three distinct phases of this series, although I propose some revisions to these phases in this

84 BARCELÓ 1975, pp. 33-71.

85 MORRISSON 1980.

86 PLIEGO 2001.

87 JONSON 2012.

dissertation. A third paper, by Parvérie, focuses on Series NA 3, and is the most useful summary of this coinage to date.[88]

As mentioned on p. 50 above, the only detailed analysis of Series 4 coinage is that of Miles, who focused most of his attention on the coins of the Umayyad Emirate and Caliphate in the Iberian Peninsula. No publication of the same magnitude exists for the Series 4 coinage of North Africa. The only recent work of any significance is Klat's corpus of Umayyad dirhams, which provides illustrations of the various types for both regions, along with a list of mints and the years struck.[89] Klat's corpus does not, however, provide any sort of detailed analysis of the various types.

SUMMARY

Despite the long history of study of the early Islamic coins of North Africa and the Iberian Peninsula, a review of the scholarship to date reveals significant gaps in the research on this coinage. If one glances through Walker's catalogue, for example, it can be seen that the author considered many of his readings of the legends (and their interpretations) on the Series 1 and 2 coins to be uncertain.

More recently, scholars have tried to address some of the gaps found in Walker's catalogue, but their work has been uneven. The latest work has tended to gloss over the North African Series 1 issues in favour of the later, dated coins. No analysis has been undertaken on Series 2 and 3 in North Africa, outside of the general treatment by Bates and the recent article by Parvérie. The investigation of Series 4 precious metal coinage in both regions also has largely languished since the 1950s. Even the more inclusive analyses of the Iberian Peninsula Series 2 and 3 precious metal issues

88 PARVÉRIE 2013.

89 KLAT 2002.

(Navascués and Balaguer) would benefit from a review and update, as many more examples of these series have become known since the publication of their work.

METHODOLOGY

This dissertation looks at all of the evidence provided by the surviving Umayyad precious metal coinage of North Africa and the Iberian Peninsula in order to construct a numismatic history of these regions during the period 79/698 to 132/750. This will involve evaluating the work of previous scholars in the light of the new coin evidence. In some cases, this process will simply consist of illustrating the previous scholar's arguments, but in a more comprehensive context; in others, it will propose a new interpretation of the coinage.

I utilize three sources for the construction of the numismatic history of North Africa and the Iberian Peninsula during the Umayyad Caliphate. The most important source is the coins themselves. This source of evidence is then supplemented firstly by literary sources and secondly by a series of technical analyses: the calculation of the diameter and mint (i.e. weight) standards; metallurgical analysis, which investigates the elemental makeup of the gold coinage; and the estimation of the number of dies for each precious metal series.

THE COINS

The importance of coins as evidence in the construction of the history of North Africa and the Iberian Peninsula cannot be underestimated. This is due not only to the fact that little other archaeological evidence remains from the earliest Islamic period in either of the two regions,[90] but also to the lateness and often contradictory nature of the literary sources (see p. 66 below).

Coins contain a large amount of historical evidence despite their small size. The iconography of a coin can provide information on the contemporary visual culture,

90 Gillote and Nef provide a recent summary of the archaeological evidence in North Africa and the Iberian Peninsula. See GILLOTE AND NEF 2011.

while the content of the legends (especially if they contain mint names, issuing authorities and dates) can aid in understanding the administrative practices of government and contemporary customs, traditions and religious beliefs. Just as important is the 'unintended' information provided by coins, such as their weight, metallurgical make-up and the location of a find spot. Scholars can discern further additional information through an analysis of the minting technology and administration (mints, geographical centres, centralization vs. decentralization). The fact that coins were mass-produced also allows us to investigate the monetary systems of societies in a quantitative way.

The evidence from a single coin tells us little about a monetary system and only becomes useful when a researcher interprets the evidence found on and contained within the specimen in the context of an entire series and then compares that data to the information provided by other coins in the same region. Due to the limited information that can be derived from either a single coin or a small group of coins, I have compiled a database of surviving examples of the precious metal coinage of North Africa and the Iberian Peninsula (1850+ examples), thereby allowing the study of both single specimens and groups of coins.

The database is the largest collection of this material ever amassed. It comprises the relevant examples in both public and private collections (Table 1 below), and numerous examples gleaned from smaller collections, journal articles and auction catalogues.

Table 1: Major Collections Utilized in this Dissertation

Type of Collection	Collection	Location
Public	American Numismatic Society	New York
	British Museum	London
	Fitzwilliam Museum	Cambridge
	Ashmolean Museum	Oxford
	National Museum	Copenhagen
	Orientalisches Münzkabinett University of Jena	Jena
	Forschungsstelle für Islamische Numismatik, University of Tubingen	Tubingen
	Münzkabinett, Staatliche Museen	Berlin
	Staatliche Münzsammlung München	Munich
	Kungliga Myntkabinettet	Stockholm
	Bibliothèque Nationale	Paris
	Museo Archeológico de Córdoba	Cordoba
	Museo Arqueológico Nacional	Madrid
	Instituto Valencia de Don Juan	Madrid
	Casa de la Moneda	Madrid
	Banque Centrale de Tunisie	Tunis
Private	Khalili Collection	London
	Tonegawa Collection	Online
	Klat Collection	Thames

Despite the comprehensiveness of my database, it is never possible to accumulate 100% of all of the surviving examples of a particular series. For Series 1 through 4, however, I am confident that I have examined the majority of the known surviving examples with the exception of Series IP 2 and Series NA 4 and IP 4 dirhams. In the case of Series IP 2, new examples frequently appear in the auction catalogues and examples of which I am unaware are likely to be housed in regional museums in Spain and Portugal. As for the Series NA 4 and IP 4 dirhams, their relative

abundance suggests that many more are housed in both smaller public and private collections.

High quality images are essential for this database. Walker's catalogue is one of the best illustrated available, but in many cases the quality of images is poor. The public and private collections listed in Table 1 provided images or allowed me to photograph their collections.

I have obtained additional images in two primary ways. First, I scoured older auction and museum catalogues for coins (see Appendix A on p. 453 for the complete list), turning up numerous unstudied examples. The Internet has also been an important tool for the acquisition of images because in the last three years major auction houses and several collections have placed good quality images online. These images in turn, are currently being compiled into online databases, easing the search for examples. Some of the more notable sites are Coin Archives Pro, Zeno Coin Database, SixBid, and Numisbid.

I have examined approximately 95% of the coins in the database, either in person or via an image. I have not included in the typology of the dissertation those examples where an image is not available. In some cases the publications that record and/or describe the un-illustrated examples include the legends, but my experience has revealed that the legends in these publications cannot be considered accurate until an image is analysed and the reading of the legends is confirmed. For each of the coins where I have an image I have transcribed and interpreted the legends. Wherever possible I have also recorded the weights, diameter, fineness, provenance, and references to similar coins. This data provides the essential elements for the construction of the typology of each series.

LITERARY SOURCES

No contemporary and eyewitness account, whether in Arabic or Latin, has survived from the period of the conquests of North Africa and the Iberian Peninsula. The primary sources that do survive are few and fragmentary, and in many cases disagree on the chronology of events.[91]

No Byzantine historian left an account of the Muslim conquest of North Africa, although there are scattered references in the ninth-century chronicle of Theophanes the Confessor and ecclesiastical texts.[92] For the Iberian Peninsula, the primary Latin source is the anonymous *Chronicle of 754*, which provides an overview of the Visigoth and early Islamic history of the region.[93]

The Arabic sources for both conquests are much later. There are two surviving chronicles from the ninth century, that of Ibn ʻAbd al-Ḥakam (d. 870) and ʻAbd al-Malik b. Ḥabīb (d. 852). In both cases, they appear to have compiled material written in earlier periods.[94] The information provided on the conquest of the Iberian Peninsula in these sources is even more fragmentary than the information on North Africa, and it was not until the tenth century that Rāzī made a concerted effort to collect the traditions related to the conquest and arrange them in a chronological form.[95] Clarke has demonstrated, however, that even these 'early' works were more concerned with jurisprudence and morality than objective historical accuracy. Later chroniclers, such as Ibn Khaldūn (1332-1406), provide further detail without citing

91 CLARKE 2012, p. 5; For a list of primary sources dealing with the history of the conquest of North Africa, see KAEGI 2010, pp. 301-5; For a list of primary sources for the history of the conquest of Iberian Peninsula, see KENNEDY 1996, pp. 316-19.

92 KAEGI 2010, p. 34.

93 COLLINS 1994.

94 CLARKE 2012, pp. 23, 29.

95 KENNEDY 2008, p. 308.

many more sources than those above, and that detail must therefore be considered suspect.[96]

Clarke divides the recent work on the early Islamic historical tradition into two categories, which she terms 'optimistic' and 'sceptical'. The optimistic scholars, although acknowledging the difficulties associated with some elements of the texts, nevertheless believe that the primary sources can be used to reconstruct a chronology of events. The sceptics, on the other hand, argue that the early Islamic history as it has come down to us is largely imaginary, built on false perceptions of the past.[97]

As Clarke notes, even though the accounts of the conquest are formulaic, this does not necessarily mean that they provide the modern scholar with nothing of value.[98] Modern critical interpretations of the primary sources can still provide us with at least a sketch of the historical events in North Africa and the Iberian Peninsula in the seventh and eighth century, critical to our understanding of the historical context within which the coinage of these two regions was struck. The coins, in turn, can help literary scholars in assessing the veracity of the various texts.

Given the historiographical problems noted above, I chose a selection of secondary literature to supplement the evidence provided by the coinage in my construction of the numismatic history of North Africa and the Iberian Peninsula during the Umayyad Caliphate (see Numismatic History, p. 367). While I present the history as a seamless narrative, the reader should keep in mind that many of the events, and their dating, are subject to differing interpretations. The authors upon whom I will most rely for the conquest of North Africa are Kaegi and Christides.[99] For the history of the conquest of the Iberian Peninsula, I will turn to Collins and

96 JULIEN ET AL 1970, pp. 1-2.

97 CLARKE 2013, pp. 1-2.

98 IBID.

99 KAEGI 2010; CHRISTIDES 2000.

Kennedy.[100] In all four of these works, the authors are properly sceptical of the sources, but offer the context necessary to construct a monetary history. I will supplement the above secondary sources with others, including Ṭāhā and Djeit.[101]

TECHNICAL ANALYSIS

I have undertaken three sets of technical analyses as part of the dissertation: metrological analysis of the diameters (gold only) and weights (gold and silver) of the coinage; metallurgical analysis of the elemental makeup of the gold coinage; and die studies of each of the main series.

METROLOGY

The investigation of the diameter of the precious metal coinage is straightforward – simply measure the diameters of the examples, calculate the various averages, and then compare the results. The investigation of the weights is much more complicated, however.

The initial outcome in any investigation of the weights of the output of a mint is the determination of a mint standard, defined as the weight standard to which a mint or government struck their coins.[102] The examination of weights can also provide insights into the administrative practices of the mint, such as whether a mint struck a particular series *al marco*, where a fixed weight of metal was exchanged at the mint for a fixed number of coins; or *al pezzo*, with the mint striking coins that varied in weight within a narrow range.[103] Ultimately, the information provided by the weights of coins struck at a mint can be compared to the weights of coins struck at other mints. This comparison may provide important information regarding the evolution

100 KENNEDY 1996; COLLINS 1989.

101 DJAÏT 1967; DJAÏT 1973; ṬĀHĀ 1989.

102 SEARS 1997, p. 280.

103 STANNARD 2011, p. 427.

of the mint standard in a particular region and whether the mint standard was the same or different when compared to mints in other *junds* (provinces) within the Umayyad Caliphate.

There are a variety of statistical calculations that can be used in order to determine the mint standard. First a sample population is selected, and then the various averages (mean, median and mode) are determined. This is followed by a calculation of the standard deviation and confidence intervals of the mean, which provides important information regarding the precision of any of the calculations of the averages for the population as a whole. It is also useful to plot a histogram of the frequency distribution of the weights for each group of coins being analysed.

Once the statistical calculations are completed, a series of comparative analyses need to be undertaken, as statistical outcomes are of limited use if they are not contextualized. Mint standards do not exist in a vacuum, but are instead influenced by the mint outputs of previous regimes and by mint outputs under the same regime but earlier in the chronological sequence. They also may be influenced by contemporary mint standards utilized at other mints or, in the case of smaller mints, they may have been constrained by factors like technological competence, the need to rapidly recycle plundered gold, the need to strike a batch of coins in a hurry for army pay, etc.

The metrological analysis of the weights therefore seems straightforward: simply calculate the averages; select the most likely mint standard (perhaps within a weight range); and then compare this standard to other standards, both historical and contemporary. Unfortunately, both of these steps, statistical and comparative, are beset by difficulties.

There are several problems inherent in statistical analysis. If the sample size is small, or the sample in some way non-random, conclusions are necessarily tentative. For that reason, I have in some cases only been able to provide a range for the mint standard of a particular series. It is also important to select the appropriate statistical method. Scholars of Islamic numismatics have often used the mean in determining the mint standard,[104] but Sears has persuasively argued that the measurements of central tendency (mean, median, and/or mode) are not necessarily the best option. The use of the mean assumes a symmetrical distribution, where all of the measures of central tendency have the same value (i.e. it doesn't matter whether you use the mean, the median, or the mode).[105] This type of frequency distribution is found where coins have been minted *al marco*.

For many of the groups of coins discussed, however, the distributions are skewed to the left (see p. 305 for an example of a distribution skewed to the left). In this case, the coins are most likely to have been minted *al-pezzo*.[106] With a distribution skewed to the left, the weights of the majority of the coins will be above the mean, with the median above the mean and the mode above the median. The measures of central tendency do not therefore necessarily provide an appropriate measure of the mint standard.[107] Instead, Sears has adopted a method that determines the percentile of the weights of the sample above which very few coins at a particular mint were struck.

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104 For example, see MILES 1959, pp. 207-13 and GRIERSON 1960, pp. 241-64.

105 SEARS 1997, p. 278.

106 A sample from a population of coins newly minted *al-pezzo* would almost always have a symmetrical frequency distribution. However, once the coins had circulated three factors would tend to make the distribution left skewed: 1. Wear; 2. Clipping; and 3. (sometimes) the removal from circulation of the heaviest coins. A sample from a population of coins newly minted *al-marco* would also usually have a symmetrical distribution but the spread would be much greater (i.e. much greater standard deviation (STDV)). Once the coins had circulated exactly the same factors would be at work, although the left-skew would be much less noticeable because of the much larger initial spread. It is also possible that the frequency distribution would have a secondary peak as the need to produce x coins per pound might cause the mint to strike a few light (or heavy) coins to adjust the overall weight of each batch.

107 SEARS 1997, p. 280.

For dirhams he uses the 97th percentile, while for gold he suggests using a value between the 80th and 90th percentile. Sears suggests a lower percentile for the gold coinage because he believes that the mint would have more precisely measured the weights of the more valuable emissions.[108] I have therefore, where the distribution of a particular series skews to the left, included a percentile in the discussion of the mint standard.[109]

Additional difficulties exist when comparing the mint standards, as the comparison of standards between mints assumes that previous scholars have calculated standards, and that there is an agreement on the standard. Fortunately, for the Byzantine solidi of Carthage and the Visigoth tremisses of the Iberian Peninsula we have good information.[110] There is not, however, an estimation of the mint standard for the Byzantine semisses and tremisses struck at Carthage, and I have therefore provided a rough calculation based on the small number of weights recorded in Wroth and Grierson.[111]

The comparison of mint standards becomes even more problematic when we turn to the mint standard(s) of the Post-Reform dinars and dirhams struck elsewhere in the Umayyad Caliphate at the same time that the Umayyad mints operated in North Africa and the Iberian Peninsula. For both dinars and dirhams, the most frequently cited study is that of Grierson, who posited a 4.25 g standard for the Post-Reform gold

108 IBID., p. 280-83.

109 With the technology available at the early Islamic mint it was likely not possible to accurately weigh an individual coin, so the only way in which the mint could check the average weight of the coins it produced was to weigh a large number. There might then have been two stages of quality control in which lightweight and then heavyweight coins were weeded out. The best run mints were clearly capable of maintaining a high degree of uniformity. The smaller mints may often have had other priorities and the average weight of coins issued may have varied slightly over time without anyone bothering about it. Sear's methodology based on percentiles probably gives quite reasonable results for large Umayyad mints, but it needs to be made clear that there is no rigorous statistical justification for the methodology and it might not always be appropriate for all types of mint.

110 For the weight standards of Byzantine solidi in Carthage, see MORRISSON ET. AL 1983, p. 267-87. For the weight standards of Visigoth tremisses, see PLIEGO 2009, pp. 201-209.

111 WROTH 1908, pp. 292-4, 322, 338. ; GRIERSON 1966, pp. 348, 474, 553..

and 2.975 g for the Post-Reform silver.[112] Sears, who argues for a 4.28 g standard for the dinar and a 2.90 g to 2.95 g standard for the dirham, has challenged these two figures.[113] Given the lack of consensus over the Islamic weight standards, the results of the calculations beginning on p. 275 will be compared to both Grierson's and Sears's standards.

Furthermore, before analysing the metrological data it is important to consider the condition of the coins, as well as the data for the weights used in my calculations, which come from a large number of sources. I have only included those examples that I have either personally examined or that have a high-quality image. This allows me to eliminate duplicate coins from my calculations and all examples that are pierced, mounted, or that I have determined to be the product of irregular mints or modern fakes.

The weights of the examples used in the calculations below come from a variety of sources. In many cases I have been able to weigh the coins and I have also had access to Oddy's largely unpublished metrological data. Unfortunately, restricting my sample to only these two sources would have provided too few examples. I have therefore also recorded the data from other scholarly sources and from auction catalogues.

112 GRIERSON 1960.

113 SEARS 1997, p. 307-10.

METALLURGY

Two types of elemental analyses were undertaken for the study of the metallurgy of the early Islamic gold coinage of North Africa and the Iberian Peninsula – first, Laser Ablation – Inductively Coupled Plasma – Mass Spectrometry (LA-ICP-MS) and second, Specific Gravity.[114]

LASER ABLATION – INDUCTIVELY COUPLED PLASMA – MASS SPECTROMETRY

The Centre Ernest-Babelon performed elemental analyses using LA-ICP-MS on a representative sample of Islamic gold coins from North Africa and the Iberian Peninsula. The results of the analysis of some of the examples are still unpublished, and in those cases I will only be able to provide a summary of the results.

LA-ICP-MS is a non-destructive method for measuring the quantity of multiple elements in a metal object. It does this by removing a very small amount of material using an ablation laser.[115] At least three different ablations were carried out on each example. The ablated material is then transferred to a mass spectrometer, a device that not only measures the major elements of gold, silver, and copper, but also a large range of trace elements. It also has the advantage of establishing concentration profiles of the constituent elements from the surface of the coin toward its core. The drilled depth of the laser ranges usually from 0.2 to 0.3 mm for gold coins, but it can be increased if necessary. Depth profiles are used to determine the composition of the interior of the coin as the surface can be enriched with gold and also contaminated.[116]

114 The description of the methods used in the metallurgical analysis of the gold coinage of North Africa and the Iberian Peninsula is a summary of the description in JONSON ET AL forthcoming.

115 GRATUZE ET AL. 2004; DUSSUBIEUX and VAN ZELT 2004; BLET-LEMARQUAND ET AL 2009.

116 A depth profile for one of the examples tested (L105) is found in JONSON ET AL forthcoming.

SPECIFIC GRAVITY

Specific Gravity (SG) is specific to a metal and is the ratio between the coin's weight and the weight of the same volume of water.

The use of SG testing for the estimation of fineness for coins is now well established and has several advantages over other methods.[117] It is low cost, non-destructive and is one of the only methods of analysis that a researcher can carry out on site at the relevant collections. This method also eliminates the problem of surface enrichment that may occur through the reaction of the metal in the coin to acids in the soil after burial or by cleaning with a weak acid (sometimes undertaken by coin dealers). This is because the SG method samples the entire coin, giving a more accurate measurement than surface methods (e.g. X-Ray fluorescence).[118]

I constructed a device to take the SG measurements using specifications provided by Oddy (see Figure 17). The device consisted of a light weight metal 'gallows' that sits on the pan of the scale. The coins were suspended by a tungsten wire and cradle from the gallows into a cup holding perfluro-I-methyl decalin, the fluid preferred by Oddy and others due to its low surface tension and non-toxicity.[119] The cup itself rested on a thin piece of plywood on wooden blocks. This configuration means that the liquid itself was never part of the measurement, eliminating errors that would invariably occur due to the loss of small amounts of liquid whenever the coin was removed from the fluid.

117 ODDY and HUGHES 1972, pp. 96-107; ODDY 1998, pp. 147-57; ODDY and BLACKSHAW 1974, pp. 81-90.

118 BARTLETT, ODDY, and MORRISSON 2011, pp. 351-401. Portable XRF machines are also now available, but this does not eliminate the problem of surface enrichment.

119 ODDY and HUGHES 1972, p. 77-8.

Figure 17: Device used to conduct SG testing.

The measuring process and calculation of the SG (from which the fineness of the coins is derived) consists of six steps:

1. Weigh the coin in the air;
2. Weigh the wire cradle suspended in the liquid;
3. Weigh the coin suspended in the liquid in the wire cradle;
4. Calculate the SG using the following formula:

$$\text{SG of the coin} = \frac{(\text{Weight of coin in air}) \times (\text{SG of the liquid})}{[(\text{Weight of coin in air}) - (\text{Weight of coin in liquid})]}$$

5. Calculate the fineness using a chart.[120]
6. or Calculate the fineness using a theoretical formula (see below) if the copper content is known or can be estimated:[121]

120 The chart used for the estimation of the gold content using the SG method can be found in ODDY and HUGHES 1972, p. 81.

121 The typical SG test assumes an Au-Ag alloy and the formula corrects for the presence of Cu.

$$Au = \frac{\frac{1}{10.52} - \frac{1}{SG} + Cu \times \left(\frac{1}{8.92} - \frac{1}{10.52} \right)}{\frac{1}{10.52} - \frac{1}{19.3}}$$

with

Au and Cu equalling the contents of gold and copper as percentage of weight

(19.30; 10.52 and 8.92: SG of pure gold, silver and copper)

This process was repeated for each coin a minimum of five times. Further tests were conducted when necessary in order to achieve at least three consistent measurements.

FURTHER DATA INCORPORATED IN THIS STUDY

Twenty-six early Islamic coins from North African and the Iberian Peninsula were analysed in previous studies using Proton Activation Analysis (PAA), a method where the results agree closely in most cases with the LA-ICP-MS method.[122] I have included the results of these earlier tests both in my metrological analysis.

DIE ESTIMATION

In the majority of cases, the die from which a particular coin was struck can be identified and compared to dies used to strike similar coins. This is useful, as die studies, where a researcher determines the number of dies of a particular issue, can help quantify the relative or absolute size of an issue and shed light on its economic significance. The knowledge gained regarding coin production at individual mints in turn sheds light on the circulation of precious metals, as well as regional monetary policy. There are also two secondary benefits: First, the identification of all of the coins struck from a particular die can help in decrypting the often fragmentary legends of a particular series by recording the parts of the legends that are visible on

122 The coin is irradiated with protons produced using a cyclotron, and then the elements are measured using mass spectrometry. See ROUX 2000 and GONDONNEAU AND GUERRA 2002; For a discussion of the close agreement between the results obtained by LA-ICP-MS and PAA, see BLET-LEMARQUAND ET AL. 2009.

several coins and then piecing them together. Second, observing patterns of obverse and reverse die linkages can help to reconstruct relative chronology, especially when a series of coins does not bear a date.

Unfortunately, the estimation of the number of dies is not simple and is fraught with uncertainties. There are three main concerns in any die estimation method: the coin sample used in the die estimation may not be random; the sample size may be too small; and, finally, it is impossible to estimate the number of dies that broke very early in the production process.[123]

The estimation of the number of dies in any formula rests on the assumption that the sample is random. This may not be the case, especially when the sample is small. Worn coins may have been in circulation for a long time, but it is unlikely that samples from a hoard are representative of an entire issue.[124] It is likely, however, that the combination of coins from a large number of collections and auction catalogues will allow for a reasonably random sample, especially for those issues where a large number of examples have survived.

The second potential concern is the sample size. As I have already discussed, many of the early North African and Iberian Peninsula issues are relatively rare, and in some cases the number of examples known is so small that no meaningful estimate of total die numbers can be made (see discussion beginning on p. 352).

The third concern, the estimation of the number of dies that broke after a small number of coins were struck, is not possible to address, and that is why it is important to calculate the confidence intervals for the estimated number of dies.[125]

123 ESTY 2006, pp. 361.

124 IBID.

125 IBID., p. 362.

Two formulas are used in the estimation of the number of dies. The first formula estimates 'coverage' of each series, i. e. an estimate of the thoroughness of the sample used in the estimation of the number of dies. The coverage is the ratio of the number of coins in the original population struck by dies in the sample to the total number of coins struck by all dies. Coverage is not observable, but can be estimated using the following formula:

$$C_{est} = 1 - \frac{d_1}{n}$$

where 'd_1' is the number of dies represented by a single coin and n is the number of examples in the sample.

Once the coverage has been estimated the number of dies can be estimated using the following formula:

$$e_p = \left(\frac{d}{C_{est}} \right) \left(1 + \frac{d_1}{pd} \right)$$

In this formula, 'd' is the total number of dies, 'C' is the estimated coverage of the sample, 'd_1' is the number of dies represented by a single coin. The 'p' in the formula is a parameter that in our formula equals 1. The parameter is a function that identifies failure time and is used in probability theory and engineering in a sampling context. In a numismatic context, the lower the parameter value, the more variable the die lifetimes. The p-value is on a continuous scale, so 0.5 or 1 or 1.5 or 1.9 or 2.0 or 2.2 or higher are possible, but 1 (the parameter used in my calculations) is by far the simplest and most often used in non-numismatic contexts. It yields a highly variable die-lifetime, with some dies breaking very early and others lasting a long time.[126]

126 W. Esty provided the explanation of the parameter value on 30/7/2014.

With the establishment of my methodology completed, I will now turn to the Typology of the coinage circulating in North Africa and the Iberian Peninsula during the Umayyad Caliphate.

THE TYPOLOGY OF THE EARLY ISLAMIC PRECIOUS METAL COINAGE OF NORTH AFRICA AND THE IBERIAN PENINSULA

As stated on p. 32, the precious metal coinage of North Africa/*Ifrīqiya* and the Iberian Peninsula/*al-Andalus* can be divided into four distinct series: Series 1, the Two Imperial Bust type; Series 2, the Latin Epigraphic type; Series 3, the Bilingual type; and Series 4, the Post-Reform type. Series 1 through 3 is comprised of gold coinage only, while both silver and gold coinage is found in Series 4. The Islamic mint(s) only struck Series 1 in North Africa, with the following three series struck in both regions.[127]

	North Africa	Iberian Peninsula
Series 1 – Two Imperial Bust	✔	✖
Series 2 – Latin Epigraphic	✔	✔
Series 3 - Bilingual	✔	✔
Series 4 – Post-Reform	✔	✔

I will begin the typology with some general comments regarding various aspects of the coinage, followed by a detailed analysis of each of the four series.

DENOMINATIONS

The denominational makeup of the precious metal coinage of North Africa and the Iberian Peninsula varies by series. Table 2 sets out the denominations for Series 1 through 3.

127 Guillou provides a useful summary of the typologies utilized by earlier scholars. See GUILLOU 1955, pp. 87-90. For Walker's typology, see WALKER 1956, pp. xxxix-li; For Balaguer's typology, see BALAGUER 1988, pp. 11-28.

Table 2: Denominational Makeup of Series 1 through 3

Series	Denomination		
	Solidus	Semissis	Tremissis
Series NA 1	✓	✓	✓
Series NA 2, Phase 1	✓	✓	✓
Series NA 2, Phase 2	✓	✓	✓
Series IP 2	✓	✗	✗
Series NA 2, Phase 3	✓	✓	✓
Series NA 3	✓	✗	✗
Series IP 3	✓	✓	✓

As can be seen in Table 2, the administration in North Africa initially struck the earliest Islamic precious metal coinage, Series NA 1, in three denominations – solidi, semisses, and tremisses. This denominational system was borrowed from the Byzantine mint in Carthage, although as I discussed on p. 34, the denominational makeup appears to have changed, with the Islamic mint in North Africa striking more gold fractionals than had been previously utilized under the Byzantine monetary system. This denominational makeup continued until the invasion of the Iberian Peninsula.

The striking of semisses and tremisses was discontinued with the invasion of the Iberian Peninsula, with their place in the monetary system likely taken by the Visigoth tremisses already circulating in the region. Semisses and tremisses appeared again with the transfer of the main mint from the Iberian Peninsula to North Africa in 95-6/713-14, but were discontinued in 97/715-716, coinciding with the introduction of Series NA 4 dirhams in that same year. Series IP 3 semisses and tremisses appear to have been struck in small numbers at the same time as the Series IP 3, bilingual solidi in 98/717-18 (see p. 204).

The evidence also suggests that gold *nisf* and *thulth* were introduced in North Africa in 91/709-10, and that they continued to be struck (perhaps at a separate workshop from the transitional gold coinage) until 103/721-22 (see p. 246). In 97/715-16, thus, we have three denominations of gold in circulation in North Africa (Series NA 3 solidi and Series NM 4 *nisf* and *thulth*) in addition to the Series NA 4 dirhams, and this system remained in place until 103/721-22, when the system found elsewhere in the Caliphate of Post-Reform dinars and dirhams was adopted. In the Iberian Peninsula, Series IP 3 bilingual solidi gave way to Series IP 4 dinars and dirhams in 102-103/720-22, with a small number of *nisf* and *thulth* struck there for one year (102/720-21).

DATING

Dates appear on the solidi of three of the four series of the early Islamic precious metal coins of North Africa, with only Series 1 dateless.

The Series 2 solidi struck by the Islamic mint in North Africa prior to the invasion of the Iberian Peninsula are dated by the Indiction system (discussed on p. 36), while those struck during and after the invasion of the Iberian Peninsula bear both a *hijri* and Indiction date. Table 3 below begins with the striking of the last known Byzantine solidi of Carthage and gives an approximate correlation between Indiction, Christian and *hijri* dating. The Christian years begin on September 1st of each year in order to correspond with the Indiction date.

Table 3: Indiction Dates found on Series 2 Coinage

Indiction	Christian	*hijri*	Notes
IX (Θ)	695-6	76-7	Last Byzantine Solidi of Carthage
X	696-7	77-8	
XI	697-8	78-9	
XII	698-9	79-80	
XIII	699-700	80-1	
XIV	700-1	81-2	
XV	701-2	82-3	
I	702-3	83-4	
II	703-4	84-5	Series NA 2, Phase 1 Solidi
III	704-5	85-6	Series NA 2, Phase 1 Solidi
IV (IIII)	705-6	86-7	Series NA 2, Phase 1 Solidi
V	706-7	87-8	
VI	707-8	88-9	
VII	708-9	89-90	Series NA 2, Phase 2 Solidi
VIII	709-10	90-1	
IX (Θ)	710-11	91-2	Series NA 2, Phase 2 Solidi
X	711-12	92-3	Series IP 2 Solidi
XI	712-13	93-4	Series IP 2 Solidi
XII	713-14	94-5	Series IP 2 Solidi Series NA 2, Phase 3 fractionals?
XIII	714-15	95-6	Series NA 2, Phase 3 Solidi Series NA 2, Phase 3 fractionals

It should be noted that Table 3 above does not wholly correspond with similar tables produced by either Walker or Balaguer.[128] This is due to the differences in their respective approaches. In both cases they tried to correlate the Indiction year to either a particular Christian (Walker) or *hijri* (Balaguer) year. It is understandable why Balaguer chose her approach, as the Indiction years in which the Series IP 2 solidi were minted line up quite closely with the *hijri* years. In Walker's case, however, the emphasis on the Christian year leads to dating errors in his catalogue from Indiction III onwards.

Hijri dates began to be placed alongside Indiction dates on the solidi beginning with Series IP 2 in Indiction X (92-93/711-12). Considerable effort has previously

128 BALAGUER 1976c, p. 38; WALKER 1956, p. xiix.

attempted to reconcile the *hijri* and Indiction dates found on the Series IP 2 coinage, as the *hijri* date is often different from what we would expect given the Indiction date. Balaguer, for example, read the following *hijri* dates on the 22 Indiction XI examples she analysed: 90/709 (3); 91/710 (2); 93/712 (1), 94/713 (15) and 95/714 (1).[129] What is clear from my investigation is that the *hijri* dates, which are found at the end of the marginal legend, should be disregarded when analysing the dating of the Series IP 2 (and also Series NA 2, Phase 3) examples (see discussion beginning on p. 157). As I will show, the truncation of the marginal legend is a common feature on the coinage of Series 1 through 3, leading to errors in the *hijri* dates.

The Islamic mints beginning with the striking of the Series NA 3, bilingual solidi in 97/715-16, abandoned the Indiction dating system. The *hijri* dates on Series NA 3 appear to be accurately engraved. The Series IP 3 solidi, struck in 98/715-16, again show discrepancies in the dating, however. The obverse marginal legend of Series IP 3 has a Latin mint/date formula, while the reverse marginal legend has an Arabic mint/date formula. The Arabic mint/date formula is consistent, with all of the coins having 98/715-16 as the date. The Latin mint/date formula, in contrast, has engraving errors that lead to errors in the date (see p. 203).

Series 4, the Post-Reform coinage, bear the *hijri* date with no discernible errors.

MINTS

Four mint names, likely representing two mints, are found on the Umayyad precious metal coinage of North Africa and the Iberian Peninsula struck during the Umayyad Caliphate: *Africa*, found on Series NA 2 and Series NA 3; *Ifrīqiya*, found on Series NA 4; *Spania* found on Series IP 2 and Series IP 3; and *al-Andalus*, also found on Series IP 3, as well as Series IP 4. A fifth mint name, *al-Maghrib*, is found on one

129 BALAGUER 1976c, pp. 38-45.

Series NA 4 dirham dated 105/723-24, and is discussed separately on p. 229. Although Series NA 1 does not bear a mint name, evidence provided by die links suggests that this series was struck in the same workshop that struck Series NA 2 (see discussion beginning on p. 379).

AFRICA/IFRĪQIYA

The location of the Islamic mint in North Africa that struck precious metal coinage is unknown. Walker suggested Qayrawān as the location for this mint,[130] and this was most likely the case for the majority of the period. In the initial stages of the conquest of North Africa, however, the mint may have been a mobile one, striking Series NA 1 in response to the changing monetary needs of the Muslim army. For Series NA 1, we cannot even be entirely certain that the coinage was struck at a single mint (it does not bear a mint name), although this was most likely the case.

The mint name *Africa* is abbreviated in a variety of ways. For Series NA 2, the mint name is most often abbreviated as AFRC, although it is occasionally found as AF or AFR. For Series NA 3, the mint name is abbreviated as AFRK. The mint introduced the name *Ifrīqiya* in 97/715-16 when it began to strike Series NA 4 dirhams, followed in 100/718-19 by dinars. This would remain the mint name for the rest of the Umayyad period.[131]

The Series NM 4 *nisf* and *thulth* do not bear a mint name, but as I argue beginning on p. 246, they were likely struck in North Africa. It is unclear, however, whether they were struck at the same mint as the other North Africa coinage, or at a separate workshop.

130 WALKER 1956, p. xlviii.

131 The use of the mint name 'Africa' on Series 2 and Series 3, followed by the adoption of the mint name '*Ifrīqiya*' with the introduction of Series 4, strongly suggests that '*Ifrīqiya*' is derived from 'Africa'.

SPANIA/AL-ANDALUS

The evidence provided by the coinage suggests that multiple Islamic mints were in operation in the initial stages of the conquest of the Iberian Peninsula. As I discuss throughout the Series IP 2 section of the typology beginning on p. 145, as well as on p. 390, Mūsā b. Nuṣayr set up a main mint in the Iberian Peninsula upon his arrival in Ramaḍān 93/June-July 712, with an unknown number of secondary mints operating with other elements of the army. The mints during this period were unquestionably mobile, striking coinage as needed and as booty became available.

Bates has argued that Mūsā transported elements of the North Africa mint with him when he journeyed to the Iberian Peninsula.[132] Bates' argument rests on two pieces of evidence: the fact that the North Africa mint ceased striking Series NA 2 with Mūsā's departure; and a comparison of the legends found on the North Africa and Iberian peninsula coinage. As I will show, acceptance of Bates' argument rests on the sequence of coinage struck in the Iberian Peninsula (see p. 392). The coin evidence does confirm, however, that the main Iberian Peninsula mint striking Series IP 2 returned to North Africa with Mūsa in 95-96/713-14 (see p. 188).

The Muslims initially established their capital at Seville, and it is probable that at least some of the Series IP 2 coinage was struck in this location. The *al-Andalus* governor, al-Ḥurr, moved the capital to Córdoba in approximately 98/716-17, and this is the likely location of the mint until the end of the Umayyad Caliphate.

Series IP 2, the earliest Islamic coinage struck in the Iberian Peninsula, bears the mint name *Spania*, which in most cases is abbreviated as SPN. The abbreviation was changed to SPAN with the introduction of Series IP 3. This series bears a second

132 BATES 1992, pp. 273-77.

mint name, *al-Andalus*, and this is the mint name found on all of the Series IP 4 precious metal coinage.

ABBREVIATIONS AND EPIGRAPHY

The legends and epigraphy, whether Latin or Arabic, are discussed in detail later in the typology, and I will not repeat the discussion here. A few words should be said however, regarding the abbreviation system and epigraphy of the coinage that bears Latin legends.

ABBREVIATIONS

The Latin legends found on Series 1 through 3 are abbreviated in many different ways. It appears that the engravers of Series NA 1 attempted, wherever possible, to spell out the words in the legends in full, or use the first few letters of the word as the abbreviation. The length of the legends found on some of the dies of this series, however, meant that as the engraver came to the end of the margin he often truncated the legend or began to abbreviate words as single letters. The one exception to this abbreviation convention for Series NA 1 is *deus*, which is abbreviated in multiple ways (DS, DVS or spelled out in full).

A large number of abbreviation methods were used for the legends found on Series NA 2, Phase 1, despite the fact that the legends in most cases say the same thing. The lack of consistency in the abbreviation methods for this phase is discussed on p. 118. Abbreviation methods became much more consistent with the introduction of Series NA 2, Phase 2 and continued to vary little within each series until the discontinuation of Latin in 99/717-18.

EPIGRAPHY

In the seventh century, the die-sinkers of Byzantine Carthage were using a mixture of Greek and Latin in their inscriptions, leading to a wide variety of letterforms.[133] This trend continued with the early engravers of post-Muslim conquest North Africa. Certain letters, however, vary considerably more than others.[134] These letters are:

D – appears as 'ᗡ' or 'ᗺ' in Series NA 1. For Series NA 2, Phase 1 it is most frequently 'ᗺ', while for Phase 2 it changes to 'ᗡ', and remains in this form for the majority of the examples until the discontinuation of the Latin legends.

L – appears most frequently as 'Λ' or 'ᘻ' throughout Series NA 1 and Series NA 2, Phases 1 and 2. The Byzantine mint in Carthage used the form 'ᘻ' in the period c. 610-620, the likely date of the Byzantine prototype of the Series 1 coins.[135] This letter also appears as 'ᒐ' and 'L' for some of Series NA 2, Phase 1 examples. The introduction of Series IP 2 sees 'L' become the dominant letterform, and this continues to be the case for Series NA 2, Phase 3. The form returns to 'ᘻ' on the Series 3 coinage.

E – appears as 'Ɛ' in Series NA 1. It is found in this form or as a 'E' on Series NA 2, Phases 1 and 2. The 'Ɛ' occurred frequently on Byzantine Carthaginian coins of the late seventh century, while 'E' occurred only in Western mints of the Byzantine Empire.[136]

S – is frequently reversed. Reverse 'S's (i.e. 'Ƨ') first appears on two coins of Series NA 2, Phase 1, but this was likely an engraver error. The systematic substitution of

133 GRIERSON 1966, p. 103.

134 I use the Athena Ruby font, developed by Dumbarton Oaks, for the reproduction of the Latin legends found on the coinage.

135 IBID., p. 104.

136 IBID.

‘Ƨ’ for ‘S’ begins in Series NA 2, Phase 2 and continues until Latin legends are discontinued, although both forms are often found on the same coin.

V – sometimes appears as ‘Ƥ’ on Series NA 1 and Series NA 2, Phases 1 and 2.

Ligated letters also appear on the early Islamic coinage of North Africa with the introduction of Series NA 2, Phase 1. They are:

HN – for MN. Used in the abbreviation of *omnium creator* in Series NA 2, Phase 1.

MN – for MN. Used in the abbreviation of *omnium creator* in Series NA 2, Phase 1.

NN – for NN. Used in the abbreviation of *non* and for the abbreviation of *in nomine* on the majority of the coins of Series NA 2, Phase 2.

SERIES 1 (THE TWO IMPERIAL BUST TYPE)

SERIES NA 1

Series NA 1, the earliest Islamic gold coinage struck in North Africa, has neither dates nor a mint name in the legends. Each of the three denominations (solidi, semisses, tremisses),[137] feature on the obverse busts of the Byzantine emperor Heraclius and his son and co-emperor Heraclius Constantine surrounded by a legend in Latin (Figure 18 below). The North Africa mint altered the design of the obverse of the Byzantine coinage by removing the cross at the top of the obverse field and modifying the cross on the crowns of the Emperor and his son into a trefoil design.[138] The reverse field was also modified, changing the cross-potent found on the Byzantine coins into a T-bar on steps or a globe on a pole on steps, surrounded by a second legend in Latin. Other design features include a single beaded circle outlining the obverse and reverse of the coins and in some cases pellet(s) or a reverse gamma in the reverse field (see p. 207 for discussion of pellets and other ornamentation).

Figure 18: Series NA 1 solidus, no mint or date. CNGNo2, L:230. Image courtesy of Classical Numismatic Group, Inc. (4.26 g) (scale x4)

No one has previously attempted to develop a typology of the Series NA 1 coinage, although Walker, in the descriptions of the examples of this type in his catalogue, did

137 A corresponding *fulūs* coinage was also minted, likely at the same time as the gold Series NA 1 coinage. See JONSON forthcoming.

138 The trefoil design is very occasionally found on Heraclian solidi, and more frequently on Byzantine folles (for example the Antioch copper coinage of Maurice).

describe two features of the coins that varied considerably – the obverse iconography and the legends. The differences in the obverse iconography, with some busts very well executed and others schematic, are useful for developing a relative chronology of the Series NA 1 coinage (see p. 379). The differences in the iconography are not, however, as clear-cut as the differences in the legends, and I have therefore chosen to develop the typology based on the legends.

Walker identified five unique obverse and six unique reverse legends on the Series NA 1 examples found in his catalogue, not including possible variants and garbled legends. According to Walker, these legends appeared to be either Latin variations of the *shahāda*, such as *non est deus nisi ipse solus cui socius non est* (There is no god but He alone, to whom is no partner); shorter legends that capture the essential elements of the *shahāda*, such as *deus tuus deus et alius non est* (Thy God is God and there is no other); or those that highlight certain attributes of God, such as *in nomine tuo deus vivificus* (or *vivificans*) *et misericordis* (In Thy name, O life-giving and merciful God).[139] Although many of Walker's reading of the legends can no longer be considered correct, his catalogue did reveal the wide range of different legends found on the coins of Series NA 1.

I have recorded 55 examples of the gold Series NA 1 coinage and divided them into seven obverse legend types (Table 4 below). Each of the legend types will be discussed separately, beginning with the NONEST type, the Series NA 1 type whose imagery adheres most closely to the Byzantine prototype.

139 WALKER 1956, pp. xcviii-xc, 54-58.

Table 4: Series NA 1, Divided by Legend Type

Legend Type	Denomination			Total by Legend Type
	Solidi	Semisses	Tremisses	
NONEST	8	2	13	23
DEUSINNOMINE	1	0	1	2
INNOME	1	2	5	8
DUSTUS	2	5	5	12
DEUSNON	1	1	1	3
MISERICORDIS	0	1	2	3
Unclear	0	0	4	4
TOTAL	**13**	**11**	**31**	**55**

NONEST TYPE

Figure 19 Series NA 1 solidus, NONEST type, undated. CNGVI, L:1189. Image courtesy of Classical Numismatic Group, Ltd. (4.36g) (scale x4)

The early Islamic mint of North Africa struck the 23 surviving examples of the NONEST type from eight obverse and 15 reverse dies. The legends found on the obverse dies of every known example of every denomination of this type are set out in Table 5.

Table 5: Obverse Legends and Dies of the NONEST Type

Legend	Die No.	Denomination			Total by Die
		Sol	Sem	Tre	
NONЄST6SNISIPSЄSOLCSЄTNONABЄ[TV]	1	1	0	0	1
. . . . . [ƏS] . . . . . [PSЄ]SOL[CI]SЄTN[ONAB]	2	1	0	3	4
NONЄSTƏNISIIPSЄSЄSOLCISЄT	3	2	0	1	3
NONЄSTƏSNISIIPSЄSOLCISЄI	4	2	1	6	9
. . . [Є]STƏS[NI]SIIPS[ЄSO]	5	1	0	0	1
NONЄSTƆNISIIPSЄSOL[CI]S	6	0	1	1	2
NONЄSTƏSNISIIPSЄS[OLC] . . [ЄI]	7	0	0	2	2
. . . . ST6SNISIIPSЄSOL	8	1	0	0	1
	TOTAL	8	2	13	23

Although most of the examples do not provide complete and readable legends, they appear to be remarkably consistent. The obverse legends on all 23 coins begin with the letters NONESTDSNISIIPSESOLCIS, (correcting for missing letters and slight variations).[140] In one case, OD6 in Table 5, this constitutes the entire legend. For the 23 remaining examples, NONESTDSNISIIPSESOLCIS is followed by one of four possible endings: ЄTNONABЄ[TV]; ЄTN[ONAB]; ЄT; or ЄI. A comparison of the five legends allows us to reconstruct the relationship between them:

NON ЄST DS NIS IPSЄ SOL CS ЄT NON AB Є[TV]
NON ЄST DS NISI IPSЄ SOL CIS ЄT NON AB
NON ЄST DS NISI IPSЄ SOL CIS ЄT
NON ЄST DS NISI IPSЄ SOL CIS Є*I*
NON ЄST DS NISI IPSЄ SOL CIS

They all appear to be the same legend, although shortened to a greater or lesser degree. In the case of the examples whose obverse legend ends in 'ЄI', the final 'I' can most easily be explained as a deformation of the 'T' of 'ЄT' (indicated by italics).

140 Obverse die 1 is missing one 'I' of NISIIPSE and the 'I' of SOLCIS. The two solidi and one tremissis of OD3 show a doubling of the 'SE' of IPSE.

Despite Walker's errors in the reading of the obverse legend of the NONEST type, we can see through an analysis of the legend on the example in Figure 19 above that his reading of the first part of the obverse legend appears to be correct:

Legend: NON ЄST DS NIS IPSЄ SOL CS ЄT NON AB Є[TV]
Reading: NON EST DeuS NISi IPSE SOLus

This is the first phrase of the *shahāda – non est deus nisi ipse solus* (There is no God but He alone). The remainder of the legend on this coin, CSETNONABE[TV], is more difficult to decipher, especially given the uncertainty of the last two letters. One possibility is:

Legend: CS ЄT NON ABЄ[TV]
Interpretation: soCioS ET NON hABE[T] [V?]

With this reading, the English translation of the obverse legend would be 'There is no God but He alone, and he has no partners'.

There are two problems with this interpretation, however. First, it omits the last, barely readable letter of the legend ('V'?). Even more problematic, however, is the fact that the abbreviations of two of the words found in the second part of the legend do not begin with the first letter of the word (soCioS and hABET); such a reading would not agree with the standard convention for such abbreviations found on the other Series NA 1 examples. Given the similarities between the fabric of the Series NA 1 coinage and those coins struck in Carthage by the Byzantines in the seventh century, it has been assumed that the Muslim conquerors of North Africa employed some of the Byzantine mint personnel after they captured Carthage.[141] If this were indeed the case, these workers would likely have retained the abbreviation conventions that were in place in the mint prior to the conquest.

141 BATES 1992, p. 272.

In general, the abbreviation of each of the words on the legends of the seventh-century Byzantine solidi began with the first letter of the word, although the subsequent letters varied considerably. The usual obverse legend found on the Byzantine coinage followed the format of 'DN' (for *Dominus Noster*), the Emperor's name, and then 'PPAVC' (for *PerPetuus AUGustus*). The reverses of the solidi carried the legend *VICTORIA AUGUstus*, with *CONOB* at the bottom of the coin.[142] As can be seen, in each case the abbreviation of the word begins with the first letter of the word.

There are at least two exceptions to this rule, however. The Carthaginian solidi of Heraclius omitted the first letter of his name - 'H' (i.e. ERACLIO), the same letter of the word *habet* that is omitted on the obverse legend of the NONEST type,[143] while the Carthaginian solidi of Constantine IV (r. 668-685) sometimes omitted the 'C'.[144] Given these exceptions, and the fact that the legends on the Series NA 1 coinage are so much longer and so different from Byzantine Carthaginian issues and therefore may have necessitated new abbreviation conventions, the above interpretation of the obverse legend of the NONEST type cannot be ruled out.

There are other possible interpretations of the second phrase of the obverse legend. The letters 'CS' could be CuiS (anyone) as suggested by Walker, or alternatively ComiteS (companions). Another possibility is that the 'CS' stands for Cui Socios, but given how the other words of the legend are abbreviated it is unlikely that the engraver would have chosen to use single letters to abbreviate a word, especially in the middle of the legend. The final possibility is that the 'C' of 'CS' is an error for 'V',

142 GRIERSON 1968, pp. 99-102.

143 IBID, p. 343.

144 IBID, p. 546.

which would mean that the last word of the first phrase of the legend would be SOLVS. This would not change the reading of the legend.

The last few letters of the legend also suggest other possibilities. The last word could be hABETVr (have; possess), but this is a passive and would therefore not take the object *socios*. A final possibility that should be considered is that the legend ends in ET NON AB Eo (and not from him), but this again does not solve the problem of the barely readable letters 'TV' at the end of the legend. For now, I will propose that the obverse legend on the NONEST type is *non est deus nisi ipse solus socios et non habet*, but future analysis may reveal a better reading.

The difficulty in the analysis of the Series NA 1 coinage is clearly demonstrated by the preceding discussion of the obverse legends on the NONEST type. The examples of this type, from eight different obverse dies, all appear to have the same legend, although shortened to a greater or lesser degree, but even with a sample size of 23 it is still difficult to conclusively establish the interpretation of the obverse legend. It is also difficult to determine whether the truncation of the legends was progressive, or whether different die engravers were simply more or less capable of putting the complete legend on the coin. It does imply that the early die engravers of Islamic North Africa faced the same problem as the previous Byzantine die engravers of Carthage, as they struggled to fit the complete legend on the small module of the coin, and therefore shortened it by removing the last few letters (e.g. 'PPAVC' for *Perpetuus Augustus*, becomes 'PPAV', 'PAA', 'PA', or is eliminated altogether).[145] This task would have been even more difficult for the engravers at the Islamic mint, who had to contend with a much longer legend.

145 GRIERSON 1968, pp. 99-103.

The reverse legend of the NONEST type is even more difficult to interpret than the obverse legend (see reverse dies in Figure 20 below, as well as the reverse dies of Figure 18 and Figure 19 above). Table 6 sets out the 23 reverse legends of the NONEST type, from 15 dies.

Figure 20: Reverse dies of Series NA 1 examples of the NONEST type. On left: Series NA 1 solidus, struck with RD7. W 143. Image courtesy of the Trustees of the British Museum, London. On right: Series NA 1 tremissis, struck with RD10. W.12=Ø44. Image courtesy of the National Museum, Copenhagen. (scale x4)

Table 6: Reverse Legends and Dies of the NONEST Type

Legend	Field	Die no.	Denomination			Total By Die
			Sol	Sem	Tre	
ϬЄϬNC[I]PIAS[O]AЄ[T] . . . . . NO[AV]C[:]SC	G/3	1	1	0	0	1
[ϑЄϑ] . . . . IASMAЄTOMI[A]ININM	T/4; pr	2	1	0	0	1
. . . . . ASMAЄTOMNAIN[I] .	T/2	3	0	0	3	3
[ϑ] . . . . . [PI]ASMAЄTOM[AI]NIN	T/2 pr	4	0	0	1	1
ϑЄϑNCIPIASMAЄTONMA	T/3; pr	5	2	0	0	2
ϑЄϑNCIPA[S] . . . . . MA[I]	T/2	6	0	0	1	1
ϑЄϑNOCIASMAЄTOMNAN	T/3; pr	7	2	0	0	2
. . . . . .[M]AЄPOMN[AI] . . .	T/3; pr	8	1	0	0	1
[ϑЄ] . . . . . [N]A[INI]	G/3	9	0	1	0	1
ϑЄϑNMCIASMAЄPOMNAIN	T/2	10	0	0	4	4
. . . . . AS[M]AЄTOM[NA]N	T/2; 2pr	11	0	0	1	1
ϑЄϑN[CPI] ASMAЄT[OMNAIN]	T/2	12	0	0	1	1
ϑЄ[ϑЄ] . [C] . PA . . . . . [O]MNAIN[I]	G/3; ??	13	0	1	0	1
ϑЄ . . . . . ЄTOMN[A]MANSC[I]	T/2	14	0	0	2	2
ϬЄϬN[V]B[S]ME[T]OMNNINMA[NO]	T/4	15	1	0	0	1
	TOTAL		8	2	13	23

The legends on 13 of the 15 NONEST type reverse dies appear to be similar,[146] with one of the following letter sequences:

DЄ *unclear* ЄT OMN A MAN SCI
DЄ D N CI PI AS MA ЄT OMN A IN MA
DЄ D N CI PI AS MA ЄT OMN A NIN
DЄ D NO CI AS MA ЄT OMN A N
DЄ D N*M* CI AS MA Є*P* OMN A IN . .

Like the obverse legends of this type, all of the reverse legends on these examples may in fact be variations of the same legend, but truncated to a greater or lesser degree. Unfortunately, even with 23 examples, reconstruction of the complete reverse legend continues to be elusive.

The reverse legends on two of the examples are significantly different from the other 21 specimens. I have transcribed the reverse legend on the solidus of RD1 in Table 6 (see *Figure **19*** above), which has the most complete obverse legend of the NONEST type, as DEDNC[I]PIAS[O]AE[T] . . . . . NO[AV]C[:]SC, but it is very difficult to read and many of the letters must be considered tentative. Even with this caveat, it is clear that the beginning of the reverse legend on this die closely adheres to that on the other 21 coins whereas the second part of the legend appears to diverge. The reverse legend on the solidus of RD15 in Table 6 - DEDN[V]B[S]ME[T]OMNNINMA[NO], in contrast, appears to begin differently (the sixth letter, 'B', is clear), although the ending of the legend is similar to the other coins of this type. Once again the reading of the legend on this die is tentative.

The problem of reading some of the reverse legends, and the greater variation in the lettering when compared to the obverse, presents greater interpretational challenges. Walker suggested two possibilities for the reverse legend:

146 The separation of the letters of the legends in the following list should not be taken to indicate the abbreviations of distinct words, but as a device designed to more clearly show the common features of the legends.

Legend: DЄ D NO CIAS MA ЄT OMNA N
Interpretation: DEus Dominus NOster CIAS MAgnus ETernus OMNiA Noscens?

or

Legend: DЄ D SNЄIPAS MA ЄT OMNAI NS
Interpretation: DEus Dominus SAPIENS MAgnus ETernus OMNIA NoScens?

Like his interpretations of the obverse legends, neither of Walker's two possible interpretations of the reverse appear to be correct, but unfortunately the revised and new readings in Table 6 and in Appendix A (see p. 469) do not readily suggest an alternative. Walker's suggestion of the retrograde word *sapiens* in his second interpretation does not appear to be accurate (the correct reading of the reverse legend of the semissis is found in Table 6; RD9). This is not only because the revised readings of the coins presented above appear to eliminate this possibility, but also because none of the coins of Series NA 1 have any other retrograde letters or words.

Although only conjecture, the obverse and reverse legends may in fact be an allusion to Qurʾān 13.30-31. Sura 13.30 contains the phrase 'He is my Lord, there is no God but He!', similar to the first part of the obverse legend on the coins above. The ending of the reverse legend could perhaps be ET OMNiA IN MAnu [eius], "and everything is in [his] hands" or even ET OMNiA IN MANu [eius] SCI, "and know that everything is in [his] hands", a phrase without a Qurʾānic equivalent. This interpretation of the last words of the reverse legend can only be reconstructed from two of the coins, however, and the rest of the legend is an enigma. Walker's reading of DEDN as *Deus Dominus Noster*, may be correct, given how prevalent the abbreviation 'DN' seems to have been in Late Antique North Africa, but it is unlikely that the engraver of the reverse legend would use a different abbreviation for *Deus* (versus DS on the obverse). 'CI' could be read as a second singular imperative of "cire", giving *DEum Dominum Nostrum CI*, "invoke our lord God". Even if this is the

case, it still leaves the letters 'PIASMA'. The letters 'MA' could stand for MAgnus, as suggested by Walker, or even MAximus, but this presupposes the use of highly abbreviated words in the middle of the reverse legend, something we do not see on the obverse. Further analysis, hopefully with additional examples, will be necessary before a new full interpretation of the reverse legend can be proposed. A satisfactory reading of this legend may, in the end, be a hopeless task, as the engraver of the first die may have bungled the legend to such an extent that the other die engravers could make no sense of it, but just copied it roughly, inserting random letters as they saw fit.

The obverse and reverse legends and dies of the remaining 32 examples of the Series NA 1 precious-metal coinage are set out in Table 7 and Table 8 below.

Table 7: Obverse Legends and Dies of the Remaining Six Legend Types of Series NA 1

Legend	Type	Die No.	Denomination			Total by Die
			Sol	**Sem**	**Tre**	
. . . . INNOMINЄT[VOVN] . .	**DEUSINNOMINE**	1	0	0	1	1
6ЄVSINN . . . . . [T]VOVNVS		2	1	0	0	1
INNOMЄTVO6SPPIЄCTMI	**INNOME**	3	0	2	2	4
. . . . [MЄTV]OSPPI[ЄC] .		4	1	0	0	1
INNO . . . . [6S]SPPIЄCT		5	0	0	3	3
6VSTVS6VPSЄTAVSNONЄ	**DUSTUS**	6	2	2	3	7
6VSTVSS6VS•ЄTAΛIVS .		7	0	3	1	4
. . . . . [C6VS]NЄTAϟIVƧ . . .		8	0	0	1	1
6ЄVSNONЄSTAϟIVS6SN . . .	**DEUSNON**	9	1	0	1	2
[6Є] . . . . . TAΛIVS[6S]N		10	0	1	0	1
. . . . . [Є . I]CO . .	**MISERICORDIS**	11	0	0	1	1
. . . . . ЄRICOR6IS		12	0	1	0	1
. . . . . [C]OR6IS[N]		13	0	0	1	1
GVSI[CT]V . . . . [V]ЄN	**Unclear**	14	0	0	3	3
. . . . . V6SNO[N]		15	0	0	1	1
	TOTAL		5	9	18	32

Table 8: Reverse Legends and Dies of the remaining six legend types of the Series NA 1 Types

Legend	Field	Die no.	Denomination			Total By Die
			Sol	Sem	Tre	
ƆƐƆNMCIASMAƐ[P]OMN[AI]N	T/2	10[147]	0	0	1	1
6ƐVSNONƐSTAʌIVS6SN .	T/3	1	1	0	0	1
[G]V[ST]VƐO[G]VS[Ɛ]TAʌIVS[N]	G/3	2	0	2	0	2
6VSTVƐ()6VSƐTAʌIVSN	T/2	3	0	0	7	7
INNOMI[N]CTVO6[S]ꟼꟼIC[148]	T/3; pb	4	1	0	0	1
. . . . . [T]6SNISISOʌVS[6] .	T/2; pb	5	0	0	3	3
IN . . V . NCTV[O]GSP[149]	T/2; pb	6	1	0	0	1
INNOMICTV . . . . . CTMIS	T/3; pb	7	1	0	0	1
INNONƐ•TVO[6]SꟼIƐCTMI	G/3; pb	8	0	2	0	2
INNOMINCTVO[Ɛꟼ]	T/2; psb	9	0	0	2	2
I[NNO] . . . . [T]VO6SP[NI]•	T/2; rgr	10	0	0	1	1
INNOMINƆTVO6SO•	G/3; rgr	11	0	3	0	3
. [ƐV]SINN	T/2	12	0	0	1	1
6ƐVSINONIN[ƐTVO] . .	T/3	13	1	0	0	1
. . NON	G/3; pl	14	0	1	0	1
[NO]NƐST6S	T/2	15	0	0	1	1
[NO]N[Ɛ]ST6SNISISOʌVS .	G/3; pb	16	0	1	0	1
IN SRƆVNS6S	T/2	17	0	0	1	1
. . . . . [M]ISRCVNS6S	T/2	18	0	0	1	1
		TOTAL	5	9	18	32

DEVSINNOMINE TYPE

Two Series NA 1 examples bear the obverse legend DEVSINNOMINETVOVNVS – *deus in nomine two unus* (OD1 and OD2 in Table 7). All of the words of the legend are completely spelled out, and thus the interpretation and translation of the legend are straightforward - In Thy name, God [is] One – a simple anti-Trinitarian reference frequently found in the Qurʾān.[150]

147 Die linked to RD10 of NONEST type (Table 6).

148 Pellet below first N.

149 Pellet below last N.

150 For example, Suras 2:163; 16:22; 18:110; 21:108; 22:34; 29:46; 37:4; and 41:6. Most often as 'God is one God'.

Figure 21: Above: Series NA 1 tremissis, of DEUSINNOMINE type (legend beginning at 12 o'clock), undated. W 146. Image courtesy of the Trustees of the British Museum, London. (1.38g) Below: Reverse of Series NA 1 tremissis, of NONEST type, undated. W C.2=Ø44. Image courtesy of the National Museum, Copenhagen. (1.35 g) (Scale x3)

The two examples of the DEUSINNOMINE type each have a different reverse legend. The reverse legend on W C.2 (see Appendix A, p. 453, for coin reference abbreviations) is DEDNMCIASMAEPOMNAIN, the same as the reverse legend on the NONEST type. It is in fact die-linked (RD10 in Table 6) to the NONEST type. The reverse legend on the DEUSINNOMINE solidus (RD1 in Table 8), in contrast, is DEUSNONESTALIVSDSN . . Although this legend is not found on the reverse of any of the other Series NA 1 coinage, it is the same legend as that found on the obverse of the DEVSNON type (see p. 106 below). This legend also gives few problems in its interpretation, as the words are completely spelled out except for the second *deus* (abbreviated as 'ꝺS') and the last word. The end of the legend also

appears to be truncated, but the most likely interpretation is DEUS NON EST ALIUS DeuS Nisi. Like the obverse legend on the NONEST type, this is a variation of the *shahāda*, and can be translated as 'There is no other God but God'.

INNOME TYPE

Figure 22: Series NA 1 semissis of the INNOME type, undated. KC AV0001=Sp31, L:50. Image courtesy of the Khalili Collection. (1.99 g) (scale x4)

There are eight examples of the INNOME type, one solidus, two semisses, and five tremisses, struck from three obverse and four reverse dies (OD3 through OD5 in Table 7; RD2 through RD5 in Table 8). The full INNOME legend is INNOMETUODSVVIECTMI, found on OD3, with the two other obverse dies having truncated versions of this legend (similar to the truncation on the obverse dies of the NONEST type):

INNOMЄTUODSVVIЄCTMI
INNOMЄTUODSVVIЄCT

Walker interpreted the above legend as IN NOME TUO DeuS ViVifICans ET MIsericordis, with the 'Є' and 'C' transposed due to engraver error. This legend would then translate to 'In Thy name, O life-giving and merciful God'.[151] The first part of the legend, INNOMETUODS, is easily interpreted, but the last part is not. The last word is likely *misericordis*, especially when we take into account the reverse

151 WALKER 1956, p. c.

legend on RD7 in Table 8, which ends in 'MIS', and given that this word (in a different case) is found in the legends of both other Series NA 1 types (i.e the MISERICORDIS type) and the later Series 2, Latin Epigraphic coinage. Unfortunately, I am unable to provide a different interpretation from that of Walker for the letters 'VVIC'.

There are three distinct reverse legends on the coinage of the INNOME type. The first legend, found on only one solidus (RD4 in Table 8) is simply a repetition of the INNOME legend. The second legend, found on four tremisses of RD3 (die linked to DUSTUS and DUESNON coins, as well as three examples with unclear obverse legends) appears to be a variation on the obverse legend of the DUSTUS type discussed below. The final reverse legend is found on three tremisses (RD5 in Table 8). The legend reads NONESTDSNISISOLUSDS – NON EST DeuS NISI SOLUS DeuS – which can be translated as 'There is no God but God alone'. This legend, despite the very different wording, has a similar meaning to the obverse legend of the DEUSNON type (p. 106 below) - DEUS NON EST ALIUS DeuS Nisi (There is no other God but God).

DUSTUS TYPE

Figure 23: Series NA 1 semissis of DUSTUS type, undated. W C.1=Ø45. Image courtesy of the National Museum, Copenhagen. (2.03 g) (scale x4)

There are 12 examples of the DUSTUS type, from three obverse dies (two solidi, five semisses, and five tremisses; OD6 through OD8 in Table 7 above). The three obverse dies each have a variant of the same legend:

DVSTVSDVPSЄTAVSNONЄ

DVSTVSSDVS•ЄTALIVSN

. . . . . [CDVS]NЄTALIVƧ . . .

The first of the three legends can be expanded to DeUS TuUS DeUs iPSe ET AliUS NON Est (Thy God, God himself, and there is no other). The first words of the legend, *deus tuus* (Thy God (or Your God)) is strange, and implies that the legend was engraved by a non-Muslim. The second legend appears to be a shortening of the first legend, with a second 'S' inserted as an error after 'TVS'. The final legend is fragmented.

This type has five reverse legends, struck from seven dies. One of the legends (RD3 in Table 8) is a repetition of the obverse legend found on this type, with these coins also die linked to coins of the INNOME and DEUSNON types. A second legend, found on RD7 through RD9, is a repetition of the obverse INNOME type legend. The three remaining reverse legends (RD6, RD10 and RD11) all begin with the phrase IN NOMINE TUO. The last few letters of the legends on RD6 and RD10 include the letters 'SP' and 'SPN' respectively, possibly an abbreviation for *sapiens* – 'wise' – another reference to an attribute of God. Reverse die 11, ends in 'O' followed by a pellet. This legend may be IN NOMINE TUO DeuS Omnipotens - In Thy name, O God, the all-powerful. Alternatively the 'O' could stand for *omnium creator* (the creator of all), a phrase found on Series NA 2, Phase 1 (see p. 115).

Although questions still remain regarding the interpretation of some of the legends of the INNOME and DUSTUS types, the legends of the two types appear closely linked, possibly indicating that they were struck at the same time or with one type followed closely by the other.

DEUSNON TYPE

Figure 24: Series NA 1 Solidus, of DEVSNON type. icaL24, L:4079. Image courtesy of Baldwin's Auctions, Ltd. (4.23 g) (scale x3)

There are only three examples of the DEUSNON type, one from each denomination. They were struck from two obverse dies (OD9 and OD10 in Table 7). The obverse legend is a further variation on the *shahāda* – DEUS NON EST ALIUS DeuS Nisi (There is no other God but God), also found on one example of the DEUSINNOMINE type (see p. 101 above). The reverse legends are fragmentary but are most likely the same legend as that found on the obverse dies of the DEUSINNOMINE type – *deus in nomine tuo unus* (In Thy name, God [is] One). There are no die links, however, between the DEUSINNOMINE and the DEUSNON types.

MISERICORDIS TYPE

Figure 25: Series NA 1 tremissis of the MISERICORDIS type. CNG81, L:1227. Image Courtesy of Classical Numismatic Group, Inc. (1.37 g) (scale x4)

There are three examples of the MISERICORDIS type (two tremisses, one semissis), all struck from different dies (OD11 through OD13 in Table 7). Unfortunately in all three cases the coin has been struck off flan, and so we cannot see the first letters of the obverse legend. Walker suggested 'In nomine domini misERICORDIS' (in the name of the Lord, [of the] Merciful) for this legend.[152] This interpretation is likely correct, as one reverse die used to strike a Series NA 2, Phase 1 semissis also has the legend INN[N]IMISERICORD (IN Nomine domiNI MISERICORDis (see p. 126). This phrasing, with *misericors* in the genitive case, is similar to the earliest translations of this phrase from the Qurʾān. Both Robert of Ketton's translation of the Qurʾān for Peter the Venerable or, a century later, Mark of Toledo's literal translation rendered *bi-smi llāhi l-raḥmāni [l-raḥīmi]* (In the name of God, the Merciful, the Compassionate) as *in nomine dei misericordis, miseratoris*. As can be seen with these early translations, *al-raḥmāni / misericordis* is in the same genitive case as the noun (*Allāhi* / *domini*, '*of* God / *of the* Lord') to which they are in apposition.

Two reverse legends (from 3 dies) are found on the MISERICORDIS type. The first reverse legend, found on RD15 and RD16, is NONESTDSNISISOLUS, a reverse legend also found on the INNOME type. The second legend, found on RD17, is likely INNDNIMISRCUNSDS, or IN Nomine DomiNI MISeRiCordis UNuS DeuS

152 WALKER 1956, p. 56.

(in the name of the Lord, the Merciful, God alone), a reverse legend that is also found on the later Series NA 2, Phase 1 coinage (see p. 127).

UNCLEAR

Figure 26: Series NA 1 tremissis, type unclear and undated. W 153. Image courtesy of the Trustees of the British Museum, London. (1.35 g) (scale x4)

Figure 27: Series NA 1 tremissis, type unclear and undated. Zeno 65355. (1.37 g) (scale x4)

There are four Series NA 1 examples (from two obverse dies (ODs 14 and 15)) whose obverse legends are too fragmented to definitively place in one of the above groupings. Obverse die 14 is reverse die linked to the INNOME, DUSTUS and DEUSNON types, and the obverse legend may be a poorly engraved DUSTUS legend. The legend on OD15 is mostly off flan, but the reverse legend is the same as that on one of the coins of the MISERICORDIS type, INNDNIMISRCUNSDS, the reverse legend commonly found on the fractionals of Series NA 2, Phase 1 (see p. 127).

If we return to Table 5 through Table 8, we can see a close relationship between the types, the die links and the legend variants. In most cases, a legend variation is

only found in its die-linked grouping, the two exceptions being the legend on the reverse die of one example of the DEUSINNOMINE type linked to the NONEST type and the one die link (RD3 in Table 8; see also Appendix A, p. 470) between several of the other types.

This suggests two things. First, the time of the striking of the Series NA 1 coinage was a time of intense experimentation, with many different legends appearing on the coins. These legends appear to have two main messages. The first message is that of the *shahāda*. In Series NA 1 there are coins that feature the full *shahāda* stressing that God has no associate, or shorter, perhaps catchier slogans such as *non est deus nisi solus* (there is no God but God alone). The second set of messages appears to stress the attributes of God found in the Qurʾān, such as *vivificans* (*al-muḥyī*; the Lifegiver),[153] *omnipotens*, (*al-qādir*; the All-Powerful),[154] or *misericors* (*al-raḥīm*; the Merciful).[155] The placing of the attributes of God (or the 99 names of God) on the coinage of North Africa continues in Series NA 2, Phase 1 (*eternus*; *al-ṣamad;* the Eternal; *magnus*; *al-kabīr*; the Great; and *omni creator*; *al-khāliq*; the Creator of all; (see p. 117), as well as on the Series NM 4 *nisf* and *thulth* and later on the Series 4, Post-Reform dinars struck up until 110/728-29 (*al-raḥīm*; the Merciful; *al-raḥman*; the Compassionate; see p. 225).

Secondly, the Muslim conquerors of North Africa appear to have struck these coins in small batches. In nearly all cases, the legend on each die is unique, although as I have demonstrated many of the legends are variations on a common type. The only exceptions to this are: 1) when legends jump from the obverse to the reverse of a denomination, and 2) the NONEST type that in some cases has the same legend on

153 Suras 7:158; 15:23; 30:50; and 57:2.

154 Suras 6:65; 46:33; 75:40.

155 At the beginning of every Sura except one, as well as numerous other places.

different dies. This suggests that the mint struck coins as needed and in small batches, and that perhaps it was mobile and attached to the governor's court. This certainly fits with what we know of the period, as Ibn al-Nuʿmān was frequently on campaign against the Byzantines, and later the Berbers. The variations in the legends are quite exceptional, which might suggest more than one Islamic mint was in operation at this time. Evidence against this possibility, however is found in the reverse die link between the DEUSINNOMINE and NONEST types, as well as the reverse die links between the INNOME, DUSTUS and DEUSNON types.

SERIES 2 (THE LATIN EPIGRAPHIC TYPE)

The Series 2, Latin Epigraphic coinage has a similar fabric and module to Series 1, but the Islamic mints in North Africa and the Iberian Peninsula made significant changes to the layout. On Phases 1 and 2 of Series NA 2 (the coins of this series struck prior to the invasion of the Iberian Peninsula), the North African mint replaced the obverse imagery in the field (the Two Imperial Busts) with a legend that was an extension of the obverse marginal legend. The obverse legend becomes more standardised, first with a legend that highlights the attributes of God (see p. 117), and then a legend that is another Latin variation of the *shahāda* (see p. 130). The globe on pole or T-bar on steps remained in the reverse field of the semisses and tremisses, but no longer occurred on the solidi. We find instead in the reverse field of this denomination a continuation of the reverse marginal legend, which in all cases ends with the Indiction date. The reverse marginal legend on the Series 2 solidi changes to a mint/date formula. The reverse marginal legend on the semisses and tremisses varies more than on the solidi, sometimes repeating the reverse legend found on the solidi, but in other cases bearing reverse legends found on the previously struck Series 1 coinage.

The Iberian Peninsula coinage of Series 2 (Series IP 2, see p. 145) in some cases continues the design and layout of the earlier North Africa coinage, but the majority of the coinage of this type replaces the obverse field legend with a seven, eight, or nine pointed star. The Muslim administration in the Iberian Peninsula abandoned the star symbol on the eve of the return of the main Islamic mint to North Africa in 95-6/713-15 (see p. 188 and p. 398), and reverted to the layout that existed prior to the invasion.

SERIES NA 2, PHASE 1

The surviving coinage of Series NA 2, Phase 1 is dated to Indiction years II through IIII (84-87/703-06). The only ornamentation on the coins (with two exceptions, see p. 213) is a single beaded circle tracing the outside edge of the coin. Examples of each of the three denominations of Series NA 2, Phase 1 are found in Figure 28 below.

Figure 28: Above: Series 2, Phase 1 solidus, dated Indiction II (84-5/703-4). W C.11= Ø52. Image courtesy of the National Museum, Copenhagen. (4.32 g); Middle: Series 2, Phase 1 semissis, undated. HD309, L:254. Image courtesy of Hess Divo AG. (2.06 g); Bottom: Series 2, Phase 1 tremissis, undated. W P.36=L105. Image courtesy of Bibliothèque nationale de France, Paris. (1.45 g) (scale x4)

Table 9: The Obverse Dies of Series NA 2, Phase 1

Die No.	Legend	Field	Ind. Date	Denominations			Total By Die
				Sol	Sem	Tre	
1	6SЄTЄRNS6SMAGNSOI	RTЄRCN	II	1	0	1	2
2	6SЄTЄRNS[6SM]AGNS[T6]SOMN	ICRЄ[T]R[Є]	II	1	0	0	1
3	6SЄTЄRNS[6]SMAGN6[I]	NICRAR	II	1	0	0	1
4	6SЄTЄRNS6SMAGN6SO	NICRЄTI	II, III	2	1	2	5
5	6SЄTЄR6SMAGN6SOMN	CRЄTRN	II?, III?	0	0	3	3
6	6SЄTCRNS6SMAGNS6S	OMNIↃ	III	2	1	4	7
7	6SЄTЄRNS6SMAGN6SO	MNIЄRЄ	III	1	0	1	2
8	6SЄTЄRNS6SMAGN6SO	MNIЄRЄ[T]	III	1	0	1	2
9	6SЄTCRNS6SNAGN6[S]ONI	RTЄRCIII	III	1	0	0	1
10	6SЄTЄRNS6SMAGNOMSAR	RTЄRCIN	III	4	0	0	4
11	6SЄTCRNS6SMAGNS6S	ONNIΩ	III, IIII	2	0	9	11
12	6SЄTCRNS6SMAGNOMRTЄR	RTЄRCIN	III, IIII	5	2	3	10
13	6SETRNSSMAVGNSASCO[I]	IMIЄRA	III?, IIII?	0	3	11	14
14	6SЄTЄRNS6SMAGNS6S	OMNICR	III?, IIII?	0	4	0	4
15	62ЄЄЄRNS6SMAGNOMI	RTCRCIN	IIII	1	0	3	4
16	6SЄTЄRNSΛSMAGNOMSNS	RTЄRCIN	IIII	1	0	1	2
17	6SЄTЄNS[A]SMAGNOMRTЄR[C]	RTЄRCIN	IIII	1	0	0	1
18	6SЄTCRNS6SMAGNOMЄNS	RTЄRCIN	IIII	2	0	0	2

19	6S[ЄTЄRN]S6S[M]AGNONSNI	RTЄRCIN	IIII	1	0	0	1
20	6SЄTCRNS6SMAGNS6SOI	NICRЄT	IIII	2	0	0	2
21	6SЄTCRNS6SMAGN6SOM	NICRЄTR	IIII	2	0	1	3
22	INN6NIMISRCVNS6S	VNS6SO	IIII	3	0	0	3
23	6SЄTЄRNS6SMAGN6SOMN	ICЯƎTЯ	IIII	2	0	0	2
24	6SETRNS6SMGNS6SOI	.SOMNC	unknown	0	3	4	7
25	6ƨETRNS6S[MG]NSOVO	HNCRAT	unknown	0	1	3	4
26	6SЄTЄR . . . . . R	RTЄRCIN	unknown	0	0	2	2
27	. . . [6]NINI6S[OM]	ICRЄTR	unknown	0	3	1	4
			TOTALS	**36**	**18**	**50**	**104**

Table 10: The Obverse Legends and their Readings for Series NA 2, Phase 1

Die No.	Marginal Legend	Field	Interpretation
1	6SЄTЄRNS6SMAGNSOI	RTЄRCN	Deus ETERNuS DeuS MAGNuS ***O***eu*S* omNi CREaToR
2	6SЄTЄRNS[6SM]AGNS[T6]SOMN	ICRЄ[T]R[Є]	DeuS ETERNuS DeuS MAGNuS ***T*** DeuS OMNI CREATOR ***E***
3	6SЄTЄRNS[6]SMAGN6[I]	NICRAR	DeuS ETERNuS DeuS MAGNus Deu***I*** omNI CReAtoR
4	6SЄTЄRNS6SMAGN6SO	NICRЄTi	DeuS ETERNuS DeuS MAGNus DeuS OmNI CREaTo***i***
5	6SЄTЄR6SMAGN6SOMN	CRЄTRN	DeuS ETERnus DeuS MAGNus DeuS OMNi CREaToR ***N***
6	6SЄTCRNS6SMAGNS6S	OMNIↃ	DeuS ET***C***RNuS DeuS MAGNuS DeuS OMNI ***Ↄ***reator
7	6SЄTЄRNS6SMAGN6SO	MNIЄRЄ	DeuS ETERNuS DeuS MAGNus DeuS OMNI CREator
8	6SЄTЄRNS6SMAGN6SO	MNIЄRЄ[T]	DeuS ETERNuS DeuS MAGNus DeuS OMNI CREaTor
9	6SЄTCRNS6SNAGN6[S]ONI	RTЄRCIII	DeuS ET***C***RNuS DeuS *N*AGNus DeuS OmNI ***III*** CREaToR
10	6SЄTЄRNS6SMAGNOMSAR	RTЄRCIN	DeuS ETERNuS DeuS MAGNus OM***SAR***NI CREaToR
11	6SЄTCRNS6SMAGNS6S	ONNIΩ	DeuS ET***C***RNuS DeuS MAGNuS DeuS O***N***NI ***Ω***reator
12	6SЄTCRNS6SMAGNOMRTЄR	RTЄRCIN	DeuS ET***C***RNuS DeuS MAGNuS OM***RTER***NI CREaToR
13	6SETRNSSMAVGNSASCO[I]	IMIЄRA	DeuS ETeRNuS deuS MA***V***GNuS *A*euS ***C*** O***II***MnI CReAtor
14	6SЄTЄRNS6SMAGNS6S	OMNICR	DeuS ETERNuS DeuS MAGNus DeuS OMNI CReator
15	62ЄƆЄRNS6SMAGNOMI	RTCRCIN	Deu***Ƨ*** ETERNuS DeuS MAGNus deus OM***I***NI CR***C***aToR
16	6SЄTЄRNSΛSMAGNOMSNS	RTЄRCIN	DeuS ETERNuS ***Λ***euS MAGNus OM***SNS***NI CREaToR
17	6SЄTЄNS[A]SMAGNOMRTЄR[C]	RTЄRCIN	DeuS ETErNuS *A*euS MAGNus OM***RTERC***NI CREaToR
18	6SЄTCRNS6SMAGNOMЄNS	RTЄRCIN	DeuS ET***C***RNuS DeuS MAGNus OM***ENS***NI CREaToR

19	6S[ЄTЄRN]S6S[M]AGNONSNI	RTЄRCIN	DeuS ETERNuS DeuS MAGNus O***NSNI***NI CREaToR
20	6SЄTCRNS6SMAGNS6SOI	NICRЄT	DeuS ET***C***RNuS DeuS MAGNuS O***I***NI CREaTor
21	6SЄTCRNS6SMAGN6SOM	NICRЄTR	DeuS ET***C***RNuS DeuS MAGNus DeuS OMNI CREaToR
22	INNƆNIMISRCVNSƆS	VNSƆSO	IN Nomine DomiNI MISeRiCordis UNuS DeuS UNuS DeuS Omnipotens
23	6SЄTЄRNS6SMAGN6SOMN	IƆЯƎTЯ	DeuS ETERNuS DeuS MAGNus DeuS OMNI CREaToR
24	6SETRNS6SMGNS6SOI	.SOMNC	DeuS ETeRNuS DeuS MaGNuS DeuS ***OmnI deuS*** OMNi Creator
25	6ƧETRNS6S[MG]NSOVO	HNCRAT	Deu***Ƨ***ETeRNuS DeuS MaGNuS O***VO***MNi CReAToR
26	6SЄTЄR . . . . . R	RTЄRCIN	DeuS ETER…..R omNI CREaToR
27	. . . [6]NINI6S[OM]	ICRЄTR	in nomine DomiNI (possible combination of obv. and rev. legend)

As can be seen in Table 9 above, the 104 surviving specimens of Series NA 2, Phase 1 were struck from 27 obverse dies. Like Series NA 1, the same obverse die was often used to strike all three denominations. Given the large number of surviving solidi, the dating of individual dies is relatively straightforward, since every obverse is paired with a dated reverse; only four dies are not die-linked to dated solidi. A question mark following an Indiction date in Table 9 indicates that, although there are no solidi struck from the die, the die in question is linked to another obverse die that is securely dated (i.e. the die is linked to a die pair that includes a dated solidus) see (Appendix A, beginning on p. 473, for complete die links).

The most significant difference between Series NA 1 and Series NA 2, Phase 1, other than the elimination of the busts of the two Byzantine Emperors, is the changes that take place in the legends. On the 23 dies of Series NA 1 I have recorded six unique obverse legend types (see Table 4 (p. 92); Table 5 (p. 93); and Table 7 (p. 100)). In contrast, 25 of the 27 Series NA 2, Phase 1 obverse dies have variations of the same obverse legend – *deus eternus, deus magnus, deus omnium creator* – God the Eternal, God the Great, God the Creator of All.[156] It is thus difficult to construct a typology based on legend type.

One method for constructing the typology of Series NA 2, previously used by both Bates and myself, is to use the obverse field legends alone (e.g. RTERCIN).[157] Since the publication of my 2012 paper, however,[158] I have come to the conclusion that the most appropriate way to categorize the coinage of Series NA 2, Phase 1 is simply by obverse die. The reason for this is simple; the abbreviated legends on each die are

156 Like some of the Series NA 1 legends, *deus eternus, deus magnus, deus omnium creator* does not have a Qurʾānic equivalent. As I discussed on p. 110, however, Arabic equivalents to *eternus (al-ṣamad*; the Eternal); *magnus* (*al-kabīr*; the Great); and *omni creator* (*al-khāliq*; the Creator of all) are all found in one or more Suras in the Qurʾān.

157 Bates outlined three phases for the Series NA 2 coinage. See BATES 1992, pp. 272-3. I revised Bates's typology of Series NA 2 in a recent article. See JONSON 2012.

158 JONSON 2012.

unique and may be distinguished from one another, despite the fact that the full reading of the abbreviated legend is the same in the majority of the examples.

How could every obverse die, and every one of the 40 reverse dies (see Table 11 through Table 18 below), be different? Examining Table 10, we can see that some of the differences are due to the multitude of abbreviation conventions used for the various words in the legend. This distinction is most apparent for the words in the obverse field, with 20 of the 25 obverse dies with the *deus eternus, deus magnus, deus omnium creator* legend abbreviating *omnium creator* in a different manner. In some cases the variance is slight (i.e. the retrograde 'RTЄRCIN' versus the retrograde 'RTCRCIN' in the obverse field) and this may be simply die engraver error. For many of the other dies, however, a completely different abbreviation system is utilized (e.g. *misericordis* – 'ISC', 'MSRC', 'MISRC', and 'MISЄRI'; *magnus* – 'MA', 'MAG', 'MAGN', 'MGNS', and 'MAGNS').

Many of the differences in the marginal obverse legends also appear to be the result of die engraver error. This appears to be the case for the errors that are found prior to the ending of the obverse marginal legend, such as the replacement of the '6' or 'S' of *deus* with 'A' or 'I' respectively (OD1 and OD3 in Table 10). Slightly more puzzling, in contrast, is the insertion of additional letters at the end of the obverse marginal legend. Some of the letters that appear at the end of the legend appear to be fillers, where the die engraver has completed the necessary letters for the legend and then finds that he has additional space. This seems to be the case with OD12 and OD17 in Table 10, where the engraver has cut the first few letters of the obverse field legend at the end of the marginal legend and then repeated them in the field. Many of the dies, however, have letters at the end of the obverse marginal legend that do not

appear to be a simple repetition of letters found elsewhere in the legend, or that reflect a different abbreviation of a particular word.

Previous scholars have argued that the letters at the end of the marginal legend reflected intentional differences in the legends themselves. Walker for example, suggested that the obverse legend on OD16 should be read as DeuS ETERNus DeuS MAGNus Omnia nosCeNS omNIum CREaToR,[159] Lavoix, in contrast, interpreted OD17 as deus ETERnuS DeuS SaPIENS MAGNus OMNI CREaToR.[160] Balaguer also noted the differences in the obverse legends in her discussion of Series 2.[161] She argued that, although occasional errors exist in the coins, the majority of the variations in her examples occur in the second half of the legend. Her explanation for this rests with the content of the phrases, as she suggested that the religious nature of the legends allowed for variations in the abbreviation methods and even the wording of the obverse legend without distorting their fundamental meaning.

There are other possible explanations that appear to provide more plausible reconstructions of this phenomenon. Perhaps we should understand the period of experimentation seen in Series NA 1 as giving way to a phase of rationalization in Series NA 2, with the large number of differing legends in the first series being replaced by a single theme – the attributes of God in the second series. However, if this were the case, the evidence suggests that the early Islamic mint of North Africa did not possess the level of organisation necessary for the production of such a prolific series of experimental types at this time – lack of organisation being the likely explanation for the variety of different systems of abbreviation used by the engraver. Perhaps the answer to the puzzle lies at the level of the practical administration of

159 WALKER 1956, p. 71.

160 LAVOIX 1887, p. 36.

161 BALAGUER 1976, pp. 62-5.

coin production. The Muslims may have produced, for some unknown reason, new dies at intervals outside of the mint, using a struck specimen as a model, which resulted in chained deformations (i.e. an error on the initial specimen, would carry over onto subsequent specimens, with additional errors engraved on the later coins). Alternatively, the mint authorities may have laid out the legend in full for the die engravers to copy: but the die engravers then used differing abbreviation schemes, resulting in the different legends noted above.

Only two of the obverse dies of Series NA 2, Phase 1 have substantially different legends from the other 25 obverse dies. The difference in the legend on one of the dies (OD27 in Table 9; Figure 29 below) appears to be the result of engraver error, possibly combining the obverse and reverse legends. A legend like this, combined with the non-standard reverse legend on the tremissis example of this die (see Table 17; RD13) raises the possibility that this was the product of an irregular mint. The reverse dies of the three semisses of OD27, however, have a well-executed, standard legend and are die-linked to other semisses of this series and phase: this argues in favour of an official mintage.

Figure 29: Series NA 2, Phase 1 tremissis (OD27), undated. W P.38=L108. Image courtesy of Bibliothèque nationale de France, Paris. (1.39 g) (scale x4)

The three solidi of OD22 in Table 9 (dated Indiction IIII (86-7/705-6)), however, have an obverse legend that cannot be explained as a result of engraver error (see Figure 30 below). The full reading of the obverse legend on this die has been

reconstructed as *in nomine domini misericordis unus deus unus deus omnipotens* – in the name of the Lord, [of the] Merciful, one God omnipotent – with a repetition of the phrase *unus deus* at the end of the obverse margin, likely for the same reasons as those discuss above. Again, the appearance of a substantially different obverse legend, on coins which were all struck from the same pair of dies, might suggest that this die was the product of an unofficial mint: however, as in the preceding example, this die is also reverse linked to other Series NA 2, Phase 1 solidi.

Figure 30: Phase 2, Series 2 solidus, dated Indiction IIII (86-7/705-6). KC AV1115. Image courtesy of the Khalili Collection. (4.33 g) (scale x4)

REVERSE LEGENDS – SOLIDI

The solidi of Series NA 2, Phase 1 were struck from 20 reverse dies, with the majority of the dies dated Indiction III or IIII (Table 11 through Table 13).

Table 11: Reverse Legend Types of Solidi dated Indiction II

Legend	Obv. Field	Rev. Field	Hor. Lines above Field	Die No.	Total by Die
INN6NIMISRCSƬFЄ[SN]	NICRAR RTЄRCN	RCIN6II	RC,IN,6	1	2
INN6NIMIS[R] . . . . . R[N]	NICRЄTI	RCIN6II	C,N,6	2	1
[I]NN6NIMISRCSƬFЄRIN[AF]	ICRЄ[C]R[Є]	RCIN6II	C,N,6	3	1
NUMBER OF INDICTION II EXAMPLES					**4**

Table 12: Reverse Legend Types of Solidi dated Indiction III

Marginal Legend	Obv. Field	Rev. Field	Hor. Lines above Field	Die No.	Total by Die
INN6NIMISRCSƮFESFRCI	RTЄRCIN	CIN6III	CI,N,II	1	4
INN6NIMISRCSƮ[FЄ]CFRN	RTЄRCIN	CIN6III	I,N6,II	2	1
6SЄTЄR . . . [SMA]GN6SONIC	ONNIΩ	CIN[6]RII[I]	IN,6,RI	3	1
INN6NI[M]ISRCSƬFERINA[FR]	OMNIↃ	ↃIN6III[162]	IN,6	4	1
. . . . . MISRCSŧFЄR . . .	RTЄRCIII	RCIN6III	RC,N,II	5	1
[I]NN6NIM[I]RCSƬFERINI	MNIЄRЄ[T] MNIЄRЄ	RCIN6III	RC,N,II[163]	6	2
. . N6NIMISRCS[Ƭ]F	OMNIↃ	ΛCIN6III	ΛC,IN,6	7	1
NN . . . . . SƬFESNFSN	NICRЄTI	RCIN6III	RC,IN,6II	8	1
NUMBER OF INDICTION III EXAMPLES					**12**

162 Pellet in reverse C.

163 Pellet below N of obverse field legend.

Table 13: Reverse Legend Types of Solidi dated Indiction IIII

Marginal Legend	Obv. Field	Rev. Field	Hor. Lines above Field	Die No.	Total by Die
INN6NIMISRCSŧFЄSFCR•SF	RTЄRCIN	CIN6IIII	CI,6,III	1	2
INN6NIMISRCSƇFЄSFNЄRFNS	RTЄRCIN RTCRCIN	CIN6IIII	CI,N6,II	2	2
INN6NMISRCSTFЄSF[R]CS	RTЄRCIN	CIN6IIII	CI,N6,II	3	1
INN6NIMISRCSŧFЄS6RCI	RTЄRCIN	CIN6IIII	I,6,II	4	2
INN6NIMISRCSƇFЄRINA	NICRЄTR VNSƠSO	RCIN6IIII	N,6,I	5	5
. . . . . IMISRCSŧFЄS . .	RTЄRCIN	CIN6IIII	I,6,II	6	1
INN6NIM . . . . . [N]CI	RTЄRCIN	CIN6IIII	CI,N6,II	7	1
INN6NIMISRCSLFRƇNAFR	NICRЄT IↃRƎTЯ ONNIΩ	CIN6IIII	I,N6,II	8	5
INN6NIMISRCSƇFЄSFRCN	RTЄRCIN	CIN6IIII	IN,N6,II	9	1
NUMBER OF INDICTION IIII EXAMPLES					**20**

Table 14: Interpretation of the Reverse Legends found on the Solidi of Series NA 2, Phase 1

Die No.	Legend	Field	Interpretation
1	INN6NIMISRCSƇFЄ[SN]	RCIN6II	In Nome DomiNI MISeRiCordis SoLidus FerituS ***N*** afRiCa INDiction II
2	INN6NIMIS[R] . . . . . R[N]	RCIN6II	IN Nome DomiNI MISeR…..
3	[I]NN6NIMISRCSƇFЄRIN[AF]	RCIN6II	In Nome DomiNI MISeRiCordis SoLidus FERitus IN AFRiCa INDiction II
1	INN6NIMISRCSƮFЄSFRCI	CIN6III	IN Nome DomiNI MISeRiCordis SoLidus FErituS aFRC***IC***a INDiction III
2	INN6NIMISRCSƮ[FЄ]CFRN	CIN6III	IN Nome DomiNI MISeRiCordis SoLidus FERitu*C* aFR***N***Ca INDiction III
3	6SЄTЄR . . . [SMA]GN6SONIC	CIN[6]RII[I]	DeuS ETERNuS DeuS MAGNus DeuS OmNI Creator afriCa IND***R***iction III
4	INN6NI[M]ISRCSƇFЄRINA[FR]	ƆIN6III[164]	IN Nome DomiNI MISeRiCordis SoLidus FERitus IN AFRiCa INDiction III
5	. . . . . MISRCSƮFЄR . . .	RCIN6III	…MISeRiCordis SoLidus FERitus…afRiCa INDiction III
6	[I]NN6NIM[I]RCSƇFЄRINI	RCIN6III	IN Nome DomiNI MISeRiCordis SoLidus FERitus IN ***I*** afRiCa INDiction III
7	. . N6NIMISRCS[Ƈ]F	ΛCIN6III	IN Nome DomiNI MISeRiCordis SoLidus Fertitus … af***Λ***iCa INDiction IIII
8	NN . . . . . SƇFЄSNFSN	RCIN6III	iN Nomine…SoLidus FEritus ***SNFSN*** afRiCa INDiction IIII
1	INN6NIMISRCSƮFЄSFCR·SF	CIN6IIII	IN Nome DomiNI MISeRiCordis SoLidus FEritus ***FCR·S*** aFriCa INDiction IIII
2	INN6NIMISRCSƇFЄSFNЄRFNS	CIN6IIII	IN Nome DomiNI MISeRiCordis SoLidus FEritus ***FNERFNS*** afriCa INDiction IIII
3	INN6NMISRCSTFЄSF[R]CS	CIN6IIII	IN Nome DomiNI MISeRiCordis SoLidus FEritus ***S*** aFRi***CS***Ca INDiction IIII
4	INN6NIMISRCSƮFЄS6RCI	CIN6IIII	IN Nome DomiNI MISeRiCordis SoLidus FEritus ***SD*** afRi***CI***Ca INDiction IIII
5	INN6NIMISRCSƇFЄRINA	RCIN6IIII	IN Nome DomiNI MISeRiCordis SoLidus FERitus IN AfRiCa INDiction IIII
6	. . . . . IMISRCSƮFЄS . .	CIN6IIII	…dominI MISeRiCordis SoLidus FEritus ***S***…
7	INN6NIM . . . . . [N]CI	CIN6IIII	IN Nome DomiNI Misericordis…***NCI*** afriCa INDiction IIII
8	INN6NIMISRCSLFRƇNAFR	CIN6IIII	IN Nome DomiNI MISeRiCordis SoLidus FeRiTus iN AFRiCa INDiction IIII
9	INN6NIMISRCSƇFЄSFRCN	CIN6IIII	IN Nome DomiNI MISeRiCordis SoLidus FEritus S aFRi***CN***Ca INDiction IIII

164 Pellet in reverse C.

Like the obverse legends, no two solidi reverse dies have exactly the same legend (this also holds true for the fractionals, see p. 126 and p. 127 below). Despite this variety in the overall inscription, the beginning of the obverse legends is remarkably consistent. Nineteen of the 20 reverse dies begin with INNDNIMISRCSL, for IN Nomine DomiNI MISERiCordis SoLidus – in the name of the Lord, the Merciful, (this) solidus… . This phrase is followed by *feritus* (struck), usually abbreviated as 'FЄS', although in one case it is abbreviated as 'FRT' (RD8 in Table 14, Indiction IIII) and in another it is abbreviated as 'FЄR' (RD3 in Table 14, Indiction II).

Like the obverse dies, it is in the second half of the reverse dies of the solidi that we find a large variation. The standard ending is 'INAFRC' (*in Africa*), followed by the Indiction date. But as with the obverse dies, it appears that letters have been added as filler at the end of the legend. This is most apparent in RD8 of Indiction III and RD1 through RD4 of Indiction IIII (see Table 14 above).

Finally, there is one reverse legend that is completely different from the others, but easily explained. Reverse die 3 from Indiction III is simply a repetition of the legend found on the majority of the obverse dies.

REVERSE LEGENDS - SEMISSES

The 18 surviving Series NA 2, Phase 1 semisses were struck from only five reverse dies, with each of the dies having a different legend (Table 15 and Table 16 below).

Table 15: Reverse Legends of the Series NA 2, Phase 1 Semisses

Marginal Legend	Obv. Field	Die No.	Total by Die
INN6NIMISRCVNS6S	OMNICR; HNCRAT; IMIЄRA; ICRЄTR	1	9
INN[N]IMISЄRIЄOR6	OMNIↃ; ICRЄTR	2	3
INN6NIMISRCSRFЄSN	RTЄRCIN; NICRЄTi	3	3
INN6INSRCSLFERINAFRЄ	SOMNЄ	4	2
NONЄST6S . . . . . [V]S6S .	SOMNЄ	5	1
		TOTAL	**18**

Table 16: Interpretations of the Legends on the Reverses of the Series NA 2, Phase 1 Semisses

Die No.	Legend	Interpretation
1	INN6NIMISRCVNS6S	In Nome DomiNI MISeRiCordis UNuS Deus
2	INN[N]IMISЄRIЄOR6	IN Nome domiNI MISERICORDis
3	INN6NIMISRCSRFЄSN	IN Nome DomiNI MISeRiCordis So***R***idus FEritus ***SN***
4	INN6INSRCSLFERINAFRЄ	IN Nome DominI ***N***iSeRiCordis SoLidus FERitus IN AFRiCa
5	NONЄST6S[NISISOʌV]S6S[N]	NON EST DeuS NISI SOLUS DeuS Non

As can be seen in the Table 16 above, the reverse legends for the semisses fall into two categories, those that imitate the legends found on the Series NA 2, Phase 1 solidi (RD3 and RD4), and those that are similar to legends found on some of the Series NA 1 semisses (RD1, RD2 and RD5). There are no die links between the semisses of Series NA 2, Phase 1 and Series NA 1.

REVERSE LEGENDS - TREMISSES

The Islamic mint in North Africa struck the 51 surviving tremisses of Series NA 2, Phase 1 from 15 reverse dies (Table 17). Like the corresponding semisses, the reverse legends of the tremisses can be divided into those that imitate the legends found on the solidi, and those that are similar to some of the legends found on the earlier struck Series NA 1 tremisses (Table 18).

Table 17: Reverse Legends on the Series NA 2, Phase 1 Tremisses

Marginal Legend	Obv. Field	Die	Total by Die
INNϬNIMISRCVNSϬ	CRЄTRN; NICRЄTI; NICRЄT[R]; RTЄRCN	1	7
INNϬNINISRCVSϬS	IMIЄRA; SOMNЄ; ONNIΩ	2	8
INNϬNIMISRCVNSϬS	SOMNЄ	3	2
INNϬNIMSRCSLFEIN[I]	IMIЄRA	4	2
INNϬNIMSRCSLFERIN	IMIЄRA	5	3
INNϬNIMISRЄVNS	HNCRAT; OMNIↃ; MNIЄRЄ; ONNIΩ	6	8
IN[NϬNIMI]SR[Є]VNSS	MNIЄRЄ	7	1
NONЄSTϬSNISISOΛVS	HNCRAT; ONNIΩ	8	8
INNϬNIMISRCVNSϬNS	RTЄRCIN	9	6
NNϬNIM[S]	RTCRCIN	10	1
INNϬNIMISRЄPNSϬN . S	RTCRCIN	11	1
IN[N] . . . . . RC[P]NSϬ[A]NI	RTCRCIN	12	1
. . . . CRЄSP[ϬN] . . .	[I]CRЄTR	13	1
. . . . . [CIΛЄI]	ICRCTC	14	1
INNϬNI[M]ISRCVNS[NS]	SOMNЄ	15	1
		TOTAL	**51**

Table 18: Interpretations of the Legends on the Reverses of the Series NA 2, Phase 1 Tremisses

Die	Legend	Interpretation
1	INN6NIMISRCVNS6	In Nomine DomiNI MISeRiCordis UNuS Deus
2	INN6NINISRCVS6S	IN Nomine DomiNI ***N***ISeRiCordis UnuS Deus
3	INN6NIMISRCVNS6S	IN Nomine DomiNI MISeRiCordis UNuS DeuS
4	INN6NIMSRCSLFEIN[I]	IN Nomine DomiNI MiSeRiCordis SoLidus FEritus IN ***I***
5	INN6NIMSRCSLFERIN	IN Nomine DomiNI MiSeRiCordis SoLidus FERitus IN
6	INN6NIMISRƆVNS	IN Nomine DomiNI MISeRiCordis UNuS
7	IN[N6NIMI]SR[Ɔ]VNSS	IN Nomine DomiNI MISeRiCordis UNuS deuS
8	NONЄST6SNISISOΛVS	NON EST DeuS NISI SOLUS
9	INN6NIMISRCVNS6NS	IN Nomine DomiNI MISeRiCordis UNuS DeuS Non (N and S transposed)
10	NN6NIM[S]	iN Nomine DomiNI MiS…
11	INN6NIMISRƆƤNS6N . S	IN NomiNI DomiNI MISeRiCordis UNuS Deus Non (last letters transposed)
12	IN[N] . . . . . RC[Ƥ]NS6[A]NI	IN Nomine . . . miseRiCordis UNuS DeuS Africa NI (last letters mixed up)
13	. . . . CRЄSP[6N] . . .	unclear
14	. . . . . [CIΛЄI]	unclear
15	INN6NI[M]ISRCVNS[NS]	IN Nomine DomiNI MISeRiCordis UNuS ***N***euS

The majority (9 of 15 reverse dies) of the reverse legends on the Series NA 2, Phase 1 tremisses are variations of the reverse legend *In nomine domini misericordis unus deus* - in the name of the Lord, the Merciful, God alone.[165] Two of the dies (RD4 and RD5) have legends copied from the solidi. A final die (RD12) appears to be the *In nomine domini misericordis unus deus* legend, but with the addition of the solidi reverse ending at the end.

There are three exceptions to this legend worth noting, however, as they are similar to legends found on Series NA 1. Reverse die 8 bears the reverse marginal legend of *non est deus nisi solus*, similar to RD5 of the Series NA 2, Phase 1 semisses as well as Series NA 1. The legends on the other two exceptions, RD13 and RD14, are quite

165 Walker read this legend as *in nomine domini misericordis unus deus non socius*. See WALKER 1956, p. 68.

worn and I am therefore unable to interpret them.

SERIES NA 2, PHASE 2

The solidi, semisses and tremisses of Series NA 1, Phase 2 are similar in layout to Series NA 2, Phase 1, as they maintain the epigraphic form of the earlier phase. The most important difference between the two phases is the change that took place in the obverse legend. In the majority of cases, the obverse legend on Phase 1 is *deus eternus, deus magnus, deus omnium creator*, an annunciation of various attributes of God (see tables and discussion beginning on p. 113). With the introduction of Phase 2, however, we once again have a variation of the *shahāda* (see p. 133) as the obverse legend. Phase 2 also sees a change in the denominational makeup of the surviving examples, with only five surviving solidi and more semisses (33) than tremisses (21) (in Phase 1 there are far fewer surviving semisses than tremisses (18 versus 51) and a large number of solidi (36 versus 5); see Table 9).

The surviving examples of Series NA 2, Phase 2 are datable to Indiction years VII (89-90/708-9) and Indiction IX (represented by a Θ) (91-2/710-11). The layout of Phase 2 follows the layout of Phase 1, with the only ornamentation on the solidi of this phase being a single beaded circle tracing the outside edge of the coin. The single beaded circle is also found on the fractionals of Phase 2, along with a globe on pole on steps (semisses) or T-bar on steps (tremisses) in the reverse field.

Examples of each of the three denominations of Series NA 2, Phase 2 are found in Figure 31 below.

Figure 31: Above: Series NA 2, Phase 2 solidus, dated Indiction Θ (91-2/710-11). BwNY2, L:409. Image courtesy of Baldwin's Auctions, Ltd. (4.28 g) Centre: Series NA 2, Phase 2 semissis, undated. W C.7=Ø46. Image courtesy of the National Museum, Copenhagen. (2.02 g) Below: Series NA 2, Phase 2 tremissis, undated. Stk09, L:3457. Image courtesy of Stack's Bowers. (1.39 g) (scale x4)

Table 19: The Obverse Dies of Series NA 2, Phase 2

Die No.	Legend	Field	Hor. Line(s) Above Field	Ind. Date	Denominations			No. of Ex.
					Sol	Sem	Tre	
1	⟨illegible⟩	⟨illegible⟩	⟨illegible⟩	??	0	3	0	3
2	⟨illegible⟩	⟨illegible⟩	⟨illegible⟩	??	0	0	2	2
3	⟨illegible⟩	⟨illegible⟩	⟨illegible⟩	VII? (III)	2	0	0	2
4	⟨illegible⟩	⟨illegible⟩	⟨illegible⟩	VII	1	5	3	9
5	⟨illegible⟩	⟨illegible⟩	⟨illegible⟩	Θ	1	0	0	1
6	⟨illegible⟩	⟨illegible⟩	SI, M, ⟨illegible⟩	VII?	0	3	0	3
7	⟨illegible⟩	⟨illegible⟩	⟨illegible⟩	??	0	3	0	3
8	⟨illegible⟩	⟨illegible⟩	⟨illegible⟩	??	0	1	0	1
9	⟨illegible⟩	⟨illegible⟩	⟨illegible⟩	??	0	1	4	5
10	⟨illegible⟩	⟨illegible⟩	⟨illegible⟩	VII?	0	1	2	3
11	⟨illegible⟩	⟨illegible⟩	⟨illegible⟩	VII?	0	0	2	2
12	⟨illegible⟩	⟨illegible⟩	⟨illegible⟩	??	0	0	2	2
13	⟨illegible⟩	⟨illegible⟩	⟨illegible⟩	Θ?	0	3	2	5
14	⟨illegible⟩	⟨illegible⟩	SI, MI, ⟨illegible⟩	VII?	0	4	0	4
15	⟨illegible⟩	⟨illegible⟩	⟨illegible⟩	??	0	1	3	4
16	⟨illegible⟩	⟨illegible⟩	⟨illegible⟩	Θ?	0	4	0	4
17	⟨illegible⟩	⟨illegible⟩	⟨illegible⟩	Θ	1	3	1	5
18	⟨illegible⟩	⟨illegible⟩	⟨illegible⟩	??	0	1	0	1
				TOTALS	**5**	**33**	**21**	**59**

Table 19 above sets out the legends on the 18 obverse dies of the 59 surviving examples of the Series NA 2, Phase 2 coinage. As can be seen in the table, the legends found on Phase 2 are much more consistent than those found on Phase 1, with variations within the legends likely only due to die engraver error (for example, the replacement of 'Є' with 'C' on OD9 and OD13). The obverse marginal legend, ending in the obverse field, is without exception a new Latin variant of the *shahāda* – *non est deus nisi unus cui non est alius similis* – 'There is no God but the one to whom no one is similar'. The most complete abbreviated version of the obverse legend is:

NN ЄƧ ∂Ƨ NIƧ ꟼN Cꟼ NN Ƨ AʎꟼI SIMIʎƧ
NoN ESt DeuS NISi UNuS Cui NoN eSt ALIUs SIMILIS

The majority of the obverse legends of Series NA 2, Phase 2 are truncated versions of the above legend.

Despite the consistency in the obverse legend, two epigraphic differences should be pointed out. The coins of OD1 and OD2 have variations in the letterforms on the marginal legends compared to the other examples of this phase. For the obverse marginal legend of these two dies, the die engraver (possibly the same individual) used 'S' instead of the 'Ƨ' that is used for the obverse marginal legend of the remaining 16 obverse dies of Series 2, Phase NA 2. For OD2, the die engraver also replaced the ligated 'NN' with two single 'Ns'.

REVERSE LEGENDS – SOLIDI

There are four variants of the reverse legends on the five solidi of Series 2, Phase 2 (Table 20). In each case, the marginal legend is, in various abbreviated forms, *in nomine domini misericordis solidus feritus in Africa* – In the name of the Lord, [of

the] Merciful, [this] solidus struck in Africa. The most complete reverse marginal legend is:

IN N ƏNI MSRC SƛƏ FRT IN ⱭFRC
IN Nomine Domini MiSeRiCoRdis SoLiDuS FeRiTus IN AFRiCa

The reverse marginal legend is followed by the Indiction date in the reverse field.

Table 20: Reverse Legends found on the Solidi of Series 2, Phase 2

Die No.	Marginal Legend	No. of Ex.	Field	Hor. Lines above Field
1	INƎNIMSRCSƛƏFRTNⱭFRCΛ·	2	INƏCIII	IN, ƏC, II
2	INNƎNIMƧRCƧƛ . . . . . ⱭFR	1	INƏCVII	IN, ƏC, VI
3	INƎNIMƧRƧƛƏFRTINAFRCR·	1	INƏCϴ	IN, ƏC, ϴ
4	INƎNIMƧRCƧƛƏ	1	INƏCϴ	IN, Ə, Cϴ
	TOTAL	5		

The legends and epigraphy of the four reverse dies of the Series NA 2, Phase 2 solidi are quite consistent, with the only significant variation occurring in the abbreviation of the mint name. The reason for this variation is likely for the same reasons as the variations at the end of the obverse legend, that is, poor planning on the part of the die engraver, leading to a lack of space on the die. An example of this poor planning can be found on RD3 in Table 20, which ends in '**R**', followed by a pellet. The '**R·**' is either an attempt to fill space, a die engraver error, or an attempt to copy the beginning of the reverse field legend '**RINƏC**', found on many of the solidi examples of Series 2, Phase NA 1 (with the balance of the legend ending in the reverse field).

There are three different Indiction dates on the solidi in Table 20 above. The solidus of RD2 (OD4, Figure 33 below) is the only known example that can be securely dated to Indiction VII (89-90/708-9). The two solidi of RD1 (OD3, *Figure **32*** below) are dated Indiction III (85-6/704-5) but the legends and epigraphy place these

examples in Phase 2.[166] The presence of one other example from Phase 1 with a 'non-standard' legend (see p. 120), and the fact that neither the obverse nor the reverse die of this coin are linked to any other examples of Phase 2, however, means that the placement of these two solidi in Phase 2 must remain somewhat tentative.

In contrast, the legends on the two solidi (RD3 and RD4) dated Indiction Θ (91-2/710-11), present no problems (Figure 34).

Figure 32: Series NA 2, Phase 2 solidus, dated Indiction III, but with epigraphy and legends that suggest that this coin was struck in Indiction VII. NG6, L:287. Image courtesy of Numismatica Genevensis S A. (4.30 g) (Scale x4)

Figure 33: Series NA 2, Phase 2 solidus, dated Indiction VII. W P.42=L111bis. Image courtesy of the Bibliothèque nationale de Paris, France. (4.25 g) (Scale x4)

166 BATES 1992, p. 273, fn 5.

Figure 34: Series NA 2, Phase 2 solidus, dated Indiction Θ (91-2/710-11) W C.12=Ø54. Image courtesy of the National Museum, Copenhagen. (4.30 g) (Scale x4)

REVERSE LEGENDS – SEMISSES

The marginal legends on the 12 reverse dies of the 33 semisses of Series NA 2, Phase 2, are nearly as consistent as those found on the corresponding solidi (Table 21 below). The legends on 11 of the 12 reverse dies are analogous to the legends found on the reverse of the solidi (minus the Indiction date in the reverse field, which is replaced in all cases by a globe on pole on three steps).

Table 21: Reverse Legends found on the Semisses of Series 2, Phase 2

Die No.	Marginal Legend	No. of Ex.	Field
1	INNϬMIMSRSSΛϬFRT	3	G/3
2	INNƏNIMƧCƧΛƏFRTINAFRCΛ	1	G/3
3	INNƏNIMƧRCƧΛƏFRTINΛFRC	6	G/3
4	INNƏNIMƧRCƧΛƏFRTINΛFR	1	G/3
5	INNƏNIMƧRCƧΛƏFRTINAFI	3	G/3
6	INNƏNIMƧRCƧΛƏFRTINΛF	2	G/3
7	INNƏNIMƧRCƧΛƏFRTINI	3	G/3
8	INNƏNIMƧRCƧΛƏFRTIN	4	G/3
9	INNƏNIMƧSCƆ[E]OFRƆINA	1	G/3
10	NNЄƧƏƧNIƧVNƧCPINƧA	6	G/3
11	[INNϬ]MIIIƧRCƧΛƏ[FRTIN] . . .	1	G/3
12	. . . . . ƧR CƧΛƏFRTINA . .	2	G/3
	TOTAL	33	

There are only two substantial differences within these 11 legends, other than the truncation of the legend on the majority of the dies. Reverse dies 1 and 11 replace 'ə' with 'ɢ', likely due to engraver error. More blatant are the errors in the letters on OD9, with an 'S' substituted for the 'R' of 'MƧRC' (*misericordis*) and the letters 'ƇEO' substituted for 'Ƨʌə' (*solidus*).

The final reverse die (RD10 in Table 21) replaces the reverse legend found on the majority of the semisses with a repetition of the abbreviated *shahāda* of the obverse marginal legend - NNЄƧəƧNIƧVNƧCPINƧA – NoN ESt DeuS NISi UNuS CUI Non eSt Alius.

REVERSE LEGENDS - TREMISSES

The 21 tremisses of Series 2, Phase NA 2 were struck from only six reverse dies.

Table 22: Reverse Legends found on the Tremisses of Series 2, Phase 2

Die No.	Marginal Legend	No. of Ex.	Field
1	INNɢNIMSRCSʌɢFRTIN . .	2	T/2
2	INNəNIMƧRCƧʌəFRTINAF	7	T/2
3	INNəNINƧRCƧʌəFRTIN	3	T/2
4	INNəNIMSRCƧʌəFRTI	4	T/2
5	NNЄƧəƧNIƧPNƧCPNNƧΔ	4	T/2
6	INNəMIMƧRCƧ[R]əFRTI[N]	1	T/2
	TOTAL	21	

Five of the six reverse legends in Table 22 above are similar to the majority of the reverse legends on the solidi and semisses. Like the majority of the reverse legends on the semisses, the only variation in letterform is the substitution of 'S' for 'Ƨ' and 'ə' for 'ɢ' on RD1 and the truncating of legends due to die engraver error. The final reverse legend, found on RD5, is a repetition of the obverse marginal legend, similar to RD10 of the semisses.

DATING THE FRACTIONALS OF SERIES NA 2, PHASE 2

With the exception of the two solidi dated Indiction III (which are likely a die engraver's error for Indiction VII), there is no problem in attributing the surviving solidi to either Indiction VII or Indiction Θ, since these dates are inscribed on the coin face. The dating of the fractionals, however, presents more problems. For Series NA 2, Phase 1, the large number of die links between the solidi and the fractionals make the tentative and/or secure dating of the majority of the semisses and tremisses relatively straightforward. Unfortunately, with Series NA 2, Phase 2 we have very few securely dated solidi.

Despite the small number of solidi in this phase, 32 of the 54 fractionals can still be die linked to the three securely dated solidi of Series NA 2, Phase 2, with 20 of the fractionals provisionally dated to Indiction VII and the remaining 12 fractionals provisionally dated to Indiction Θ (=9). Table 23 and Table 24 set out the obverse and reverse legends for the two Indiction years.

Table 23: Dateable Obverse Legends Found on the Fractionals of Series NA 2, Phase 2

Indiction Year									
VII					**ϴ**				
Marginal Legend	Field	dies	sem	tre	Marginal Legend	Field	dies	sem	tre
ꟿЄƧƏƧNISꟼNƧCꟼꟿƧΛʎI	SIMIʎƧ	4	9	7	ꟿЄƧƏƧNIƧꟼNƧCꟼꟿΛʎ	SIλIMƧ	1	3	1
ꟿЄƧƏƧNIƧꟼNƧCꟼꟿIƧΛʎI	SIMIʎIƧ	1	4	0	ꟿCƧƏƧNIƧꟼNƧCꟼꟿƧʎI	SIMIʎIƧ	1	2	2
	TOTAL	5	13	7	ꟿЄƧƏƧNIƧꟼNƧCꟼꟿI	SIMIʎIƧ	1	4	0
						TOTAL	3	9	3

Table 24: Dateable Reverse Legends Found on the Fractionals of Series NA 2, Phase 2

Indiction Year							
VII				**ϴ**			
Marginal Legend	dies	sem	tre	Marginal Legend	dies	sem	tre
IꟿƏNIMƧRCƧʎƏFRTINΛFRC	1	5	0	IꟿƏNIMƧRCƧʎƏFRTIN	2	3	3
IꟿƏNIMƧRCƧʎƏFRTINΛFR	1	1	0	ꟿЄƧƏƧNIƧVNƧCꟼINƧΛ	1	6	0
IꟿƏNIMƧRCƧʎƏFRTINΛFI	1	4	0	**TOTAL**	3	9	3
. . . . CƧʎƏFRTINΛ . .	1	1	0				
[Iꟿ6]MIIIƧRCƧʎƏ[FRTIN] . . .	1	1	0				
. . . . CƧʎƏFRTINΛ . .	1	1	0				
IꟿƏNIMƧRCƧʎƏFRTINΛF	1	0	7				
TOTAL	7	13	7				

Nothing unexpected is revealed by a comparison of the legends for each Indiction year in Table 23 and Table 24. Both the obverse and reverse legends for the Indiction VII semisses and tremisses appear to be less truncated when compared to the legends found on the semisses and tremisses of Indiction Θ, with fewer engraving errors. This makes sense, as errors might accumulate over time if previous dies containing errors were used as the model for later dies. This can be most clearly seen in the second obverse legend of Indiction Θ, with the engraving errors of 'C' for 'Є' and 'S' for 'A'. The mistakes in engraving even led to the repetition of the obverse legend on the reverse of one of the dateable legends in Indiction Θ. The appearance of such an easily seen mistake suggests that the Islamic mint in North Africa did not exercise stringent quality control measures at this time.

There are no die links with the solidi of Series 2, Phase NA 2 for the remaining 22 fractionals, and it might be imprudent to speculate on the dating of these coins for three reasons. First, all of the die links above are with only two of the solidi (one from each year). Secondly, many of the remaining coins have obverse and reverse legends that could suggest the coins were struck in either year. Finally, we cannot rule out the possibility that some of the coins of this phase were struck in Indiction VIII (90-1/709-10). There is no definite reason for a hiatus in production from the North African mint for this year, although as I suggest on p. 251 the absence of dated Series NA 2, Phase 2 for Indiction VIII may have been due to the introduction of Series NM 4, no mint fractionals in 91/710. Given the rarity of the surviving solidi of Series 2, Phase NA 2 it may just be that no solidi have survived from this year. What I have shown, however, is that the more error filled legends, those that are more truncated, and those coins that repeat the obverse legend on the reverse were more likely to have been struck later than Indiction VII.

THE FIRST ISLAMIC COINAGE OF THE IBERIAN PENINSULA?

Before delving into the earliest Islamic precious metal coinage that can be securely attributed to the Iberian Peninsula, it is important to discuss six coins dated Indiction Θ (91-2/710-11) and bearing the mint name *Africa* (see p. 484 in Appendix A for list of examples). Certain characteristics of this group of coins suggest that they were struck in the Iberian Peninsula and not in North Africa.

Figure 35: Series 2, Phase NA 2 solidus, dated Indiction Θ (91-2/710-11). TC NorthAfrica1. Image courtesy of the Tonegawa Collection. (4.22 g). (Scale x4)

Figure 35 above shows an example of the Indiction Θ solidi under discussion. As can be seen, these solidi have the general layout of the Series NA 2, Phase 2 solidi struck in North Africa in the same year (see Figure 34 above). They continue to bear the mint name Africa and the Indiction Θ date. What sets them apart from the other North African Indiction Θ solidi are the differences in the legends, epigraphy, metrology and, most importantly, the metallurgy.

Table 25: The Obverse Dies of the Anomalous Indiction Θ Solidi

Die No.	Marginal Legend	Field	No. of Ex.	Horiz. Line(s) Above Field
1	ЄSTƏSNISVNCV[SVI]NЄSNΛΛIVS[167]	SIMIΛS	2	SI, MI, Λ
2	ЄSTƏSN[ISV] . . . . SNЄSNΛΛIV	SIMIΛS	1	SI, M, Λ
3	ЄSTƏSNISVNC[VISNЄS] . . . IV	SIMIΛS	1	SI, MI, ΛƧ
4	ЄSTƏSNISNVCVISNЄSNΛΛIV	SIMIΛS	1	SI, M, ΛƧ
5	ЄSTƏSNISNVCVISNЄSNΛΛIV	SIMIΛS	1	SI, MI, Λ
		TOTAL	**6**	

W C.12
obv: NNЄƧƏƧNIƧЧNƧC[ЧNN]ƧAΛ//SIMIΛƧ
rev: INNƏNI[MƧRƧΛƏ]FRTINAFRCR·//INƏCΘ

TC North Africa 1
obv: ЄSTƏSNISVNCV[IS]NЄSNΛΛIV//SIMIΛS
rev: INƏNINSRMSΛ[NF]RTINΛFRC//INƏCΘ

Turning first to the legends and the epigraphy, we can see from Table 25 and Table 19 and the comparison of the legends on an example of Series NA 2, Phase 2 (W C.12) and an anomalous example (TC North Africa 1) that there are several epigraphic differences between this coinage and the other Indiction Θ North African solidi. The engraver(s) of the legends on the anomalous examples omitted the first word of the obverse legend – 'NN' for 'NoN', but appear to have inserted the word *non* (abbreviated as 'N') prior to the abbreviation of *alius* ('ΛΛIV(S)'). The obverse legends on this type also substitute the letters 'S' for 'Ƨ', 'Λ' for 'A', and 'V' for 'Ч'. It appears from the omission of the first word that the engraver did not understand what he was cutting on the die, and instead of truncating the legend at the end he began the legend with 'ЄST', eliminating the first word.

167 It is possible that the two examples of OD1 are the same coin.

The reverses of this group of coinage were all struck from the same die, which bears the legend INƏNINSRMSΛNFRTINΛFRC//INƏCϴ.[168] Like the obverse legends, the reverse legend continues to vary in its letterforms ('N' for 'Ɲ', 'Λ' for 'Ⱥ', 'Λ' for 'ʎ', and 'S' for 'Ƨ'). The reverse die also has two significant engraving errors. The word *misericordis*, abbreviated as 'MƧRC' on the other solidi, is retrograde ('SRM'), and the word *solidus* is abbreviated as 'SΛN', an obvious error for 'ƧʎƏ'.

The differences in legends do not necessarily point to an Iberian Peninsula as opposed to a North African provenance, because as I have outlined the legends on the North African coinage have multiple variants in both Series NA 1 and Series NA 2, Phases 1 and 2. The earlier North African coinage also frequently has errors within the legends. Taken together, these differences might only suggest that this coinage was struck at an irregular mint in North Africa or simply die engraver error at the official mint.

However, further differences, in metrology and metallurgy, exist between the anomalous Indiction Ɵ examples and the Series NA 2, Phase 2 coinage. First, the weights of the six anomalous examples vary more than what would be expected given the weights of the earlier North African coinage. This variation in weight is similar, however, to the Series IP 2 coinage struck in the Iberian Peninsula (see p. 279 for detailed discussion). More significantly, based on the SG testing of two of the six examples the gold content appears to be 60 to 70% Au, significantly lower than the earlier North African coinage, but again similar to the coinage struck at the main Islamic mint in the Iberian Peninsula (see p. 328 for full SG testing results and discussion).

168 Horizontal lines are found above the letters I, d, and CƟ in the obverse field.

The lower average weight (albeit based on only six examples), variant legends, and the lower gold content found on this variant suggest one of two possibilities. First, the Islamic administration made a change to the legends and various standards for the coins prior to the invasion of the Iberian Peninsula; or, much more likely, this variant was struck in the Iberian Peninsula after the invasion took place. LA-ICP-MS/PAA testing of coins of this variant and a comparison with elements found in the early Islamic coinage of the Iberian Peninsula is needed to confirm the second possibility.

SERIES IP 2

The Islamic mint in North Africa ceased striking Series NA 2, Phase 2 coinage either prior to, or shortly after, the invasion of the Iberian Peninsula (see discussion beginning on p. 141). The evidence provided by the coinage (legends; epigraphy; weights; gold content) all suggest that the Muslim army established multiple mints, with a main mint likely travelling with Mūsā b. Nuṣayr and secondary mints travelling with other elements of the army striking coins as needed. The Series IP 2 coinage (all solidi) has the same fabric as the earlier Series NA 2, Phase 2 coinage, but the mint(s) modified the iconography and legends, introducing a star in the obverse field and *hijri* dating in the reverse margin (see discussions on p. 147 and p. 153).

Considerably more analysis has been undertaken on the Series IP 2, Latin-Epigraphic coinage (all solidi) than on the earlier North African precious metal coinage (Series NA 1 and Series NA 2, Phases 1 and 2). The most comprehensive work is that of Balaguer who, building on the work of Navascués and earlier scholars, attempted to decipher the legends in her dataset and developed a general typology (see p. 51 and p. 53).[169]

Figure 36: Series IP 2 solidus, dated Indiction XI (94-5/713-14). W C.14=Ø51. Image courtesy of the National Museum, Copenhagen. (4.24 g) (scale x4)

169 BALAGUER 1976c. She summarized her typology again in BALAGUER 1988.

Figure 37: Series IP 2, solidus, dated Indiction XI (93-4/712-13). TC 93SPN4. Image courtesy of the Tonegawa Collection. (4.34 g) (scale x4)

In developing her typology for Series IP 2, Balaguer first divided the coinage into two groups, those examples with an abbreviated or fully engraved SIMILIS in either the obverse or reverse field (Figure 36) and those examples with a star in the obverse field and an Indiction date in the reverse field (the majority of the examples she studied, Figure 37 above). Balaguer then further subdivided the SIMILIS type into those coins that replace the Indiction date with SIMILIS in the reverse field (see Figure 56 below and associated discussion) and those that replace the star with SIMILIS in the obverse field (Figure 36 above and Figure 50 below). Finally, Balaguer noted one anomalous coin that appeared to have an abbreviated form of the word MISERICORS replacing the Indiction date in the reverse field (see Figure 57 below).[170]

For Balaguer, the coins that showed either SIMILIS or MISERICORS in the obverse or reverse fields were developmental stages in the evolution of Series IP 2. The coins that introduced the star in the obverse field and replaced the Indiction date with SIMILIS were the first link in the typological changes that took place after the invasion of the Iberian Peninsula, with the introduction of the star serving as a recognizable symbol for the new region. The elimination of the Indiction date on the

170 BALAGUER 1976c, pp. 28-9.

reverse of this type led to the introduction of the *hijri* date in the marginal legend. For Balaguer, the second SIMILIS type, which respected the North African model by placing the word SIMILIS in the obverse field while continuing to bear the Indiction date in the reverse field, was a further stage in the development of the Series IP 2 coinage, but fossilized the African model. The third, MISERICORS type, was an anomaly.[171]

Although Balaguer's simple typology of the Series IP 2 solidi established some clear divisions, it ignored certain characteristics of the coinage that might assist in providing a more detailed typology, namely the epigraphy, metrology, and metallurgy. Using these tools, it is possible to distinguish to some degree those coins struck at the main Islamic mint operating in the first few years of the conquest (presumably under Mūsā b. Nuṣayr), and those coins struck at secondary mints operating under different elements of the army (see p. 390 for a more detailed discussion of the history of the conquest of the Iberian Peninsula).

Before turning to the typology, it is important to discuss certain characteristics of the Series IP 2 coinage, namely the presence of the star in the obverse field on the majority of the examples; the epigraphy, which in some cases varies from that found on the previously struck Series NA 2 coinage; and the legends, which again are different than those found on the North African coinage.

THE STAR

The first characteristic that needs to be explored is the presence of a seven, eight (the majority of the examples) or nine-pointed star in the obverse field. The introduction of a star in the obverse field on most of the Series IP examples provides a clear differentiation between this series and the earlier North African coinage. In choosing

171 BALAGUER 1988, pp. 20-23.

to place a star in the obverse field, the early Islamic administration of the Iberian Peninsula adopted a symbol already present on coinage on both sides of the Strait of Gibraltar, but one that was not used by the Visigoth monetary system. Balaguer, in her analysis, emphasized the similarity between the stars found on the Islamic coinage and that of the Mauritanean kings Bocchus II (r. 49-38 BCE) and Juba II (r. 29-27 BCE) (clients of the Roman Empire), along with the issues of the mint Lixus-Shemesh in Mauretania and the mint in Málaga (see Figure 38 for comparison of the star found on Series IP 2 and the earlier coinage struck in the region).[172]

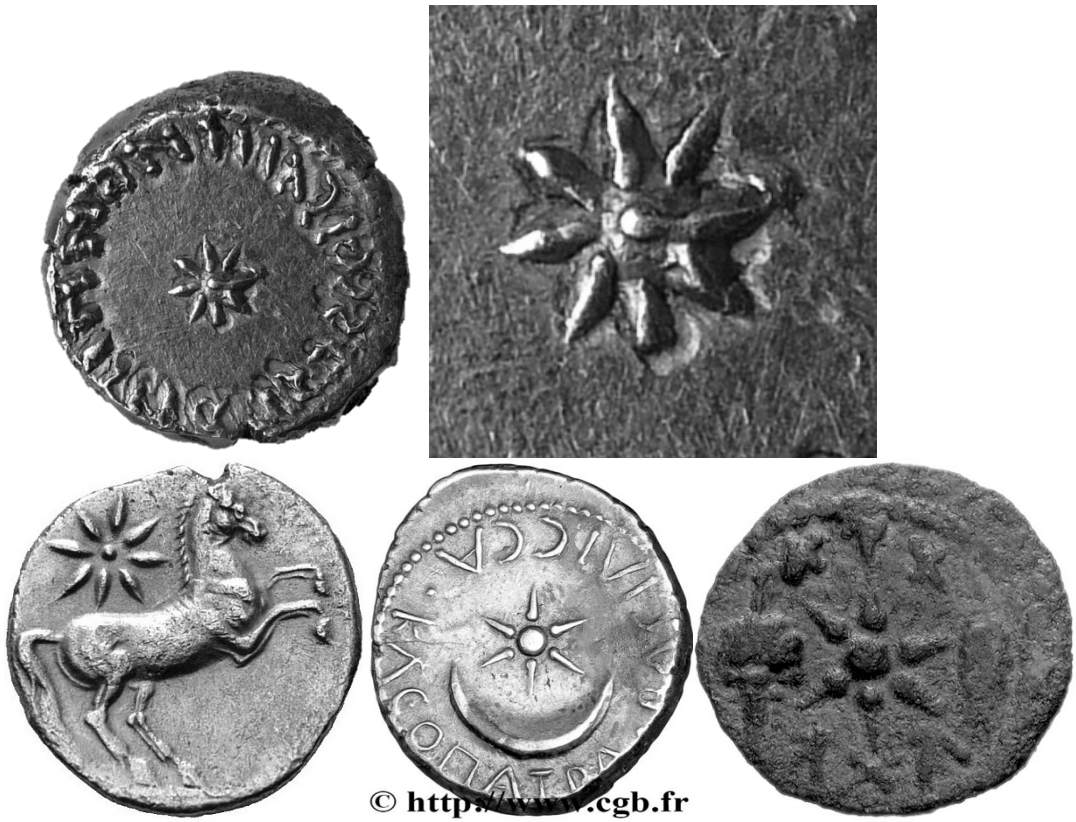

Figure 38: Above: On left, obverse of Series IP 2 solidi, showing eight-pointed star. MAN 1953.23.1. Image courtesy of the Museo Arqueológico Nacional, Madrid. On right, detail of star of same coin. (4.30 g) Below, from left: Reverse of Greek shekel of Carhago Nova. Ra94, L:190. Image courtesy of H. D. Rauch GmbH. (7.09 g); Reverse of a silver coin of Juba II. CGB59, L:230. Image courtesy of CGB. (3.09 g); Reverse of a copper coin of Lixus-Shemesh mint, dated 50-1 BCE. CNG180, L: 67. Image courtesy of Classical Numismatic Group, Inc. (5.26 g)

172 BALAGUER 1976c, p. 83.

EPIGRAPHY

Navascués has previously provided a detailed analysis of the epigraphy of Series IP 2.[173] His analysis included a reproduction of the legends of all of the examples he analysed, and I have reproduced his drawings in Figure 39 and Figure 40 below. As can be seen, the epigraphy varies considerably. In many cases, this is likely due to a lack of knowledge of the Latin script. This is especially the case for those examples that I suggest were struck at secondary mints, as they undoubtedly simply copied the legends found on the coins struck at the main mint.

173 NAVASCUÉS 1959, pp. 15-29.

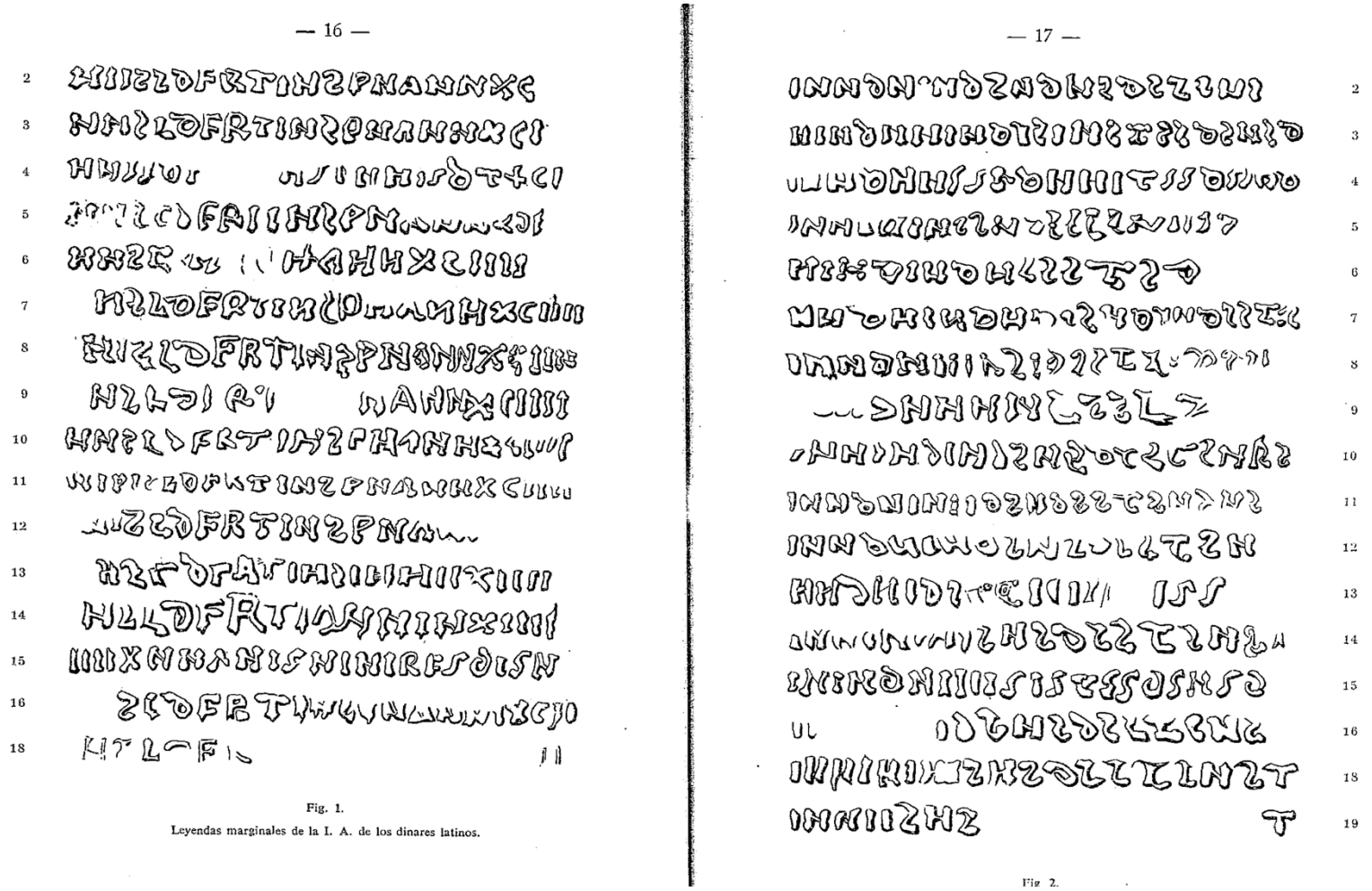

Fig. 1.
Leyendas marginales de la I. A. de los dinares latinos.

Fig. 2.

Figure 39: Navascués's drawings of the Obverse and Reverse Marginal Legends on Series IP 2 Coinage. (NAVASCUÉS 1959, pp. 16-17)

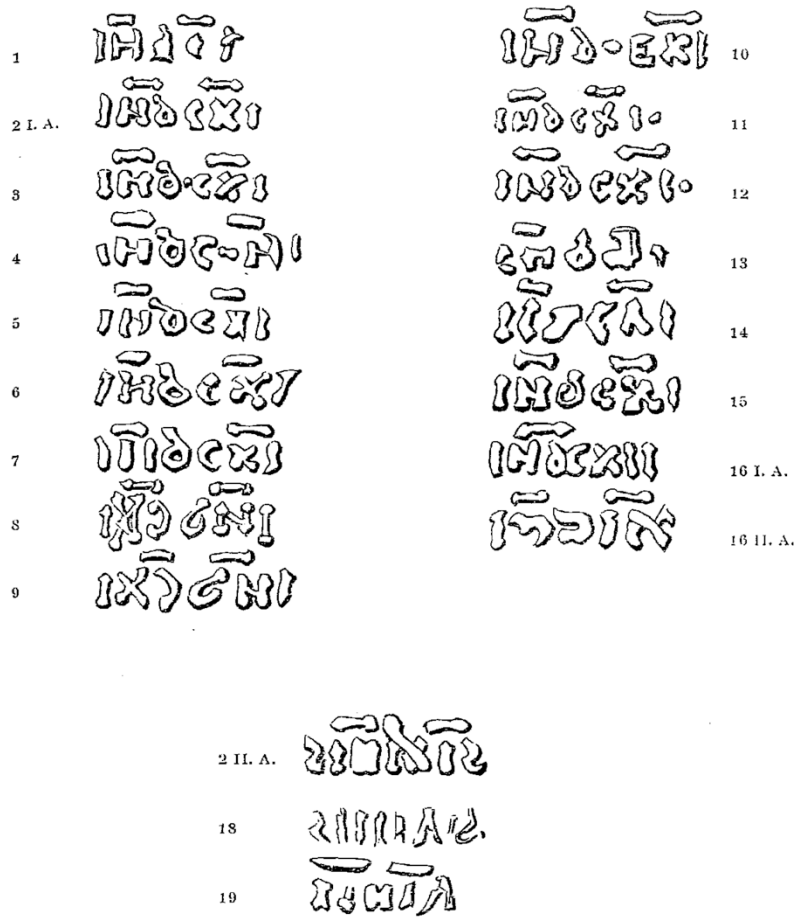

Fig. 3.
Leyendas en el campo de las áreas de los dinares latinos.

Figure 40: Navascués's drawings of the Obverse and Reverse Field Legends on Series IP 2 Coinage. (NAVASCUÉS 1959, p. 19)

For the purposes of this dissertation, it is not important to provide the same level of detail in the discussion of the epigraphy as that found in Navascués, but the differences and/or similarities in the engraving of certain letters needs to emphasized:

L – is engraved in four different ways. This letter is sometimes engraved as a 'ʎ', 'ʌ' or 'Λ', especially in the word SIMILIS. For the main mint examples, the 'L' of SoLiDus is 'L', while the 'L' of SoLus is usually engraved as 'Ɔ', although it becomes corrupted in the secondary mint coinage.

N – is ‘N’ on the main mint coinage. On the secondary mint examples, it is found as ‘N’, ‘H’, or ‘И’.

D – is usually ‘ə’ on the main mint coinage. On the secondary mint examples, it can also be found as ‘Ɵ’, ‘Ơ’, ‘Ɔ’ and occasionally ‘Δ’.

S – is usually ‘Ƨ’ or ‘S’ on both the main mint and secondary mint coinage.

Other letters are sometimes retrograde or upside down, and the marginal and/or field legends are frequently completely retrograde.

Balaguer, in her analysis of the Series IP 2 coinage, transcribed the letter ‘N’ as either ‘N’ or ‘H’, although sometimes she believed that an ‘H’ remained an ‘H’, or that an ‘N’ should be read as an ‘M’, ‘T’ or ‘L’. She also thought that sometimes a ‘D’ (which she transcribed as a tiny delta), should be read as an ‘S’.[174] Balaguer’s interpretation of the letters in turn influenced her reading of the legends, and those of later scholars. I do not believe that in any case an ‘H’ was intended as an ‘H’, but that instead it is always a corrupted ‘N’ engraved on a die used at a secondary mint. This is also the case with the letter ‘D’.

174 BALAGUER 1976c, pp. 52-3.

THE OBVERSE LEGEND

The difficulty in reading the individual letters on the Series IP 2 examples has influenced the reading of the legends. Balaguer, in her analysis, reconstructed several different obverse legends from the abbreviated versions found in the inscriptions.[175] They are as follows:

IN Nomine DoMiNi Non DeuS NiSi DeuS SoLus NoSTer

IN Nomine DomiNi Non DeuS NiSi SoLuS Non Socius, or simply Non

IN Nomine DomiNi Non Deus (?) SoLuS Sed DeuS Non Socius Deo

IN Nomine DomiNI Non DeuS NiSi DeuS eST SIMiLiS (deo)

IN Nomine DomiNi Non DeuS NiSi DeuS SoLus MisericoRS

In Nomine DomiNi Noon DeuS NiSi DeuS SoLus Non DeuS Alius

Many of Balaguer's readings of the legends, both obverse and reverse, treat all of the examples the same, as opposed to reading most of the examples as corrupted versions of the coinage struck at the main Islamic mint in the Iberian Peninsula. If we look simply at the main mint examples that I have isolated based on their legends, epigraphy, weight and/or gold content, the most probable reading of the obverse legend becomes:

IN N ƏNI N Ə2 N2 Ə2 2Ƨ2 N
IN Nomine DomiNI Non DeuS NiSi DeuS SoLuS Non

This legend would then translate as 'In the name of the Lord, there (is) no God but God alone', another Latin variation of the *shahāda*. It has a similar meaning to the obverse religious legend found on Series NA 2, Phase 2, *non est deus nisi unus cui non est alius similis* – 'There is no God but the one to whom no one is similar', but the wording is quite different. Some of the main mint legends do add additional

175 BALAGUER 1976c, pp. 63-6. Bates, in his later analysis, suggested that the most frequent obverse legend was the last of Balaguer's obverse legends: In Nomine Domini Non Deus Nisi Deus Solus Non Deus Alius (Similis). See BATES 1996, p. 14.

letters to the end of the legend, however. This is again likely due to the engraver adding additional letters to fill space.

THE REVERSE LEGEND

In contrast to the obverse marginal legend, Balaguer found few variants in the reverse marginal legend, which she read as:

N N SLD FRT IN SPN ANN (*hijri*)
Novus Numus SoLiDus FeRiTus IN SPaNia ANNo (*hijri*)

followed by the Indiction date (either Indiction X, XI, or XII) in the reverse field (new currency, (this) solidus struck in Spania, hijri date/Indiction date). Bates, in contrast, suggested that the main reverse marginal legend for Series IP 2 was Hic Solidus Feritus In Spania Anno…, followed by the Indiction date (this solidus struck in Spania, etc.).[176]

For Balaguer, the only difficulty in the reading of the reverse legend was the initial letters, which she suggested could be 'N', 'NN', 'HI', or 'HIN'. As I have already mentioned, Balaguer did not believe that all of the 'Hs' were deformed 'Ns'. The main example she drew upon in her discussion of the beginning of the reverse marginal legend is W P.45 (BalEm27), which is reproduced in Figure 41 below. I have identified this example as a product of a secondary mint, however, with the letters Balaguer identified as 'HIC', more likely 'NIP', and with the 'H' a deformed 'N' and the 'C' a worn 'P'. The letters 'NIPI' are found on some of the main mint examples, and this is likely an attempt to copy that issue.

176 BATES 1996, p. 14.

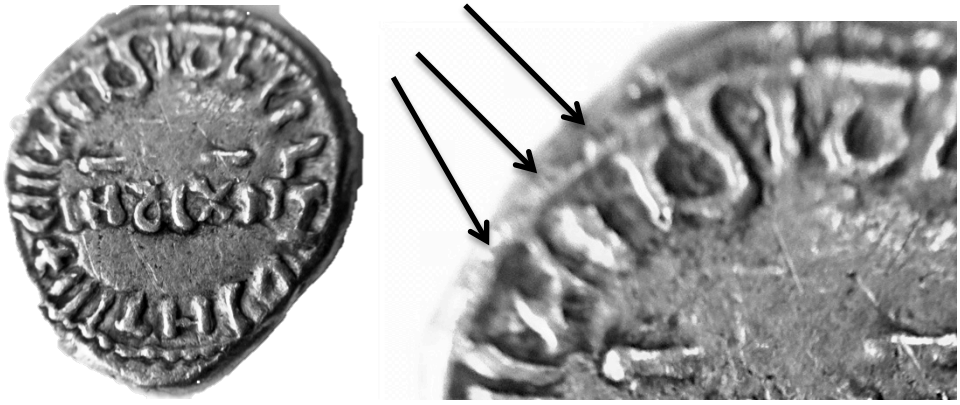

Figure 41: Series IP 2 solidus, struck at a secondary mint and dated Indiction XII (Obverse and Reverse dies 1). W P.45=L132. Image courtesy of Bibliothèque nationale de France, Paris. (3.36 g) (scale x4)

In addition, the letters above that Balaguer suggested were at the beginning of the reverse marginal legend are more likely the ending of the reverse marginal legend. There are two reasons why this is the more probable placement of these letters. First, the vast majority of the earlier North African precious metal examples, and all of the Series NA 2 examples, begin their legends at 12 o'clock and it is unlikely that the main mint in the Iberian Peninsula would change this orientation. Secondly, in two cases the reverse marginal legend on main mint dies ends with a pellet, a device that would most likely be used to fill space or indicate the ending of a legend.

Table 26 below reproduces the endings of the reverse marginal legends found on the main mint Series IP 2 examples. Although I have not identified any Indiction X examples as conclusively being the product of the main mint, I have included in the table the endings found on the two most readable Indiction X obverse dies.

Table 26: Endings of the Reverse Marginal Legend found on the Series IP 2 Coinage

Date	No. of Dies	Reverse Legend Ending
X	2 of 2	N?, NIN?
XI	5 of 5	N, NN•, NN, NIN, NR
XI•	5 of 5	N, NI, NIN, NP•, NIPI
XII	2 of 5	N, NI

As can be seen in the table above, none of the reverse marginal endings on the main mint examples end with 'HIC' or any other variant that includes the letter 'H'. What these letters represent is still unclear, but their relative regularity suggests that at least in the beginning they abbreviated a word or words, and were not simply random letters to fill space at the end of the marginal legend. Codera suggested that 'N' or 'NN' stood for *numus* or *novus numus* ('new', or 'new coin or currency'),[177] while Longpérier suggested *novorum numorum* or *nova numeratione* ('new coinage' or 'new numbering').[178] Ending the reverse marginal legend with 'new' or 'new currency', is a possibility given the legends and iconographical changes that took place on the Series IP 2 coinage. Longpérier's suggestion of 'new numbering' is also intriguing, especially given that it follows the *hijri* date in the legend. Could these letters have been used to identify the new dating system? For now I have chosen to use Codera's reading of the letters, although it will remain tentative.

If we accept the premise that these letters are found at the end of the legend, then the prototypical reverse legend changes only slightly:

SLə FRT IN SPN ANN *hijri* date N N
SoLiDus FeRiTus IN SPaNia ANNo *hijri* date Novus Numus

The standard legends on Series IP 2 differ substantially from the Series NA 2, Phase 2 coinage struck prior to the invasion of the Iberian Peninsula. As previously outlined on p. 132 through p. 134, the obverse and reverse legend found on the North African solidi are typically:

177 CODERA 1879, p. 47.

178 NAVASCUES 1959, pp. 23-25.

ⵏⵏ ⵒⵚ ⵘⵚ ⵏⵏⵚ ⵗⵏ ⵛⵗ ⵏⵏ ⵚ ⴰⴽⵗⵏ//ⵙⵏⵎⵏⴽⵚ
NoN ESt DeuS NISi UNuS CU NoN eSt ALIUs//SIMILiS

ⵏⵏ ⵏ ⵘⵏⵏ ⵎⵚⵔ ⵚⴽⵘ ⵖⵔⵜ ⵏⵏ ⴰⵖⵔ
IN Nomine DomiNI MiSeRicordis SoLiDus FeRiTus IN AFRica//Indication Date.

While the legends on the Series IP 2 coinage are:

ⵏⵏ ⵏ ⵘⵏⵏ ⵏ ⵘⵚ ⵏⵚ ⵘⵚ ⵚⵚⵚ ⵏ
IN Nomine DomiNI Non DeuS NiSi DeuS SoLuS Non

ⵙⵍⵘ ⵖⵔⵜ ⵏⵏ ⵙⵒⵏ ⴰⵏⵏ *hijri* date ⵏ ⵏ
SoLiDus FeRiTus IN SPaNia ANNo *hijri* date Novus Numus

As can be seen, the legends on the two groups of coinage vary substantially. The '**ⵎⵙⵔⵛ**' for *misericordis* was dropped from the reverse legend of the NA coinage and the '**ⵏⵏⵘⵏⵏⵏ**' for *in nomine domini* found at the beginning of the reverse legend was transferred to the obverse margin of the IP 2 solidi, perhaps to provide space for the addition of the *hijri* date.

DATING

The final aspect of the reverse marginal and field legends that needs to be interrogated is the dating systems. The majority of the Series IP solidi bear both a *hijri* and an Indiction date, unlike the Series NA 2, Phases 1 and 2 solidi that only bear an Indiction date. Balaguer noted that the Indiction years X, XI and XII correspond to the *hijri* years 93, 94 and 95 respectively, with insignificant differences between the two dating systems of only a few days, a month and a half at most.[179] In Balaguer's analysis, all of the legible Indiction X coinage appeared to correspond to 93 H. For Indiction XI (22 pieces), 15 bore 94 H, while the *hijri* date on the remaining seven could be read as 90, 91, 93, or 95 H. For Indiction XII, none of the XII pieces

179 BALAGUER 1976, p. 42.

corresponded to 95 H, but instead bear 93 H. [180] The differences between the Indiction and *hijri* dating system led Balaguer to speculate on the precise dating of the Islamic invasion of the Iberian Peninsula, although she concluded that not enough evidence existed to suggest an earlier date for the beginning of the Muslim conquest of the Iberian Peninsula.

The *hijri* dates on the Indiction X examples that I have analysed vary between 92 and 94 H. For the Indiction XI main mint examples, the *hijri* date in nearly all cases is 94 H, but in Indiction XII the *hijri* date on the main mint begins to vary again, although in most cases it can be read, as Balaguer suggested, as 94 H. Like the variation in the ending of the obverse marginal legend, the discrepancy between the Indiction and *hijri* dates should not be taken to be anything more than die engraver error, with the engraver truncating the reverse marginal legend, or simply engraving the date incorrectly. Errors in the engraving of the *hijri* date may have been compounded with the introduction of 'N', 'NN', etc, at the end of the reverse marginal legend, as some of the engravers may have also confused these letters with the *hijri* date. When dating the coinage, what is important is the Indiction date, and only secondarily the *hijri* date, as the Indiction date appears to be consistently engraved on the main mint coinage, and not subject to error based on the truncation of the marginal legend.

However, even the Indiction date, especially Indiction X, needs to be treated cautiously, for two reasons. First, none of the Indiction X examples can conclusively be tied to the main mint. Secondly, the Indiction dates on the secondary mint coinage are often difficult to read. Indiction XI, for example, is often engraved as an 'H',

180 BALAGUER 1976, p. 44-5.

which could easily be read as Indiction X. The deformation of Indiction XI, where 'XI' can become 'II', or even 'H', is shown in Figure 42 below.

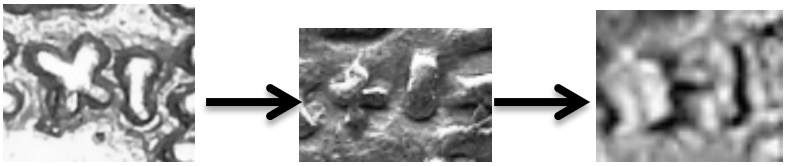

Figure 42: Detail showing the deformation in the epigraphy of Indiction XI.

With the discussion of the general characteristics of the Series IP 2 coinage complete, I will now turn to the development of the typology. Like Series NA 2, Phases 1 and 2, the most appropriate way to differentiate Series IP 2 is by die. I have divided the majority of the Series IP 2 examples by Indiction year, and then by die. Where it is possible I have also differentiated between those examples I argue were struck at the main mint and those struck at the secondary mints. The coinage struck in Indiction year XI is further subdivided into those examples where the date is followed by a pellet ('XI•'), and those where the date is not followed by a pellet ('XI').

The identification of certain Series IP 2 issues as the product of the main Islamic mint rests on the following factors: readability of the legends; consistent epigraphy, weights in nearly all cases above 4.10 g; and gold content above 50% Au (and in all but one case above 65% Au). Using these characteristics, I have identified 31 Series IP 2 examples as being struck at the main Islamic mint during the first few years after the invasion of the Iberian Peninsula. The attribution of a particular example as a product of the main mint in some cases must remain tentative, particularly for those dated Indiction X and XI•.

The discussion of the coins divided by Indiction year is followed by an analysis of the Series IP 2 coinage that does not bear an Indiction year or, for one small group of coins, an anomalous Indiction year.

Table 27: Summary of Records and Dies for Series IP 2

Type	Indiction Year	Recorded	Imaged	ODs	RDs
X	X	13	12	12	10
XI	XI	105	101	73	72
XI•	XI	29	29	19	18
XII	XII	15	15	11	10
SIMILIS	N/A	8	7	4	4
ISЄRC	N/A	1	1	1	1
ΛI	XI?	4	4	3	3
	TOTAL	**175**	**169**	**123**	**118**

INDICTION X (92-3/711-12)

Table 28 and Table 29 set out the dies and legends found on the 12 Series IP 2 examples bearing Indiction X in the reverse field.

Table 28: The Obverse Legends found on the Dies of Series IP 2, Indiction X

Marginal Legend	Star in Field	Die No.	No. of Ex.
IHII . ИƆHƆƨ . IIƨIƨ	8-Point	1	1
IIIIIƆИƆHƆƨ[C]ИƨIƨ	8-Point	2	1
IIIIHIIIIHTLƆII	7-Point	3	1
HNƆHIH[N]LN	8-Point	4	1
INN . . . . . Ƨ . . . NI	8-point	5	1
Unreadable	8-Point	6	1
IИИИƆИIИIƆSƆИS . I	8-Point	7	1
III[H]Ɔ . ƨHƨ . HƨƆƨƨ . [ƨƨ]H	7-Point	8	1
IN6NIN6SNS6SƧSNI	8-Point	9	1
[INNƆINNI]	8-Point	10	1
INNƆ[I]NNƆƨN[ƨ]Ɔƨƨ[Ƨ]ƨ[NIFA]	8-Point	11	1
INNƆHINIƆƨN . Ɔƨƨ7ƨNƨT	8-Point	12	1
	TOTAL	12	12

Table 29: The Reverse Legends found on the Dies of Series IP 2, Indiction X

Marginal Legend	Field	Hor. Line(s) Above	Die No.	No. of Ex.
SFTINƧPИΛИИXCIIIИ	INƏCX	INƏ, CX	1	2
ƧLIIINNIƧIIIIIIXIIHIN	IH[ƏCX]	IH, C	2	2
ƧƧƏ . RTINƏINXCI[II]HIH	XↃ . III	X, II	2	1
. . . . . ƧϥH . IIHI	XↃ6IIII	Ↄ, III	4	1
HIIIIↃXИ . SИITЯFƏIS	XↃ[6]HI	XↃ, H	5[181]	1
. . . . . H . H[ƧP]∈HXIIH	XↃ6NI	Ↄ, N	6	1
SƏRTIII[S]PNΛIINXII	XↃ6NI	Ↄ6, NI	7	1
. . . . . NCX[CIII]	XↃ6IIII	XↃ, II	8	1
Ƨ[λ]ƏFRTINƧ[•]PNΛNNXCIII[N]	INƏCX	N, CX	9	1
S[I]ƏFRTIHSPNΛHHI[NIN]	INƏCX	CX	10	1
		TOTAL	10	12

The diverse legends found in the two tables are typical for Series IP 2. Most of the Indiction X dies have an eight-pointed star in the obverse field, but two have a seven-pointed star. Eight of the 12 examples have a retrograde legend in the reverse field, with RD5 in Table 29 also having a retrograde marginal legend. A further example of the diversity in the legends can be observed through the horizontal pattern of lines above the reverse field, each of which are above different letters. As I have already discussed on p. 157, the readable *hijri* dates on the Indiction X examples also vary from 92 to 94 H, with the most frequent date, 93 H, found on only four of the 12 reverse dies.

The legends on the first 10 of the 12 examples are typical for the majority of the coinage of Series IP 2, difficult to transcribe as they are riddled with errors including retrograde fields and/or legends. Examples of coins struck from these dies are found in Figure 43 below.

181 The 'F' found in the marginal legend is retrograde.

Figure 43: Series IP 2, solidi, all dated Indiction X (92-3/711-12). Above: ME55, L:32. Image courtesy of Morton & Eden. (3.49 g). Middle: CNG58, L:1429=AC98M, L:1535. Image courtesy of Classical Numismatic Group, Inc. (3.24 g). Below: CNG91, L:1148. Image courtesy of Classical Numismatic Group, Inc. (3.26 g) (scale x4)

The legends on the final two obverse and reverse dies (1 example of each, illustrated in Figure 44 below) are much more readable. I have not separated them out as main mint examples, however, as I am not certain that they are main mint specimens. The first example (W P.43) has both a lower weight (3.86 g), and a lower gold content (38% Au) than that found on the main mint examples. The obverse legend also varies substantially from what would be expected from one of the earliest

coins struck at the main mint. On the other hand, it appears that the same engraver cut the die for this coin and later Indiction XI main mint examples (e.g. the example in Figure 45). This perhaps suggests that the weight and gold content standards for the main mint were not established until Indiction XI, or that the main mint workshop was not yet operational. If the latter is the case, then perhaps this engraver was later contracted by the main mint once it became established.

The second example illustrated in Figure 44 also appears to come from a die cut by an engraver who also cut dies for the main mint (for example, OD5, RD3; Indiction XI•). Although I have not been able to test the fineness for this Indiction X example, the weight (4.30 g) is what would be expected at the main mint. The epigraphy appears sloppier than the main mint coinage, however, and that is why I have chosen to exclude this example from the main mint.

Figure 44: Above: Series IP 2 solidi, dated Indiction X (92-3/711-12). W P.43=L128. Image courtesy of the Bibliothèque nationale de France, Paris. (3.86 g) Below: Series IP 2 solidi, dated Indiction X. BalEm2. Image from Balaguer 1976c, no. 2. (4.30 g) (scale x4)

INDICTION XI (93-4/712-13)

The vast majority of the surviving Series IP 2 solidi bear Indiction year XI. I have recorded 101 illustrated Indiction XI examples, with eight of those examples categorized as the product of the main mint. The eight main mint examples were struck from seven obverse and five reverse dies, while the remaining 93 secondary mint examples were struck from 66 obverse and 67 reverse dies. This is a remarkably large number of dies, the implications of which are further discussed on p. 358.

Figure 45: Series IP 2 solidus, dated Indiction XI (93-4/712-13) and likely struck at the main mint. GM67, L:965. Image courtesy of Giessener Münzhandlung Dieter Gorny GmbH. (4.16 g) (scale x4)

Table 30: Obverse Dies of the Series IP 2 Main Mint Solidi, dated Indiction XI

Marginal Legend	Star in Field	Die No.	No. of Ex.
INNƏNINƏƧNƧƏƧƧƇƧN	8-Point	1	2
[INNƏNI] . . [NƧƏ]ƧƧƇƧN	8-Point	2	1
I[NNƏ] . . . [NI]ƏƧN[ƧƏ]ƧƧƇƧIN	8-Point	3	1
INNƏNINƏSNSƏSSƇSNIRS	8-Point	4	1
INNƏNIN[ƏƧ] . . . ƧƧƇƧN	8-Point	5	1
INNƏNI[N]ƏƧNƧƏƧƧƇƧN	8-Point	6	1
INNƏNIN[I]ƏSNSƏSSƇSN[R]Ƨ	8-Point	7	1
	TOTAL	7	8

Table 31: Reverse Dies of the Series IP 2 Main Mint Solidi, dated Indiction XI

Marginal Legend	Field	Hor. Lines Above Field	Die No.	No. of Ex.
SLƏFRTINSPNΛNN[XC] . NN•	INƏCXI	N, CX	1	1
SLƏFRTINSPNΛNNXCIIIIN	INƏCXI	N, XI	2	2
ƧL[Ə]FRTINƧPNΛNNXCIIININ	INƏCXI	IN, CX	3	2
SLƏFRTINƧ[PNA]NN[C]XIIIINR	INƏCXI	N, X	4	1
ƧLƏFRTINƧPNΛNNCXIIIINN	INƏCXI	N, CX	5	2
		TOTAL	5	8

Table 30 and Table 31 above record the obverse and reverse legends found on the dies of the Series IP 2 Indiction XI main mint coinage. Four of the seven obverse dies bear what I have identified as the prototypical obverse legend of INNƏNINƏƧNƧƏƧƧƇƧN. Three further dies (ODs 3, 4 and 7) end in 'IN', 'NIRS' and 'N[R]S' respectively, likely due to an attempt by the engraver to fill space. The

reverse legends present no problems, other than the already discussed ending (see p. 155 above).

An interesting phenomenon, however, and one already encountered in Series NA 2, Phase 1, is the diversity of the legends on the obverse and reverse dies. Although four of the seven obverse dies in Table 30 bear the same legend, the other three end differently, and all of the reverse marginal legends in Table 31 end with a different letter or set of letters. This diversity is even more pronounced for the Series IP 2, Indiction XI• main mint examples discussed below on p. 172, where every one of the six obverse and five reverse dies ends with a different set of letters. As already discussed on p. 118, the reason for the diversity in the legends remains unknown, although it is possible that the engraver was able to copy the first words which remained well engraved, but made up fillers for the latter part because the latter part soon became so barbarised that there was nothing sensible to copy/no point in trying to make a coherent legend.

The weights and gold content for the majority of the main mint examples are what would be expected for the main mint coinage, with weights for six of the eight examples above 4.15 g and a gold content of 54% and 73% Au for the two examples tested (see p. 279 and p. 328).

The legends found on the 66 obverse and 67 reverse dies of the remaining 93 Indiction XI examples are found in Table 32 and Table 33 below.

Figure 46: Examples of Series IP 2 solidi, dated Indiction XI and struck at secondary mints. Above: TC 93SPN2. (3.54 g) Below: TC 93SPN6. (2.95 g) (scale x4). Images of both examples courtesy of the Tonegawa Collection.

Table 32: Obverse Dies of the Series IP 2 Secondary Mint Solidi, dated Indiction XI

Marginal Legend	Star in Field	Die No.	No. of Ex.
IИIИƠRFXNƨƨƠƨII	8-Point	1	1
IИИƎИΛSSИИ[6И]əST	8-Point	2	1
IHHəHHI . . . ИƨƆSS6SƠS .	7-Point	3	1
IИIИIИIИƨИƮFəIƨƨəИ	8-Point	4	5
IHIHƨ[T]HIƨHCƨHƠHƨH	8-Point	5	1
. . . . THISCƨəHƨƨH	8-Point	6	1
IHNNƮHH . [ƨ]N[ƨ] . [ƨ]ƨƮƨ	8-Point	7	2
IИ . ИИIИəIƨƨəTИI	8-point	8	1
INNəHI . . [ə]NI . . . . ƨƮƨHIГƨ	8-Point	9	1
IHIHƎIHIƨƨƨ . . . . ʖ	8-Point	10	1
INNəNINəƨNƨəƨƨƮƨN	8-Point	11	2
IHIIIƨƨəƨ	7-Point	12	1
INəNN . SISƮSSəSNSəIN	8-Point	13	2
INI . IITƆAN6III6N6S	7-Point	14	1
IN[NəNIIIN] . ƨNƨəƨƨ . 9N	8-Point	15	1

Marginal Legend	Star in Field	Die No.	No. of Ex.
NƧƧƧHI[H] . HƆS . . .	7-Point	16	1
Hə . . [ə]I[V]	8-Point	17	1
IHəNNIISISƧSSəSNSəIN	8-Point	18	2
INNəNIIIV[Ƨ]IəƧƧƧ[Ƨ] . N .	8-Point	19	1
INN . . . NəƧNəƧƧƧNII[ㄱ] .	8-Point	20	1
IИИIƧTƧƧИƧəИII	7-Point	21	2
IIIN[ə]NIIIN[Ɛə]ƧINƧƧƧƧəƧIIƧə	8-Point	22	1
IHƆIHƆIHLƧƧƧƆH	7-Point	23	1
ИИəИIƧI . . II . . . SS	8-Point	24	1
əNNN[I]NƧƧƧƧ	8-Point	25	1
INəNNIISISƧSSəSNSəIN	8-Point	26	1
ИIИIИIИ . ƧИT[C]I	8-Point	27	1
IИN[ə]N . Nə . IIHƧƧSƧIHI	8-Point	28	1
IIIIIIIəIIIIIIəSHSəSSTSS[P]	8-Point	29	2
unclear	8-Point	??	1
[IHHƆ] . ƧIIƆƧƧƧƧ . . [HH]	8-Point	30	1
IIIIIIIĮNƧƧIIIIIIIƆTƧƧƆƧ	8-Point	31	1
IИИəИIИ . . SSƧSI . N	7-Point	32	1
HNH[P]H	8-Point	33	1
ИIH	8-Point	34	2
IIINI . . . ƧTCN . HƧƧə	8-Point	35	2
HIIHIPSF . əƧƧI[Ƨ]IHəHII	8-Point	36	1
ИИƆИИƧƆИƆ[ƧƧ] . . . [ƆƧƧƧIƧ]	7-Point	37	1
NNIINSNSƧSS . [N] . NNIII .	8-Point	38	1
[INN]əNIIIINəƧ[əƧƧ]Ƨ[Ƨ]N	8-Point	39	1
NI[FR]II[SP]N[ə] . ə . TCXI	8-Point	40	1
ИИəИIИəИə[Ƨ]Ƨ[Hə] . ИəƧƧƧ:Ƨ	8-Point	41	1
IHNIH[L]H[S]HTCHəIS . . SSəH	8-Point	42	3
IHNIN . NSNTCHə . . . SSəH	8-point	43	1
IHH-[H]IHəƧHƧəƧƧ . . H	7-Point	44	1
ƆLHƧƆƧƧƧƧ · NIINNƆ . . .	8-Point	45	1
IИИIƧƧəƧə[Ƨ] . . F . . . . I ΛNI	8-Point	46	1
IИəИИIəƧNƧəƧƧƧƧNIIƧИə	8-Point	47	1
INƆИC[ЯЧ] ƆƧИƧ . . [TI]	8-Point	48	1
HGISSTSИISSИИGII . . GS	8-Point	49	1
IIIHGSIISəSSϬT	8-Point	50	1
. NNəNINəƧHƧə	8-Point	51	1
ИИƧ . . . . ИƧƧƧƧ . IN . N .	8-Point	52	1
IИHI[ə]NINƧIIƧƧəИ	8-Point	53	1
HƧHTFəI[Ƨ] . . əH . HHIHT	8-Point	54	1
[Λ]И . . ИƧ[ƧƧ] . . ИəƧəИ	8-Point	55	1
[I]NN[ə]N[I]NəƧ	8-Point	56	1

Marginal Legend	Star in Field	Die No.	No. of Ex.
[IIIIƏ]IIHƏ[T]RFTƧƧ[Ə] . . .	8-Point?	57	1
unclear	8-Point	?	1
[I•HH]ƟHHIS[Ƨ]ƟHIƧSSƟSSHHƟ	8-Point	58	5
IHHƟHHH.ƟHIƧSSƟ . H . Ɵ	8-Point	59	1
IHHƟHIHIƟ·SIISƟ·SSƧSHI	8-Point	60	4
[I]HHƟHIHIƟSHSƟSSƧSHII	8-Point	61	1
INNƟNNSSƧƟNNITSSƟS . ISƟ	8-Point	62	4
NNƟNINƟNƟ . ƧNƟƧƧ:Ƨ	8-Point	63	1
[I]NN[I]NƏINƏƧNƧƏƧƧƧNRƧ	8-Point	64	1
IHNƏNHINƏƧHƧƏƧƧƧHRƧ	8-Point	65	1
NNINƆINNƧNƧNƧƆƧƧƧ	7-Point	66	1
	TOTAL	66	93

Table 33: Reverse Dies of the Series IP 2 Secondary Mint Solidi, dated Indiction XI

Marginal Legend	Field	**Hor. Line(s) Above Field**	Die No.	No. of Ex.
ƧƧƟƧƟΛHRFTNX[PII]II	IИƏCXI	IИ, CX	1	1
. . . . . SИИIFƆИIII	IXƆ6ИI	X, 6	2	1
Ƨ[LƏ]FRTIИƧ[P]ИИИXCIIIN	IИƏCXI	И, CX	3	1
6ƧFR[T]ИIИƧIИNИXIIIIHII	IИƏCXI	И, CX	4	5
ƧIƟFRINIIIII[Ə]IHNIXCIIIHII	IHƏCXI	H, CX	5	2
ƧƏFRTIHƧNN . NIHXIIIIH	IXƆ6I[H]	XƆ, 6I	6	2
IИIИIИ . . . [C]I[C]ИƧИTI	ИƏCXI	И, X	7	1
[I Γ]ƟFRTINƧ9NΛNNX[Ɔ∨]N	INƏ[CX]I	N, CX	8	1
Ƨ[LƏ]FRƧ[I]Δ . . . IHIHIH	IHƆCXI	HƆ, CX	9	1
ƧLƏFRTINS9[NA]NNVCIIII	IXƆ6ИI	XƆ, И	10	1
[ƧƧƏ]TR[FƏ] . XNIƏIIHIIIH	INƏCXI	N, XI	11	1
[N] . . . . . NΛNISNIINRFSƏIS	INƏCXI	N, X	12	2
FƟIHƧ . . . . ƟNIƧИI . ΛI . . .	IX[C]ON[I]	X, ON	13	1
ƧLƏ[FRT]INS[P]NΔNIIHCIIIII[HI]	INƏCXI	NƏ, X	14	1
NNN . . IIT . . . . . HVI	INƏCXI	N, XI	15	1
. . ИIIIII . III	[H]9CXI	H, CX	16	1
NIIIIXNNΛNISNINIRFSƏIS	INƏCXI	N, CX	17	3
ƧLƏFRTINƧPNΔ[NN]XCIIIIINI	IXƆ6NI	XƆ, N	18	1
Ƨ . . FRIINƧPNΛNNXƆIIIN	[H]IƏCXI	HI, CX	19	1
. . . . Ƨ	INƏCXI	N, CX	20	2
SLƟFRTINƧPNΛNNXCINN	INƏ·CXI	N, X	21	1
ƧFRT . . HΛHHXCIIIIHH	IHƏCXI	H, X	22	1
[ƧL]ƏFRTIH[Ə]IHHI[I]XIIII[H]	IHƏ . . [I]	unclear	23	1
ƧLƟ[F]R . . . . . NANNXCIIIIN	IXƆ6NI	XƆ, 6N	24	1

Marginal Legend	Field	**Hor. Line(s) Above Field**	Die No.	No. of Ex.
ƨIϬƨ[FR] . . . . . XIIIIIH	ИƏCXI	ИƏ, X	25	1
ƨOF[P]TIN . . . [ΔHI]XƆHMN	INƏCXI	N, CX	26	1
SSOFR[III]ƨPN[AI]NN . . IIIIN	INƏCXI	N, CX	27	2
SLƏFRTƨPNNNCIIIIININ	INƏCXI	NƏ, CX	28	1
SFƆF[R]I[IIϥ]ƨN[NN] . . [X]IIIIIN	IXƆϤNI	unclear	29	1
[ƨIL]OƨFЯTIL[ƨ]ϥH	[I]HOCXI	IH, CX	30	1
ONINƨƨOƨIIƨIIRL	INƏCXI	NƏ, CX	31	1
IXИИΛNϥSИITЯF . . .	IIIƏCIX	II, ƏC	32	1
SƏ[F] . . . . . IIIIH	NƏCXI	N, CX	33	1
[ИFR]TИN . T . ИIИИ	IXƆ . NI	IX, N	34	1
ƨ . . . . . [Ə]NIIƨƏIIIIINI	IXƆ6NI	XƆ, N	35	2
ƨƨƏTN . ƨIƨTFCIIIIIIHI	IИƏCXI	И, CX	36	1
NNSICXNN 6ᒧS	IИƏCXI	И, XI	37	1
NINIIXNNINISNNRFƆSS	IN[Ə]CXI	N, CX	38	1
[ƨLƏF]RƇNIΔINIXCIIIII[N]	INƏCXI	NƏ, CX	39	1
ƨLOFRTIИƨP[ИΛИИ]XCIIIIИ	IIIƏCXI	Ə, XI	40	1
. . . . RTINSPNANN . .[NƏR]	INƏCXI	NƏ, X	41	1
TΛ . .Nƨƨƨƨƨ . NRCIIII	INƏC[X]I	N, XI	42	2
SΔH[S]HTƨIƨCIHIIIIIHIN	IИƏCXI	И, CX	43	2
H . NN[P] . . ƨHIT[Я]F6Iƨ	IXƆ6HI	XƆ, H	44	1
SLOFRTIN[S]PNΛNNXCIIIH•	IXƆO[N]I	XƆ, N	45	1
ƨI . O[FRT] . . . . . IAF	IN[Ə]CXI	IN, CX	46	1
NXCIII . . . [NNA] . Nϥƨ . . Tϥ[F]6ᒧS	IXƆ6H	IX, H	47	1
. . . FTINSPИΛИIИ	INƏCXI	NƏ, CX	48	1
SƏ . . . . . HHXIIIIИИ	IXƆ[Ə]NI	XƆ, NI	49	1
CΛTIИIИS . ИИIXCIIIИIИ	IXƆƆИI	XƆ, И	50	1
IIXIΛIИƏИИϥƨITЯF . IƨИИ	IИƏCXI	И, X	51	1
SIƏFRTIИSPИAИИXIIIИ	[I]ИƏCXI	ИƏ, X	52	1
FЯTIИ . . . NNXCIIIII	INƏCXI	IN, CX	53	1
CIƏИI . IIIIN . . . . HƨCƨ	NƏCII	NƏ, CI	54	1
. . . [FR] . . . . . H	IHƏCXI	H, CX	55	1
ИИI . . . . . .ƆIS	IXƆƆИI	unclear	56	1
. . . . [P]NANNX . . .	IXƆ6NI	XƆ, N	57	1
TOH . PIIIII . IIƨ	IXƆ[Ϥ]NI	unclear	58	1
unclear	IXƆ6NI	XƆ, N	59	1
[Ↄ]SSOFRTIHSIHIHƆXIHH	IHƏCH	IH, CH	60	3
ƆSSOFRTIHSIHIIHƆXIHIH	IHƏCH	IH, CH	61	3
SIƟSRTINSPNΛIIHHIXIII	HIƏCXI	HI, X	62	4
[SIO]S . [T]INSPII[ΛI]HHI . III	[H]IƏCXI	H, X	63	1
SSOFRTINSPHHHƆOTXCIHH	IHOC−N	H, −N	64	4

Marginal Legend	Field	Hor. Line(s) Above Field	Die No.	No. of Ex.
SLO·[F] . TINSPNΛIXCIIIN	INəCX[I]	N, CX	65	1
ƧIəFRTINƧPNΛNNXCIIIINN	IN[ə]·EXI	N, EX	66	2
ƧOFRTINƧNINIIƧHXIIIIH	IN9CXI	N, CX	67	1
		TOTAL	67	93

As can be seen by Table 32 and Table 33 above, the legends found on the secondary mint examples dated Indiction XI bear a diverse range of legends, although in most cases it is clear that the legends on the secondary mint coinage are based on the legends found on the main mint coinage.

Even though in some cases I can discern the work of an individual die engraver in the secondary mint coinage (for example, one engraver cut the obverse dies 58 to 63 and the reverse dies 60 to 65 (16 examples; Figure 47), in most cases the coinage is too worn to definitely divide the surviving examples by engraver. What is clear, however, is that multiple mints were in operation in Indiction XI.

Figure 47: The obverse of five Indiction XI secondary mint solidi, with all dies likely engraved by the same person. From top left: AC04M, L:1179. Image courtesy of Aureo & Calicó Numismatics. (3.02 g; OD58); KMK. Image courtesy of Kungl Myntkabinettet, Stockholm. (3.27 g; OD59); CNG66, L:1695. Image courtesy of Classical Numismatics Group. (4.28 g; OD60); ME54, L:33. Image courtesy of Morton & Eden. (3.63 g; OD61; TC 93SPN6. Image courtesy of the Tonegawa Collection. (2.95 g; OD62) (scale x3)

INDICTION XI• (93-4/712-13)

I have identified 30 examples bearing Indiction XI• in the reverse field. I have placed 16 of the coins in the main mint class, with 14 of the coins produced at secondary mints.

Figure 48: Series IP 2 solidus, dated Indiction XI• (93-4/712-13) and likely struck at the main mint. ME69, L:5. Image courtesy of Morton & Eden. (4.23 g) (scale x4)

Table 34: Obverse Dies of the Series IP 2 Main Mint Solidi, dated Indiction XI•

Marginal Legend	Star in Field	Die No.	No. of Ex.
INNƏNINƏƧNƧƏƧƧƧƧNITƧ	8-Point	1	6
[I]NNƏNINIƏƧNƧƏƧƧƧ[ƧNRƧ]	8-Point	2	1
INNƏNINIIƏƧNƧƏƧƧƧƧNƏNƧ	8-Point	3	2
IN[N] . . . . [Ə]ƧNƧƏƧƧƧƧN	8-Point	4	1
INNƏNINIƏƧNƧƏƧƧƧIN	8-Point	5	4
INNƏNINƏƧNƧƏƧƧƧN	8-Point	6	2
	TOTAL	6	16

Table 35: Reverse Dies of the Series IP 2 Main Mint Solidi, dated Indiction XI•

Marginal Legend	Field	Hor. Line(s) Above Field	Die No.	No. of Ex.
ƧLƏFRTINƧPNANNXCIIIIININ	INƏCXI•	N, CX	1	6
ƧLƏFRTINƧPNANNXCIIIIINIPI	INƏCXI•	N, CX	2	3
ƧLƏFRTINƧPNANNXCNIINP•	INƏCXI•	N, CX	3	3
ƧLƏFRTINƧPNA[N] . . . . . [N]I	INƏCXI•	NƏ, XI	4	2
ƧLƏFRTINƧPNANNXCIIIIN	INƏCXI•	NƏ, XI	5	2
		TOTAL	5	16

Table 34 and Table 35 set out the legends on the six obverse and five reverse dies of the main mint Indiction XI• examples. As can be seen from the tables above, the obverse and reverse legends are similar to those found on the other main mint coinage. Once again, the only differences in the reverse legends, other than the pellet following the Indiction date, are found at the end of both the obverse and reverse legends. The *hijri* date in the reverse margin is consistently 94/712-13, with the exception of RD3, where it reads as 'NII'. This is likely another die engraver error.

It is unclear why the administrators of the main mint chose to include a pellet after the Indiction date in the reverse field. It simply may have been a response to the proliferation of Indiction XI issues from the secondary mints, with the main mint attempting to differentiate its coinage from that of the other workshops. If this is the case, it appears to have been only partially successful, as at least some of the secondary mints began to produce Indiction XI• coinage.

There are far fewer Indiction XI• examples struck at secondary mints, but they exhibit the same variety as those found in the earlier Indiction years, with each of the 14 examples having an unique obverse and reverse die. The legends and dies for the obverse and reverse of these examples are set out in Table 36 and Table 37 below.

Figure 49: Examples of Series IP 2 solidi, dated Indiction XI• and struck at secondary mints. Above: TC 94SPN2. Image courtesy of the Tonegawa Collection. (3.84 g) Below: Stk09, L:3458. Image courtesy of Stack's Bowers. (3.19 g) (scale x4)

Table 36: Obverse Dies of the Series IP 2 Secondary Mint Solidi, dated Indiction XI•

Marginal Legend	Star in Field	Die No.	No. of Ex.
[N]IIN∂N . . . . ƨZƨƨNIL	8-Point	1	1
INϤN[I]ИИ[ƨ]IIH∂HƨƨZ[ƨT]	8-Point	2	1
ƨ . 6 . . . SS6SƆИИ6HHI	8-Point	3	1
S . И . . SS6SƆS6IИIИ6ИИ	8-point	4	1
[I]NII∂XIHIИ∂ƨƨИ[I]∂NI[Z]ƨ[ƨ]	8-Point	5	1
ƨH . . . SS∂[IIIIIIIII]CIИ	8-Point	6	1
IHH6HI . . . NƨJSS6S6S6	7-Point	7	1
6I:N SSSS6SNI6NIII	8-Point	8	1
IN[6]H[H] . . . . . RSN	7-Point	9	1
[III]NƨHHƨI[∂]ƨ∂ƨƨTNL[L]ƨ	8-Point	10	1
IN6NN . . . . Zƨ[ƨ]CNƨN	8-Point	11	1
HЬTRCTƨƨ∂[NINIII]	unclear	12	1
ИИIƆƨƆHƨH[HZ] . ƨILƨ . . Ɔ	8-Point	13	1
	TOTAL	13	13

Table 37: Reverse Dies of the Series IP 2 Secondary Mint Solidi, dated Indiction XI•

Marginal Legend	Field	Hor. Line(s) Above Field	Die No.	No. of Ex.
. . . . INƧPNANN . . . . . N	INƏCXI•	N, CX	1	1
ƧИFЯTIIƧ9ИΛИHXCIIIIIH[:]	IИƏCXI•	И, XI	2	1
SLƆF[R] . . . . HIH . CIIIIN	IHƏCXI•	HƏ, XI	3	1
ƧLƏFRTIИSPИИИИXCIIIIИ	IH[ƏC]XI•	IH, CXI	4	1
R[F]T[N]IƏƧƧƏƧIIII . . [ƧƧƏƧƧ]IIII	I[H]ƏCXI•	IH, XI	5	1
. . . [R] . . . [S] . . . I[S]III[XC]IIII[N]	INƏCXI•	N, X	6	1
ƧLƏF[Λ]TIHƧ[P]ИИXCIIII[H]	NƏCXI•	NƏ, XI	7	1
. . . . . SϤNΛNXCИI:И	INƏCXI•	NƏ, XI	8	1
. . . . [RINƧI]N . N	INƏCXI•	N, XI	9	1
Ƨ . ƏF[Я]TINƧIHH . CIIIH	IH[Ə]C[X]I•	N, X	10	1
. . . . . HƧNP . NINXII . .	•IXƆ6ИI	IX, 6	11	1
. . . . . P[NIIIN]R . . . [H] . . .	•IXƆ9ИI	IX, 9И	12	1
Ƨ[L]F[Я]TIƧ9HΛHHXCII[N]IИ	IHƏCXI•	H, XI	13	1
		TOTAL	14	14

INDICTION XII (94-5/713-14)

I have identified 15 Series IP 2 examples bearing Indiction XII, with seven of the coins struck at the main Islamic mint and eight likely struck at secondary mints.

Figure 50: Series IP 2 solidus struck at the main mint, dated Indiction XII (94-5/713-14). CGFMBS11, L:570=Bw30, L:16. Image courtesy of Comptoir Général Financier. (4.21 g) (scale x4)

Table 38: The Obverse Dies of the Series IP 2, Indiction XII solidi struck at the Main Islamic Mint

Marginal Legend	Field	Hor. Line(s) above Field	Die No.	No. of Ex.
IMƏNINIƏƧNƧƏƧƧƧ[NIƧI]	IϞƆIʎ-	Ϟ, Iʎ	1	1
INNƏNINƏƧNƧƏƧƧƧIN	ƧIMIΛIƧ	IM, ΛI	2	1
IMƏNINƏƧNƧƏƧƧƧCINƧI	ƧIMIΛIƧ	IM, ΛI	3	1
. . . . [N]IƏƧNƧƏƧƧƧNƧ[T]	IΠƆIX	Π, IX	4	1
INNƏNINƏƧNƧƏƧƧƧ	ƧIMIΛƧ	IM, IΛƧ	5	1
INNƏNINƏƧNƏNƧƏƧ[Ƨ]Ƨ[N]Ƨ	ƧIMIΛIƧ	IM, ΛIƧ	6	1
		TOTAL	6	6

Table 39: The Reverse Dies of the Series IP 2, Indiction XII solidi struck at the main Islamic mint

Marginal Legend	Field	Hor. Line(s) above Field	Die No.	No. of Ex.
ƧLƏFRTINƧPN . . . . . [N]I	INƏCXII	N	1	1
ƧLƏFR[TINƧP]NANN[I]XƧIIIN	INƏCXII	N, CX	2	1
ƧLƏFRTINƧPNANNIXCII	INƏCXII	NƏ	3	2
ƧLƏFR . . NƧPNAN[N] . . IIII	INƏCXII	NƏ, X	4	1
ƧLƏFRTINƧPNANNXC[N]II	INƏCXII	NƏ, X	5	1
		TOTAL	5	6

The legends for the obverse and reverse dies of six of the seven main mint examples are set out in Table 38 and Table 39. They are quite consistent in their obverse and reverse marginal legends and the dies all appear to be from the same die engraver. The mint/date formula of the legends on the reverse dies of Indiction XII are what we would expect, although letters appear after the *hijri* date on only the first two of the reverse dies (RD1='N'; RD2='NI' in Table 39). The obverse marginal legend is also similar to the earlier marginal legends, with consistent lettering up until the end of the legend. Once again each of the obverse legends ends differently.

The main difference between the Indiction XII main mint examples and the earlier coinage is the elimination of the star in the obverse field, replacing it with, in the majority of examples, the word SIMILIS. This is a reintroduction of the layout found on the Series NA 2, Phase 2 coinage struck prior to the invasion of the Iberian

Peninsula and the layout that continues with the return of the main mint to North Africa in Indiction XIII (95-96/714-15) (see p. 188). It is unclear as to why the Indiction XII main mint solidi returned to this layout. The obvious, although no doubt incorrect conclusion is that these examples were in fact North African.

Like the Indiction XI and XI• coins that were struck at the main mint, the seven Indiction XII examples are all on average heavier than the secondary mint examples (4.21 g to 4.41 g) and with a higher degree of fineness (68% Au or above for the four examples tested). The Indiction date is clear, although the *hijri* date in most cases appears to be 94 H, when it should read 95 H.

Several of the Series IP 2, Indiction XII examples merit more detailed analysis. Two examples show an unreadable word in the obverse field (OD1 and OD4 in Table 38), as shown in Figure 51 below.

Figure 51: Series IP 2 solidi, with anomalous obverse field legends. Both dated Indiction XII (94-95/713-14). .Above: W B.13=Nü75. Photo by Reinhard Sazeweski, copyright Münzkabinett, saatliche Museen zu Berlin.(4.28 g) Below: MAN 2004.117.11. Image courtesy of Museo Arqueológico Nacional, Madrid (4.41 g) (scale x4)

Previous scholars have puzzled over the abbreviated word(s) in the obverse field of these two coins. Quiepo suggested that the word found on W B.13 was in Hebrew, without giving a reading.[182] Walker, in contrast, suggested that the most probable explanation for the legend on W B.13 is that it was a bungled form of SIMILIS.[183] The most likely reading for both examples, however, is that the obverse field is a bungled Indiction date, and simply once again a die engraver error.[184]

The one main mint Series IP 2 solidus die not included in Table 38 and Table 39 is also somewhat puzzling, but in a very different way.

Figure 52: Above: Series IP 2 solidi, dated Indiction XI (93-4/712-13). MAN 100B01. Image courtesy of Museo Archeólogico Nacional, Madrid. (4.20 g) Below: Series IP 2 solidus, dated Indiction XII (94-5/713-14). CGFMBS11, L:571=BwFP5, L:7. Image courtesy of Comptoir Général Financier (4.34 g) (scale x4)

182 QUIEPO 1859, p. 397.

183 WALKER 1956, p. 75.

184 Previously suggested by VIVES 1893, p. VIII; NAVASCUÉS 1959, p. 59; and BALAGUER 1976c, pp.138-39.

As can be seen in Figure 52 above, the first example (MAN 100B01) bears the Indiction date XI, not XII. I have included it with the Indiction XII, main mint examples, for two reasons: First, this is the only example dated Indiction XI that has SIMILIS in the obverse field. More telling are the die links. As can be seen in Figure 52, the obverse of the two examples, are from the same die. What is not quite as easy to discern, however, is that, despite the different years the reverse dies are also the same. This means that either the main mint began to introduce the new obverse design in Indiction XI or, more likely, the Indiction XI date was a die engraver error, an error that was caught by the overseer of the mint relatively early and corrected.

Figure 53: Series IP 2 solidus, struck at a secondary mint and dated Indiction XII (OD1; RD1). MNAC38509. Image courtesy of Gabinete Numismático de Cataluña. (3.34 g) (scale x4)

Table 40: The Obverse Dies of the Series IP 2, Indiction XII solidi struck at the Secondary Mints

Marginal Legend	Field	Die No.	No. of Ex.
CƧƧƏHIHHIHIHSHTƐƏIS	8-point	1	2
. . . NN. . . ƨƏƨƏƨƨTH[PH] .	8-Point	2	1
IHIH[Ƨ]THI[Ƨ]HCƧ[H]ƏHƨH	8-point	3	1
IHHƏHHI . Ǝ . HƏTSS[Ƨ]SƏS[Ə]	7-point?	4	1
HH[N]IƧ[F] . . ИIT . ƏN . . . . . T	9-Point?	5	1
IN[N]Ə[NINI]ƏƨNƨƏƨƨ[ƨƏ]NI	8-Point	6	1
NIΛƨNƏN . ƨNƏƨNƏIƨƏƨƨTƨNƏƨ	ƨINƏIƨ	7	1
	TOTAL	7	8

Table 41: The Reverse Dies of the Series IP 2, Indiction XII solidi struck at Secondary Mints

Marginal Legend	Field	Hor. Line(s) above	Die No.	No. of Ex.
SI[ƏLF]ILN[Ə]IHTIIIXCIIIHI[P]	IHƏCXII	H, XI	1	2
ƧΓƏ[F]R[T] . . . . . INN	[I]HƏCXII	HƏ, XI	2	1
ƧIƏ[F]R[T]И[Δ]ƧИIИIИXIIIIHIΓ	IHƏCXII	HƏ, XI[185]	3	1
[N]IIIIIƆXИИИ[Ꝗ]SN . F[R]	IHƏCXII	H, XII	4	1
ƧIƏИ . . . [P] . . . . . H	IIXƆИI	XƆ, И	5	1
IMƏNIMƧRCƧ[ʎ]ƏF[RTINAF]	INƏCXII	N, XI	6	1
ƧIƏ[N]ƧFRTINƧƏN . . . . . ƧN[N]	INƏC[ɬ]II	NƏ	7	1
		TOTAL	7	8

An example of the Series IP 2, Indiction XII secondary mint coinage is illustrated in Figure 53, while the legends found on the five obverse and five reverse dies for this year are set out in Table 40 and Table 41. Like the previously discussed examples struck at the secondary mints, there is a wide variety in both the legends and the epigraphy, with at least three die engravers, possibly four.

Although the legends on seven of the eight Series IP 2, Indiction XII examples (OD1 through OD5) are bungled to a lesser or greater degree, they all are recognizably derived from the legends on the main mint examples. This can perhaps be most clearly seen in Figure 54 (OD7 in Table 40; RD7 in Table 41), which is the only one of the Indiction XII secondary mint examples to bear an abbreviated, although corrupted SIMILIS in the obverse field. The corrupted SIMILIS, with a 'Ə', instead of a 'Λ', was most likely copied from the obverse die of the two examples in Figure 52 above. This obverse die has a flaw on the flan across the 'Λ', making it appear to be a 'Ə'.

185 Horizontal lines are below field legend.

Figure 54: Series IP 2 solidus, dated Indiction XII, and struck at a secondary mint. BalEm31. Image from BALAGUER 1976c, no. 31. (4.27 g) (scale x4)

There is one Indiction XII, secondary mint example that does not appear to be copying other Series IP 2 coinage, at least for the reverse die in Figure 55 (OD6 in Table 40; RD6 in Table 41).

Figure 55: Series IP 2 solidi, dated Indiction XII (94-5/713-14). The enlargement reveals that the last digit of the Indiction date appears to have been worn away. TC 94SPN4. Image courtesy of the Tonegawa Collection. (4.19 g) (scale x4)

This example has a star in the obverse field and an obverse marginal legend similar to what we have come to expect for the secondary mint coinage of Series IP 2:

Obv: IN[N]ə[NINI]əƨNƨəƨƨ[ƨə]NI//8-pointed star

The reverse legend is substantially different, however:

Rev: INNəNIMƨRCƨ[ʎ]əF[RTINAF]//INDCXII

What we find on the reverse is a legend similar to what we would find on a Series NA 2, Phase 2 coin, although with a different Indiction date. On the face of it, one might suggest that this is a mule, with a Series IP 2 obverse and a Series NA 2, Phase 3 reverse, especially since the Indiction date on the reverse may be Indiction XIII (95-6/714-15, see detail in Figure 55 above). The reverse marginal legend is that of the coinage struck prior to the invasion of the Iberian Peninsula, however, lacking a *hijri* date and beginning with IN Nomine DomiNi MiSeRiCordis, and not the legend found on Series IP 2 or the Indiction XIII Series NA 2, Phase 3 coinage. The most likely explanation is that this is a product of an irregular mint. The possibility that this coin is a modern fake cannot be ruled out, but the gold content of 63% Au makes this unlikely.

SIMILIS TYPE

As I outlined on p. 146 above, Balaguer argued that the Series IP 2 coinage with a star in the obverse field and an abbreviated SIMILIS in the reverse field were struck earlier than the Iberian Peninsula coinage with an Indiction date. For Balaguer, the key to this chronology is the replacement of the Indiction date with the word SIMILIS. According to Balaguer, the Indiction date would have had no meaning in the Iberian Peninsula, and therefore the elimination of the Indiction date makes sense. She also argued that all of the examples of this type of Series IP 2 coinage that she analysed bore the *hijri* date 93/711-12, reinforcing her conclusion that the SIMILIS

coinage was one of the earliest, if not the earliest Islamic issue in the Iberian Peninsula.[186]

Figure 56: Above: Series IP 2 solidus with abbreviated SIMILIS in the reverse field. MAN 2004/117/12. Image courtesy of Museo Archeólogico Nacional, Madrid. (3.63 g). Below: Series IP 2 solidus, with abbreviated SIMILIS in the reverse field. W P.47=L129. Image courtesy of the Bibliothèque nationale de France, Paris. (4.38 g) (scale x4)

Table 42: The Obverse Dies of the Series IP 2 Solidi with Abbreviated SIMILIS in the Reverse Field

Marginal Legend	Star in Field	Die No.	No. of Ex.
ⵏ[ⵏⵉ]ⵏ[ⵄ] . [ⵒⵏ]ⵚⵄⵔⵔⵜⵚⵏⵚⵜ	8-Point	1	2
ⵉ[ⵏ] . . . . . [ⵚⵀ]ⵚⵕⵔⵔ . . [ⵚ]ⵏ	8-Point	2	1
ⵏⵀⵀⵉⵉⵚⵀⵚ[ⵄ]ⵔⵔⵜⵚⵀⵚⵜ	7-Point	3	3
[ⵏⵏⵏⵏⵏⵏⵄⵏ] ⵚ . . . ⵚ . ⵔⵔ . ⵚⵜ	8-Point	4	1
	TOTAL	4	7

186 BALAGUER 1976, pp. 28-30 and Bates 1992, pp. 278-9.

Table 43: The Reverse Dies of the Series IP 2 Solidi with Abbreviated SIMILIS in the Reverse Field

Marginal Legend	Field	Hor. Line(s) above Field	Die No.	No. of Ex.
ƧLƏFRTINƧPNN[A]NXIIIIN	•ƧIIIIΛI[Ƨ]	II, ΛI	1	3
ƧLƏFRNNƧINNNXIIIIN	•ƧINIΛ	NI	2	2
unreadable	•ƧINIΛ	NI	3	1
ƧLƆFRTINƧ[I]PNNNXNIIII	ƧNIΛI	ƧN, Λ	4	1
		TOTAL	4	7

As can be seen by the examples in Figure 56 and the legends on the four obverse and four reverse dies in Table 42 and Table 43, the seven surviving examples of this type are poorly preserved.[187] There appears to be some similarity between the obverse legends in Table 42 and the obverse legends found on the main mint examples. The reverse marginal legends are also similar, with the standard mint/date formula followed by the *hijri* date, and in at least two cases the letter 'N'. My reading of the *hijri* date differs from that of Balaguer, however, as I read 94 H for the three reverse dies.

The most likely explanation for this group is that they were again a product of a secondary mint, likely struck in 94/712-13.

187 A eighth, un-illustrated example of this type is found in GAILLARD 1854, p. 52, no. 874 (4.4 g).

IΛЄƧRC TYPE

Balaguer noted one example bearing 'IΛЄƧRC' in the reverse field (Figure 57 below).

Figure 57: Anomalous Series IP 2, undated and without mint name. COI215=BalEm38. Image from BALAGUER 1976c. (4.25 g) (scale x4)

The obverse and reverse legends on this coin are:

Obv: INNƏNINƏƧNƧƏƧƧƬƧN//8-Pointed Star
Rev: I[ᴎ]Ə[NIIƏ]ЄƧTƏƧNƧƏƧT//IΛЄƧRC

The letters of the legends of this example are well formed. The obverse marginal legend is the standard IN Nomine DomiNI Non Deus NiSi DeuS SoLus Non, while the reverse marginal legend appears to be a bungled repetition of the obverse marginal legend. The reverse field, however, continues to elude interpretation, although it appears unlikely that it is, as Balaguer has suggested, an abbreviated *misericors*.[188]

188 BALAGUER 1976c, p. 141.

ΛI TYPE

Four Series IP 2 examples bear variations of the anomalous reverse field legend 'IN9CΛI'.

Figure 58: Solidus IP 2, unclear date. icaL18, L:42. Image courtesy of Baldwin's Auctions, Ltd. (4.89) (scale x4)

Table 44: The Obverse Dies of the Series IP 2 Solidi with anomalous Indiction ΛI in the Reverse Field

Marginal Legend	Star in Field	Die No.	No. of Ex.
INNINNƧNƧƏƧƧƆƧNƧT	8-Point	1	2
I[NN]IIƧN[Ƨə]ƧƧƆƧNƧT	8-Point	2	1
[INN . NI .]ƧNƧƏƧƧƆƧNƧ[T]	8-Point	3	1
	TOTAL	3	4

Table 45: The Reverse Dies of the Series IP 2 Solidi with anomalous Indiction ΛI in the Reverse Field

Marginal Legend	Field	Hor. Line(s) above Field	Die No.	No. of Ex.
ƧLƆFRTINƧ•[P]NNNXIIIIN	[I]N9CΛI	N9, CΛ	1	2
ƧLƆF[R]TIN[ƧP]NNIN . IIII[N]	NI9CΛI	NI, 9C, Λ	2	1
[Ƨ]LƆFRTI[Δ]NNINIIIIN	II9CΛI	I, Λ	3	1
		TOTAL	3	4

The legends recorded on the three obverse dies of this type are quite consistent, and once again are similar to legends found on other Series IP 2 examples. The reverse legends on the three obverse dies also vary little, and all of the legends end with the date 94 H, followed by an 'N'.

The most likely explanation for the anomalous Indiction year, which ends in 'ΛI', is that it is a corruption of 'XI', like other deformations described on p. 159 above.

This suggestion becomes even more certain if we compare the example in Figure 58 above with the Indiction XI example in Figure 59 below. The epigraphy on the obverse and reverse of the two illustrated examples is similar, although not necessarily from the same engraver. This may simply be another case of a copy of a copy.

There are two characteristics that set these examples apart from other secondary mint Indiction XI coinage, however. First, all four examples are heavier than the majority of the Series IP 2 coinage, and weigh 4.20 g, 4.43 g, 4.71 g and 4.89 g. I have also tested the gold content of two of the four examples, with both coins over 65% Au.

Figure 59: Series IP 2 solidus, dated Indiction XI (94-5/713-14), and struck at a secondary mint. NG7, L:445; A 122=icaL20, L:54=HD323, L:351. Image courtesy of Baldwin's Auctions, Ltd. (4.12 g) (scale x4)

SERIES NA 2, PHASE 3

The main mint that operated in the Iberian Peninsula returned to North Africa in Indiction XIII (95-6/714-15), with five surviving solidi dated in that year. The solidi of Series NA 2, Phase 3 have the same layout and similar legends as the Series IP 2 main mint solidi struck in Indiction XII (94-5/713-14) (see Figure 50 on p. 175). The Islamic mint in North Africa also began to strike semisses (6 examples) and tremisses (4 examples), with legends similar to those found on the corresponding solidi (including a *hijri* date). The number of surviving examples suggests that the mint struck Phase 3 in small numbers, but the small number of die links suggests that many more examples of this phase remain unknown.

PHASE 3 SOLIDI

The five surviving solidi of Series NA 2, Phase 3 are all dated Indiction XIII (95-6/714-15 (Figure 60).

Figure 60: Series NA 2, Phase 3 solidus, struck in North Africa and dated Indiction XIII (95-6/714-15). JE69, L:756. Image courtesy of Jean Elsen & ses Fils s.a. (4.24 g) (scale x3)

Table 46: The Obverse Dies of the Solidi of Series NA 2, Phase 3

Marginal Legend	Field	Hor. Line(s) above Field	Die No.	No. of Ex.
INNƏNINƏƧNƧƧ[ʎ]ƧƏNIƧ[I]	ƧIMIʎIƧ	IMI, ʎIƧ	1	1
I[NN]ƏNINƏƧNƧƧIƧ[Ə]NƧI[Aʎ]	ƧIMIʎIƧ	IM, ʎI	2	2
ƧLƏFRTINAFRC[XANVIN]I	ƧI[N]IΛƧ	ƧIN, IΛ	3	1
ƧLƏFRTINAFRCX[ƏNƏ]N	ƧIN[I]ʎIƧ	IN, ʎI	4	1
		TOTAL	4	5

Table 47: The Reverse Dies of the Solidi of Series NA 2, Phase 3

Marginal Legend	Field	Hor. Line(s) above Field	Die No.	No. of Ex.
SLƏFRTINAFRC[ANNNXI]N	INƏCXIII	NƏ, XI	1	1
ƧL . . . . . [F]RCANNXC[II]N	INƏCXII .	NƏ, XI	2	2
INNƏNINƏƧNƧƧIƧNƏƧI[N]	I[NƏCXIII]	NƏ, CX	3	1
INNƏNIN[Əƨ]NƧƧ[I]ƧNƏƧƏNƧ	INƏCXIII	NƏ, CX	4	1
		TOTAL	4	5

Both the letterforms and the legends found on the Series NA 2, Phase 3 examples appear to be carried over from the Series IP 2 solidi struck at the main mint during the conquest of the Iberian Peninsula. The obverse legend found on the first two dies of the Phase 3 coinage begins with IN Nomine DomiNI Non DeuS NiSSi DeuS followed by a corrupt ending that theoretically should be SoLuS Non. The reverse legend is less corrupt, and can be interpreted as SoLiDus FeRiTus IN AFRiCa ANNo, followed by the *hijri* date and ending with 'N' (for *novus*?). None of the five examples have a *hijri* date that equates to the Indiction date, which should be 96/714-15.

Obverse and reverse dies 3 and 4 have a notable feature. The marginal legends have been transposed, with the marginal legend that should end in the field legend SIMILIS now on the reverse field of the coin. This feature can be seen on the example in Figure 61 below.

Figure 61: Series NA 2, Phase 3 solidus, dated Indiction XIII (95-6/714-15) and with transposed legends. icaL26, L:1587. Image courtesy of Baldwin's Auctions, Ltd. (4.21 g) (scale x3)

PHASE 3 SEMISSES AND TREMISSES

The surviving Series NA 2, Phase 3 semisses and tremisses are modelled on the Series NA 2 fractionals struck in the North Africa prior to the conquest of the Iberian Peninsula (see Phases 1 and 2 on p. 112 and p. 130). The adoption of the earlier North African model is not surprising since the main Islamic mint in the Iberian Peninsula only struck solidi.

Like the Phase 1 and Phase 2 fractionals, the Phase 3 examples have Latin legends in the obverse field and margin and in the reverse margin, while a globe on pole (semisses) or T-bar on steps (tremisses) is found in the reverse field. A single beaded circle is also once again found on the outer edge of both sides of the coinage.

Figure 62: Above: Series NA 2, Phase 3 semissis, dated 96. W C.15=Ø47. Image courtesy of National Museum, Copenhagen. (1.96 g) Below: Series NA 2, Phase 3 tremissis with unclear date. Jena OMJ305-B02=St38. Image courtesy of Jena University. (1.37 g) (scale x4)

Table 48: The Obverse Dies of the Fractionals of Series NA 2, Phase 3

Marginal Legend	Field	Hor. Line Above Field	Die No.	Sem	Tre
ƧʌƎFRTINAFRKANXCV	ƧIMIʌƧ	IʌƧ	1	1	2
ƧʌƎFRT[INAFRK]ANXCV	ƧIMIʌƧ	ʌƧ	2	0	1
ƧʌƎFRTINAFRKAN[X]	ƧINIʌƧ	ʌ	3	1	0
ƧʌƎFRTINA[FRKANXC]VNI	ƧIMIʌIƧ	ʌI	4	1	0
ƧʌƎFRTINAFRKANXCVI	ƧIMIʌƧ	ʌƧ	5	1	0
[Ƨ]ʌƎFRTINAFRKANXN	ƧI[MIʌƧ]	IʌƧ	6	0	1
ƧʌƎFRTINAFC[A]NVI	SINIʌS	Iʌ	7	1	0
ƧʌƎFRTINAFR[K]ANXVI	ƧMIʌƧ	Ƨ	8	1	0
		TOTAL	8	6	4

Table 49: The Reverse Dies of the Semisses of Series NA 2, Phase 3

Marginal Legend	Field	Die No.	No. of Ex.
IIƏNINƏƧNƧƧIƧNƏƧ	G/3	1	1
INNƏNIN[ƏƧN]ƧƧIƧN[Ə]Ƨ	G/3	2	1
INNƏNIN[Ə]NƏƧNƧƧIƧ[I]	G/3	3	1
INNƏNINƏƧNƧƧIƧNƏƧI	G/3	4	1
INNƏNINƏƧNƧƧIƧNƏƧ•	G/3	5	1
[I]NNƏNININ[Ə]SN	G/3	6	1
TOTAL		6	6

Table 50: The Reverse Dies of the Tremisses of Series NA 2, Phase 3

Marginal Legend	Field	Die No.	No. of Ex.
INN[Ə]NIN[Ə]ƧN[ƧƧIƧ]NƏI	T/2	1	2
INN[Ə]NI[NƏ]ƧNƧƧIƧN[Ə]	T/2	2	1
INN[ƏNI] . . . NƧƧIƧNƏIƧ	T/2	3	1
TOTAL		3	4

Table 48 through Table 50 above set out the legends on the dies of the Series NA 2, Phase 3 fractionals. As can be observed from the tables, the fractionals transpose the obverse and reverse marginal legends, similar to obverse and reverse dies 3 and 4 (Table 46 and Table 47) on the Indiction XIII solidi. Unlike the earlier North African coinage, there are no die links between the fractionals and the corresponding solidi, and only one die link between the semisses and tremisses of this phase (OD1 in Table 48.

The most complete obverse marginal legend found on the Phase 3 fractionals is SoLiDus FeRiTus IN AFRiKa Anno, followed by the *hijri* date, the same as the mint/date formula found on the Phase 3 solidi. In one case (OD6) the legend ends with an 'N', while in another (OD4) it ends in 'NI', a carryover from the legends used at the main Islamic mint in the Iberian Peninsula and adopted at the secondary Iberian Peninsula mints. Like the Series NA 2, Phase 3 solidi, the reverse marginal legend

begins with IN Nomine DomiNI Non Deus NiSSi DeuS, followed by a corrupted ending.

Previous scholars have dated the Series NA 2, Phase 3 fractionals to both 95/713-14 and 96/714-15.[189] We cannot be certain, however, that the Islamic mint in North Africa struck the fractionals in 95/713-14, given that the legends on some of the examples are clearly truncated. It is just as likely that they were all struck in 96/714-15, as the date recorded in the Muslim sources for Mūsā's departure from the Iberian Peninsula is Dhū al-Ḥijja 95/September 714.[190] If the sources are correct and Mūsā departed the Peninsula in the last month of the Islamic calendar, then it is unlikely that Mūsā would have had time to arrive in North Africa, establish himself in Qayrawān, and begin striking coins before 96/714-15.

189 Most recently by Bates. See BATES 1992, p. 276. It should also be noted that Walker (and Bates) dated one example to 98/716-17. This is incorrect. It is dated 95/713-14 (ANXCV), followed by the letters NI. WALKER 1956, p. 76, W 186.
190 TĀHĀ 1989, pp. 99-100.

SERIES 3 (THE BILINGUAL TYPE)

The Islamic mint in North Africa abandoned the layout found on the Series NA 2, Phase 3 coinage (Figure 63) in 97/715-16. The mint retained the transposed marginal legends found on some of the Phase 3 coinage, but eliminated the obverse ('ƧIMIʎIƧ') and reverse (Indiction date) field legends. Instead of the obverse and reverse Latin field legends, the North Africa mint instead inserted, in Arabic, the first (obverse field) and second (reverse field) phrases of the *shahāda* (see Figure 64 below). Series 3 was also introduced at a mint in the Iberian Peninsula in 98/716-17. This series is bilingual like the North African Series 3 solidi, but with a markedly different design and legends (see p. 201 below).

Figure 63: Series NA 2, Phase 3 solidus, dated Indiction XIII (95-6/714-15). AC06D, L:99. Image courtesy of Aureo & Calicó Numismatics. (4.03 g) (scale x3)

The introduction of Series 3 also meant the elimination of Series NA 2, Phase 3 semisses and tremisses, possibly replaced by the Series NA 4 dirhams that were also struck in North Africa beginning in the same year as the introduction of the Series NA 3 solidi (see p. 228). The Islamic mint in the Iberian Peninsula, in contrast, chose to begin striking unilingual Series 3 semisses and tremisses at the same time that it introduced the bilingual, Series IP 3 solidi (see p. 204 below).

SERIES NA 3

As I have just noted, the Islamic administration of North Africa adopted a new design for the solidi beginning in 97/715-16, and continuing in 98/716-17 and 99/718-19. Series NA 3 followed the practice adopted in Series NA 2, Phase 3, placing the Latin mint/date legend in the obverse margin and the Latin religious legend in the reverse margin. The new design, however, discontinued the Indiction date and the word *similis* from the obverse and reverse fields, replacing them with the first and second phrases of the *shahāda* in Arabic. A beaded circle continues to border the obverse and reverse margins.

Figure 64: Above: Series NA 3 solidus, dated 97/715-16. StM 1935/125. Image Courtesy of Münzkabinett, Staatliche Museen zu Berlin. (4.20 g); Middle: Series NA 3 solidus, dated 98/716-17. ME37, L:493. Image courtesy of Morton & Eden. (4.16 g); Bottom: Series NA 3 solidus, dated 99/717-18. S84A, L:16. Image courtesy of Sotheby's. (4.19 g) (scale x 3)

There is no variation in the Arabic legends in the obverse and reverse fields of Series NA 3. The obverse field bears the first statement of the *shahāda* - *lā 'ilāh 'illa llāh*– 'There is no God but God', while the reverse field bears the second statement – *muḥammad rasūl Allāh* - 'Muhammad is the Messenger of God'. In every instance, the *rā'* of *rasūl* is on the first line of the reverse marginal legend, while the rest of the word is on the second line. The Arabic legend is in all cases clearly engraved, although in some cases (for example, the second example in Figure 64 above), the Arabic slopes to the left.

Table 51: Summary of Specimens and Dies for Series NA 3

hijri Year	Recorded	Imaged	ODs	RDs
97	13	11	8	10
98	22	22	16	19
99	5	4	3	3
TOTAL	**40**	**37**	**27**	**32**

Table 52: Obverse Marginal Legends found on Series NA 3 solidi, dated 97/715-16

Legend No.	Marginal Legend	No. of Dies	No. of Ex.
1	ƧʌƏFRTINAFRKANXCVIIN	2	4
2	ƧʌƏFRTINAFRKANXCVII	4	5
3	ƧʌƏFR/TINAFRKANXCVII	1	1
4	ƧʌƏFRTINAFRKANXCV*H*II	1	1
	TOTAL	8	11

Table 53: Reverse Marginal Legends found on Series NA 3 solidi, dated 97/715-16

Legend No.	Marginal Legend	No. of Dies	No. of Ex.
1	INNƏNINƏƧNƧƧIƧNƏƧN	1	2
2	INNƏNINƏƧNƧƧ[IƧNƏƧ]INƏƧNI	1	1
3	INNƏNINƏƧNƧƧIƧNƏƧINIIN[Ə]	1	1
4	INNƏNINƏƧNƧƧIƧNƏƧIN	1	1
5	I[NNƏNI]NƏƧN[Ƨ]Ƨ[IƧNƏƧ]INƧ	1	1
6	INNƏNINƏƧNƧƧIƧ[NƏƧI]NƏI	1	1
7	INNƏNINƏƧNƧƧIƧNƏ[ƧNI]	1	1
8	INNƏNINƏƧNƧƧIƧN[Ə]ƧIN[I]N	1	1
9	NNƏNINNƏƧƏƧNƧƧIƧNƏƧNƧ	1	1
10	INN[ƏNINƏƧ]NƧƧIƧNƏƧINƏN	1	1
	TOTAL	10	11

Table 54: Obverse Marginal Legends on Series NA 3, dated 98/716-17

Legend No.	Marginal Legend	No. of Dies	No. of Ex.
1	ƧʌƏFRTINAFRKANXCVIIIN•	1	2
2	ƧʌƏFRTINAFRKANXCVIII	12	17
3	ƧʌƏFRTINAF[R/K]ANXCVIII	1	1
4	[Ƨ]ʌƏF/RTINAFR[KA]NXCVIII	1	1
5	ƧʌƏ*Λ*FRTINΛFRKΛNXCVIII	1	1
	TOTAL	16	22

Table 55: Reverse Marginal Legends on Series NA 3, dated 98/716-17

Legend No.	Marginal Legend	No. of Dies	No. of Ex.
1	INNƏNINI[NƏƧNƧƧIƧ] . . . [I]NƏNII-	1	1
2	INNƏNINƏƧNƧƧIƧNƏƧINƏƧN	2	2
3	NSS•SMƏSI[NƏNSƏNVIIII]	1	1
4	INNƏNINƏƧNƧƧIƧN[ƏƧINƧN]	2	2
5	INN[ƏNINƏ]ƧNƧƧ[IƧN]ƏƧINIƧ•	1	1
6	INN[ƏNINƏ]ƧNƧƧ[IƧN]ƏƧINƏƧ•	1	1
7	INNƏNINƏƧNƧƧIƧNƏƧ[NƏIƧ]	1	1
8	INNƏNINƏƧNƧIƧNƏƧINƏ	1	1
9	[INNƏ]NINƏƧNƧƧIƧNƏƧN[I]	1	1
10	IИИOИIИV . . . . . И	1	1
11	INNƏNINƏƧNƧƧIƧNƏƧIN[Ə]NƏƧ	1	1
12	INNƏNINƏƧIIƧƧIƧNƧ . INƏN	1	1
13	INNƏNINƏƧNƧƧIƧN[Ə]ƧINƧNI	1	1
14	INNƏNINƏƧNƧƧ[I]Ƨ[NƏ]ƧIN	2	4
15	INIƏNINƏƧNƧƧIƧNƏƧIN	1	2
16	[INNƏNINƏ]ƧNƧƧIƧNƏƧIƧNƧ	1	1
	TOTAL	22	19

Table 56: Obverse Marginal Legend on Series NA 3, dated 99/717-18

Legend No.	Marginal Legend	No. of Dies	No. of Ex.
1	ƧʎƏFRTINAFRKANXCVIIII	3	4

Table 57: Reverse Marginal Legends on Series NA 3, dated 99/717-18

Legend No.	Margial Legend	No. of Dies	No. of Ex.
1	INNƏNINƏƧNƧƧIƧNƏƧINƧ	1	2
2?	INNƏNINƏƧN[ƧƧ] . . . . . Ƨ	1	1
3?	INNƏNINƏƧN[ƧƧ] . . . . . Ƨ	1	1
	TOTAL	3	4

Table 51 records the number of surviving Series NA 3 examples by year, while Table 52 through Table 57 records each of the legends found in each of the years, followed by the number of dies and examples for each legend. Unlike the legends found on the earlier Series 1 and Series 2 coinage, many of the Series NA 3 (and

Series IP 3) dies bear exactly the same legend, and I have therefore separated the examples and dies of this series by legend, and not by die as I have done for Series 2.

As can be seen in Table 52, Table 54 and Table 56 above, there is little variation in the obverse marginal legend. The most common legend is:

ƧʌƏ FRT IN AFRK AN date
SoLiDus FeRiTus IN AFRiKa ANno date

The majority of the variations in this legend appear to be engraver error (for example, Legends 3 through 5 in Table 54). The only substantive difference in the legends is the insertion of a 'N' at the end of the legend. This appears to be a carryover from the Indiction XIII (Series NA 2, Phase 3) legends (and prior to that the Series IP 2 solidi), and is found on one die dated 97/715-16 (Legend 1 in Table 52) and one die dated 98/716-17 (Legend 1 in Table 54). In the second example, the 'N' is followed by a pellet, which provides further evidence to suggest that the 'N' (or multiple letters found after the date in the case of Series IP 2) should be recorded at the end of the legend (see p. 155).

In every observed instance, the 'S' is reversed and in every example the 'L' has returned to either a 'Λ' or 'ʌ'. As I have shown, the use of the reverse 'S' is a consistent feature of the early Islamic coins of North Africa from Indiction VII (89-90/708-9) onwards.

The reverse legends, in contrast, vary substantially, although they are all patterned on the religious legends found on the coinage of Series IP 2 and Series NA 2, Phase 3. On the majority of the dies, the legend begins with:

IN N ƏNI N Ə2 NƧƧI Ƨ N Ə2
IN Nomine DomiNI Non est DeuS NiSSI Solus Non DeuS

The remaining letters of the reverse legends are meaningless repetitions of groups of letters from the first part of the legend.

SERIES IP 3

The Islamic administration in the Iberian Peninsula stuck Series IP 3, Bilingual solidi in 98/716-17 (Figure 65), a year after the series was introduced in North Africa.

Figure 65: Series IP 3 solidus, dated 98/716-17. L136bis. Image courtesy of Bibliothèque nationale de France, Paris. (4.12 g) (scale x4)

Table 58: Summary of Records and Dies for Series IP 3

hijri Year	Recorded	Imaged	OD	RD
98	**35**	**33**	**19**	**14**

Table 59: Obverse Marginal Legends on Series IP 3, all dated 98/718-19

No.	Marginal Legend	No. of Dies	No. of Ex.
1	ƧʌƏFRTINIʌ[ƏA]INXIIIIN[I]	1	2
2	FЄRITOƧƧOLIINƧPANANXCI	1	2
3	FЄRITOƧƧOLIINƧPANANXC	6	11
4	FЄRITOƧƧOLIINƧPANANXCVI	1	3
5	FЄRITOƧƧOLIINƧPANANXVCI	1	2
6	FЄRITOƧƧOLIINƧPANANX	2	2
7	FЄRITOƧƧOLIINƧPANANXCV	5	7
8	FЄRITOƧƧOLIINƧPANANXCVN	1	1
9	FЄRITOƧƧOLIINƧPANAN	1	3
	TOTAL	**19**	**33**

Table 58 summarizes the number of surviving examples and dies of the Series IP 3 solidi, while Table 59 sets out the obverse Latin marginal legends, along with the number of dies for each obverse legend type. As can be seen in Figure 65 above, the layout of Series IP 3 varies substantially from Series NA 3 (Figure 64 above). Instead

of the phrase *lā ʻilāh ʻilla llāh*, found in the obverse field of Series NA 3, the Iberian Peninsula bilingual coinage reintroduces an eight-pointed star. The marginal legends on both sides of the Series IP 3 coinage repeat the mint/date formula, once in Latin (obverse), and once in Arabic (reverse). The Arabic phrase *muḥammad rasūl allāh* is found in the reverse field, the same place it is found on Series NA 3.

The obverse marginal legend is abbreviated in two ways. The first abbreviation method (Legend 1 in Table 59) is found on only two examples, both from the same obverse die:

ƧʌƏ FRT IN ꟾʌƏ AꟾN XIIII N[I]
SoLiDus FeRiTos IN Spania? AꟾNno date

Figure 66: Series IP 3 solidus, dated 98/716-17, with obverse legend type 1. icaL26, L:1589. Image courtesy of Baldwin's Auctions, Ltd. (4.12 g) (scale x4)

This legend appears to be an attempt to copy the formula found on Series NA 3. Most notable is the abbreviation for the mint name, with 'IΛƏ' in place of 'ƧPAN' and potentially being a repetition of 'ƧʌƏ' for SoLiDus. It should also be noted the placement of a 'N' at the end of this legend, followed by an 'I', or more likely an elongated pellet. This shows the continued fossilization of 'N' for *novus* (or 'N' followed by other letters) first seen in Series IP 2 (see p. 155). The continued use of an older style legend, along with the errors in the legend, might suggest that these two examples were struck at an unofficial mint, but their reverse die is linked to other

examples of this series that bear the more common Latin legend (see p. 503 in Appendix A).

The second obverse legend, found on the remaining 18 dies is, theoretically:

FЄRITOS ƧOLI IN ƧPAN AN XCVIII
FERITOS SOLIdus IN SPANia ANno date

With this legend, the Islamic mint in the Iberian Peninsula instituted changes in the method of the abbreviation of the Latin mint/date formula. The first word, *feritos*, is now spelled out in full, with the remaining words either spelled out in full or abbreviated by the first few letters of the word (for example, SOLIdus).

The calligraphy of the Latin legends of Series IP 3 is quite clear and regular on these dies.[191] The composition of this Latin mint/date formula is also uniform up until the *hijri* date. At that point, it appears that the engraver erred in the spacing of the legend, leading to errors and truncation. The Latin legend should end in the date 'XCVIII', but instead we find a wide variety of dates: 'AN', 'ANX', 'ANXC', 'ANXCI', 'ANXCV', 'ANXVCI', 'ANXCVI', and 'XIIII'. None of these dates equate to 98/716-17, the date found in the Arabic mint/date formula on the reverse of the coins.

The Arabic mint/date legend found in the reverse margin is *ḍuriba hādhā al-dīnār bi'l-andalus sanata thamān wa tis'īn* - this dinar was struck in *al-Andalus* in the year eight and ninety. With this legend we find the first use of the word 'dinar' to describe a denomination of either the North African or Iberian Peninsula transitional coinage. Even more significant is the replacement of the mint name *Spania* with *al-Andalus*. The full Arabic legend is found in all but one case (RD11; W Mad.2=MAN 2004.117.16), where the legend is truncated.

191 BALAGUER 1976, p. 73.

SERIES IP 3 FRACTIONALS

There are 12 surviving Series IP 3 semisses and one surviving Series IP 3 tremissis. Two of the 12 semisses are anomalous and are discussed separately on p. 265. The Series IP 3 fractionals continue to show an eight-pointed star in the obverse field, similar to other transitional Iberian Peninsula coinage. Legends in Latin are found in both the obverse and reverse margin. A globe on pole on steps (semisses) and T-bar on steps (tremissis) is found on the reverse field.

Figure 67: Above: Series IP 3 semissis, undated. W P.48=L127. Image courtesy of Bibliothèque nationale de France, Paris. (1.91 g) Below: Series IP 3 tremissis, undated. MAN 2004.117.20. Image courtesy of Museo Arqueológico Nacional, Madrid (1.26 g) (scale x4)

Table 60: Obverse Legends Found on the Series IP 3 Semisses

Obverse Legend	Die No.	No. of Ex.
FEITOƧƧLIINƧ•PANANI	1	9
FERITOƧƧOLIINƧPAN	2	1

Table 61: Reverse Legends Found on the Series IP 3 Semisses

Reverse Legend	Die No.	No. of Ex.
FERITOƧƧOIIINƧPANAN	1	5
FERITOƧƧOLIINƧPANANI	2	2
INNƏNINƏƧNƧƧIƧNƏƧI[NƏƧ]	3	2
INNƏNINƏƧNƧ[ƧIƧNƏ]	4	1

The legends on the obverse and reverse of both denominations are clearly engraved and easily readable. As shown in Table 60 above, the obverse legends are variations of FERITOS SOLIdus IN SPANia ANno. The legend on the first two of the four reverse dies repeats the obverse legend, with the legend on the two remaining reverse dies showing the religious formula found on the earlier transitional coinage.

The obverse of the single surviving tremissis (Figure 67 above) of this type was struck with OD1 of the semisses, while the reverse repeats the same formula. The legends on the tremissis are:

Obv: FЄITOƧƧLIINƧ•PANANI
Rev: FЄRITOƧƧOLIINƧPANI

Although the Series IP 3 fractionals have a mint name – SPANia – they do not bear a date. This has led to some speculation regarding the date in which they were struck. Vives was the first to suggest that they were struck at the same time as the Series IP 3 solidi.[192] Navascues also placed the fractionals in 98/716-17, citing the similar content of the legends, layout, colour (i.e. fineness) and epigraphy, and contrasting these characteristics with those of Series IP 2.[193] Balaguer, in contrast, suggested that the stylistic features of the fractionals resembled both Series IP 2 and 3, and that we cannot assume that they were struck at the same time as the bilingual coinage. For Balaguer, this coinage could even perhaps have been struck between 95/713 and 98/716-18, serving as a bridging coinage between Series IP 2 and Series IP 3.[194]

If the Series IP 3 fractionals were a bridging coinage, however, we might expect to have a much larger number of surviving examples and dies given how many Series IP 2 solidi appear to have been struck. The fractionals in most cases also have a gold

192 VIVES 1893, p. VII.
193 NAVASCUES, p. 44-48.
194 BALAGUER 1976, p. 78-9.

content of 80% Au or higher, which is unlikely to have been the case with coinage struck prior to the introduction of Series IP 3 (see p. 332). This evidence, combined with similarity in the epigraphy and legends of the Series IP 3 solidi and fractionals, places this coinage in 98/716-18. Perhaps the governor of *al-Andalus*, al-Ḥurr ibn ʿAbd al-Raḥmān al-Thaqafī (98/716-100/718), saw the need for multiple gold denominations during his reform of the *al-Andalus* monetary system, replacing both the Series IP 2 solidi and the Visigoth tremisses circulating in the Iberian Peninsula.[195]

195 TĀHĀ 1989,, p. 187; COLLINS 1994, pp. 45-6.

REVERSE ICONOGRAPHY AND OTHER ORNAMENTATION

As I have noted previously in the typology section, the reverse fields of all three denominations of Series NA 1, and the semisses and tremisses of Series NA 2 and Series IP 3 feature either a globe on pole on steps or a T-bar on steps in the reverse field. Ornamentation, usually in the form of pellets, is also sometimes found in the obverse and reverse field of Series NA 1 and on the reverse die of one Series NA 2, Phase 1 example. Further types of ornamentation are the one or more horizontal lines found above the obverse and reverse field legends of Series NA 2, Phase 2 and 3 and Series IP 2. Although technically a part of the legend, their meaning will also be discussed below.

THE OBVERSE ORNAMENTATION OF SERIES NA 1

A pellet is found in the obverse field to the left of the two busts on five of the Series NA 1 dies (Figure 68). Two of the obverse dies found in Table 7 (p. 100) are of the DEVSNON type (OD9 and OD10), one is of the DEVSINNOMINE type (OD1), one is of the DVSTVS type (OD7) and one is of the INNOME type (OD4).

Figure 68: Series NA 1 tremissis of the DEVSNON type, showing a pellet to the left of the busts in the obverse field. PG1483. Image courtesy of the Fitzwilliam Museum, Cambridge. (1.32 g) (scale x4)

The most likely explanation for the presence of the pellet in the obverse field of Series NA 1 is that it is a corruption of the *fibula* (clasp) of the *chlamys* worn by the Emperor Heraclius. The increased barbarization of the obverse iconography of Series NA 1 is discussed further on p. 379.

THE REVERSE ICONOGRAPHY OF SERIES NA 1

Until relatively recently the symbol-on-steps on the reverse of the early Islamic coinage had generated little interest and was almost universally regarded as a modified ("de-Christianised") version of the cross on steps found on the reverse of Byzantine gold solidi. This view still has considerable support but in recent years five different interpretations have been put forward, each of which sees the symbol-on-steps as a meaningful image with significance for Muslims of the time.

The first of these interpretations was by Savage who suggested that it represented a victory trophy consisting of a spear and shield.[196] The second, by Jamil, was more complex, but basically considered the pole to represent an axis around which stars rotate, which by analogy had a number of layers of meaning, including the caliph as an axis of the community.[197] Recently Schulze has offered a third interpretation of the image as a solar or lunar symbol.[198] He argued that solar, lunar and astral cults were common in Syria, Mesopotamia and the Arabian Peninsula. These cults and their associated symbols were of very ancient origin, but certainly lasted into Late Antiquity and he cites suggestive examples of cult objects mounted on top of poles (or columns) on steps. He also pointed out that many of the Umayyad Standing Caliph copper coins were decorated with small astral symbols (stars, crescents, circles etc.).

These three interpretations all have the common theme of the selection of a symbol that was in some way familiar to the users of the coins, but that would serve as a suitable image for the new Islamic coinage. Of the three interpretations, Jamil's is probably the least convincing, as it seems to be unduly complex. Savage's

196 Elizabeth Savage in an unpublished talk to the Royal Numismatic Society entitled "Arab-Byzantine Symbols of Victory" 1996. Information provided by Tony Goodwin.

197 JAMIL 1999.

198 SCHULZE 2010.

explanation has the great benefit of simplicity and, if such trophies were used, its meaning would have been obvious to all users of the coins. Schulze's interpretation is perhaps the most persuasive, although it requires us to accept that a basically pagan cult symbol would have been acceptable for a new Islamic coin. However, as he points out, we have very little knowledge of the state of Islam at this formative stage. Also there are numerous examples of solar, lunar and planetary symbols on later Islamic coins. For the moment therefore the interpretation of the symbol on steps must be regarded as unresolved, as so far none of the proponents of the new interpretations has been able to produce any contemporary artefact or inscription that supports their case.

Other recent interpretations are those of Heidemann and Popp. Heidemann has suggested that the symbol on steps may have represented a late Roman urban column surmounted by a globe of the type shown on the Madaba map outside the Damascus gate of Jerusalem.[199] This familiar secular object was chosen because of its general resemblance to the Byzantine cross on steps. Heidemann's suggestion is essentially different from the others in that he sees the symbol as a representation of a real object, but not necessarily one that had deep significance for the Muslims. Popp's suggestion is more radical, and sees the symbol on steps as a Jewish symbol, the *Yegar Sahaduta*, comprising a pile of stones.[200] This is in line with his thesis that 'Abd al-Malik was an Arab Christian rather than a Muslim, but seems unlikely as the symbol seems to bear no resemblance to a pile of stones.

The above interpretations did not consider the North African Series 1 through 3 gold coinage in any detail (struck in c. 79/699-700 to 99/718-19, slightly later than the Standing Caliph dinars struck from 74/693-4 to 77/696-7), but possible explanations

199 HEIDEMANN 2010b, pp. 179-80.

200 POPP 2010, p. 59 fn.

for the reverse iconography have been proposed. Both Walker and Heidemann have argued that the reverse iconography of the Series 1 through 3 coinage indicated denominational values.[201] Walker provided the chart in *Figure **69*** below to illustrate his observations.[202]

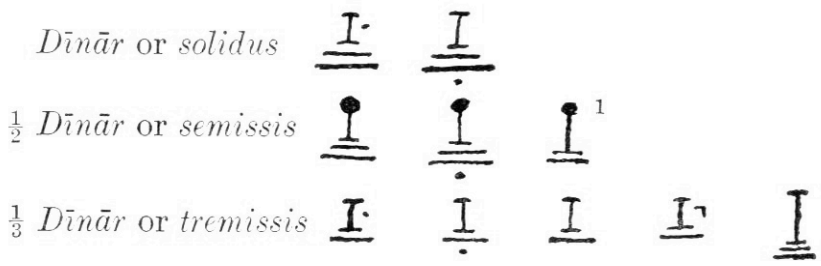

Figure 69: Walker's categorization of globe and T-bar on steps as denominational symbol.

In order to review Walker's and Heidemann's arguments it is necessary to summarise briefly the reverse iconography of these coins. Let's consider first the reverse fields found on the 23 examples of the NONEST type of Series NA 1 (see p. 97). This type has 15 reverse dies, with a wide variation in the reverse iconography.

Table 62: Reverse Iconography of the NONEST Type of Series NA 1

Reverse Field	No. of Dies	Solidus	Semisses	Tremisses
G/3	1	1	0	0
T/4; pellet right	1	1	0	0
T/4	1	1	0	0
T/3; pellet right	3	5	0	0
G/3	2	0	2	0
T/2; 2 pellets right	1	0	0	1
T/2; pellet right	1	0	0	1
T/2	5	0	0	11
TOTAL	15	8	2	13

Several conclusions can be drawn from a review of Table 62 above. First, although the reverse iconography varies on the NONEST type tremisses with the presence on some of the dies of one or more pellets to the right of the field, they all have a T-bar on two steps. The two NONEST type semisses, in contrast, both bear a

201 WALKER 1956, p. xli and HEIDEMANN 2010b, pp. 26-7.

202 The gold coinage of Walker's Subdivision I is equivalent to Series NA 1. See WALKER 1956, p. xli.

globe on pole on three steps in the reverse field. There is considerably more variation in the reverse iconography on the NONEST type solidi. In one case a solidus has a globe on pole on three steps in the reverse field, while the remaining solidi have a T-bar with three or four steps and in some cases a pellet to the right. Whether they bear a T-bar or globe on pole on steps, the solidi are distinguished from the tremisses by the presence of additional steps. The only exception to the differentiation between the solidi and the fractionals is the one solidus bearing the globe on pole on three steps (CNG03, L:1189), the same as the semisses. The placement of a globe on pole on steps on this solidus may simply be die engraver error. It is also possible that the Islamic mint in North Africa had not decided on a reverse symbol for the Series NA 1 solidi when they struck this example.

The reverse iconography for the remaining 32 Series NA 1 examples varies in the location of the pellets or a reverse gamma 'ℸ' in the reverse field, but the nine semisses have a globe on pole on three steps and the18 tremisses have a T-bar on two steps. All but one of the five solidi have a T-bar on three steps, with the one exception having a T-bar on two steps.

There are no pellets in the reverse field of the DEVSINNOMINE type of Series NA 1. Pellets below the steps are found on two dies of the INNOME type (RDs 4 and 5); on four dies of the DVSTVS type (RDs 6, 7, 8, and 9); and one die of the MISERICORDIS type (RD16). A pellet is also found on the left of the reverse field of one die of the DEVSNON type (RD14).[203]

203 The reverse dies are found in Table 8 (p. 89).

Two of the reverse dies (RDs 10 and 11), both of the DVSTVS type, bear a reverse gamma in the field. This may have been an attempt to copy the gammas found in the reverse fields of the Byzantine Heraclian solidi dated 628-30.[204]

Figure 70: Examples of reverse field iconography of Series NA 1 solidi.

Figure 71: Examples of reverse field iconography on Series 1 semisses and tremisses. From left: semissis with reverse gamma, semissis with pellet below pole on three steps, tremissis with T-bar on two steps.

Unlike the obverse of Series NA 1 where the same die(s) were used for multiple denominations, the reverse iconography of the semisses and tremisses of Series NA 1 is very consistent, with the exception of the placement of pellets or reverse gammas. This consistency is likely a carryover from the Byzantine period, where the semisses and tremissis featured differing versions of the cross-potent (Figure 72 below) based on their denomination. This consistency does not hold true for the Series NA 1 solidi, however, which features a wider variety of modified cross-potents. The reverse iconography of the Series NA 1 solidi varies more than the semisses and tremisses, but in all but one case is differentiated from the fractionals by additional steps.

204 GRIERSON 1966, p. 118.

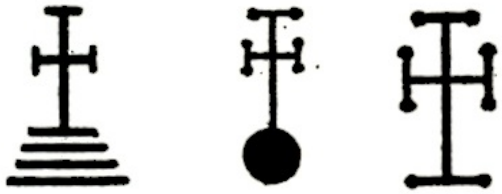

Figure 72: Examples of reverse iconography of Byzantine solidus, semissis, and tremissis.

REVERSE ICONOGRAPHY OF THE SEMISSES AND TREMISSES OF SERIES NA 2

The reverse fields of the Series NA 2, Phase 1 semisses and tremisses continue the pattern found on the previously minted Series NA 1 gold fractionals. All of the Series NA 2, Phase 1 semisses display a globe on pole on steps and all of the tremisses a T-bar on steps. Nine of the 18 semisses have three steps, with the remaining nine having two steps. Given that all of the semisses with two steps are from a single die, we may conclude that this die is an aberration, probably resulting from a mistake on the engraver's part.

A single Series NA 2, Phase 1 semissis, with a globe on pole on three steps, has a prominent pellet below the steps (see Figure 73 below). The reverse legend on this example is *non est deus nisi solus deus non est*, similar to what we find on the reverse of the Series NA 1 semisses of the MISERICORDIS type. This suggests that this is an example of the reuse of a die previously used on the earlier Islamic semisses even though no such specimen of a Series NA 1 coin survives. Given the reuse of an earlier die on Series NA 2, Phase 1, it also suggests that the MISERICORDIS type may have been the last Series NA 1 type struck before the introduction of Series NA 2, Phase 1 (see Relative Chronology of Series NA 1 beginning on p. 379).

Figure 73: On left, reverse of Series NA 2, Phase 1 semissis. Ra96, L:3003. Image courtesy of Rausch. (2.14 g) On right, reverse of Series NA 1 semissis of the MISERICORDIS type. W P.20=L96. Image courtesy of the Bibliothèque nationale de Paris (1.95 g) (scale x4)

The reverse field of the Series NA 2, Phase 1 tremisses has even less variation than that of the semisses. Every tremissis has two steps below the T-bar, with only one exception, W P. 38=L108, which has three steps (Figure 74 below). There are no pellets or other ornamentation on the reverses of the Series NA 2, Phase 1 tremisses, although W 177 at first sight appears to have a pellet in the right of the field. This is likely just a gouge or mark as the other tremissis (BCT6) with the same reverse die does not show a pellet.

Figure 74: Reverse of Series NA 2, Phase 1 tremissis, showing T-bar on Three Steps in the Field. W P.38=L108. Image courtesy of the Bibliothèque nationale de France, Paris (1.39 g) (scale x4)

All of the Series NA 2, Phase 2 and Phase 3 (*hijri* dated) semisses have a globe on pole on three steps, with no pellets or other ornamentation, with one exception. This Series NA 2, Phase 2 example has a pellet to the right of the steps (Figure 75). Again, this may simply be a die engraver error.

Figure 75: Reverse of Series NA 2, Phase 3 semissis, with pellet to right of the steps. BNFnonname. Image courtesy of the Bibliothèque nationale de France, Paris (2.02 g) (scale x4)

The Series NA 2, Phase 2 and 3 tremisses all feature a T-bar on two steps with no additional ornamentation. The semisses and tremisses of Series IP 3 make no changes to the reverse iconography, with all of the semisses having a globe on pole on three steps and the single tremissis having a T-bar on two steps in the reverse field.

The above analysis shows quite clearly that the globe on pole on three steps in the reverse field served as a denominational symbol for the Series 1 through 3 semisses, while a T-bar on two steps served as a denominational symbol for the corresponding tremisses. Exceptions to this rule were extremely rare, as only one of the tremisses analysed varied from a T-bar on two steps (through the addition of a third step), while none of the semisses varied from this reverse iconography. The reverse iconography of the Series NA 1 solidi varies more than the semisses and tremisses, but in all but one case is differentiated from the fractionals by additional steps. Perhaps less care was taken with the solidi because the substantial difference in weight made it less likely that a solidus would be confused with a semissis or tremissis, whereas confusing a semissis with a tremissis was always a possibility.

ORNAMENTATION ON SERIES 3 SOLIDI

Pellets are found in a few cases on the Series NA 3 and Series IP 3 solidi. No pellets are found on the Series NA 3 solidi dated 97/715-16, but they are found in the centre of the obverse field on one die (OD3 in Table 54) and in the centre of the reverse field on two dies (RD10 and RD17) on the solidi dated 98/716-17 in Table 55. Although there are no pellets in the centre of the dies on the Series NA 3 examples dated 99/717-18, a pellet is visible below the legend in the reverse field on one die (RD1 (Table 57; an example of which is in Figure 76 below). Pellets in the centre of the field are found on two (RD2 and RD5 in Table 59) of the 14 reverse dies of Series IP 3. The meaning, if any, for the Series 3 pellets is unclear, but they likely had some sort of meaning within the mint workshop.

Figure 76: Reverse of Series NA 3 solidus, dated 99/717-18, with pellet at the bottom of the reverse field. BalGacNum43, no.12. (4.05 g) (scale x4)

HORIZONTAL LINES ABOVE THE OBVERSE AND REVERSE FIELD LEGENDS

One or more horizontal lines are found above the Indiction date of the reverse field legend of the Series NA 2, Phase 1 solidi. Beginning in Series NA 2, Phase 2, horizontal lines are found on both the obverse and reverse field legends of all denominations, and continuing until the introduction of Series NA 3 in 97/715-16. Examples of solidi bearing horizontal lines are found in Figure 77 below.

Figure 77: Four solidi, showing one or more horizontal lines above the obverse and/or reverse field. From Top: Series NA 2, Phase 1 solidus. KC AV1131. Image courtesy of the Khalili Collection. (4.36 g); Series NA 2, Phase 2 solidus. W P.42=L 111bis. Image courtesy of the Bibliothèque nationale de France, Paris (4.25 g); Series IP 2 solidus. CNGXVII, L:908. Image courtesy of the Classical Numismatic Group, Inc. (4.31 g); Series NA 2, Phase 3 solidus. JE69, L:756. Image courtesy of Jean Elsen & ses Fils s.a. (4.24 g) (scale x4)

Bates argued that the single horizontal line above the obverse marginal legend of the Series NA 2, Phase 2 coinage (for example, W P.42=L111bis in Figure 77 above) was a horizontal rendering of the second 'I' that is missing from the word SIMILIS on some of the examples.[205] This explanation is unlikely for several reasons. First, horizontal lines were introduced in the reverse field of Series NA 2, Phase 1, prior to the introduction of Phase 2. In Phase 1, the horizontal lines could have signified that the Indiction date of the solidi was abbreviated, but lines are found not only above the abbreviated Indiction date, but also the date itself, which does not appear to be abbreviated. This would mean, in the case of the Phase 1 solidi above (see Figure 77, top example), that the Indiction date was in fact IIII, and not III. Secondly, no horizontal lines are found above the obverse field legends of Series NA 2, Phase 1, despite the obverse field legend also being abbreviated.

Beginning with the Series NA 2, Phase 2 coinage, some of the coins have a horizontal line above where a letter is missing from the obverse field, but other examples have the horizontal line above the first two letters of the word or two

205 BATES 1992, p. 273.

horizontal lines, one of which is not above an area of the field legend with missing letters. It may be that at some point a die engraver or mint supervisor decided to adopt the convention of abbreviating words with horizontal lines, but this convention may not have been properly understood even on the first die cut. The meaning of this convention then appears to have been lost over time.

SERIES 4 (THE POST-REFORM TYPE)

The North African Islamic mint transitioned into the mainstream Umayyad monetary system with the introduction of Post-Reform dirhams in 97/715-16 and dinars in 100/718-19 and would strike this coinage until the end of the Umayyad Caliphate. The North African dirhams were struck in nearly every year up until 132/749-50, and differ in only small respects (e.g. annulet patterns) from those struck elsewhere in the Caliphate. The North African dinars, in contrast, bore different legends up until 114/732-33 (see p. 224), and for the first two years of striking had smaller flans than the eastern dinars. Unlike the dirhams, the minting of dinars appears to have been sporadic, with the majority of surviving examples from the first few years of production.

In the Iberian Peninsula, the mint began to strike Post-Reform dinars and a small number of *nisf* and *thulth* in 102/720-21, followed in the next year by the introduction of dirhams. Like in North Africa, the Iberian Peninsula dirhams survive from most years, but the dinars, whose legends are similar to those in North Africa, are again few in number, with the majority struck in their first year of production.

Nisf and *thulth* without a mint name were also struck at an unknown mint beginning in 91/709-10, although the balance of evidence argues for a North African provenance (see p. 243).

The Series 4 Post-Reform dinars and dirhams bear the mint names *Ifrīqiya* and *al-Andalus*, and I will therefore use these mint names in place of North Africa and the Iberian Peninsula when discussing the Post-Reform coinage. The construction of a typology for the Series 4 precious metal, Post-Reform coinage of *Ifrīqiya* and *al-Andalus* is much more straightforward than for the transitional coinage of Series 1 through 3. The coins can logically be divided first by mint and then by date. Each of

the years can then be examined, and differences between years, or within a particular year, can be documented.

The examination of the dinars of *Ifrīqiya* and *al-Andalus* has never been attempted on a large scale for the two regions.[206] For the dirhams, however, we have the work of Klat,[207] whose typology I will rely on in my own discussion of the silver coinage. I will build on Klat's typology, however, as I have undertaken die studies of a large number of dirhams of both *Ifrīqiya* and *al-Andalus*.

SERIES 4 DINARS

There are confirmed surviving examples of Series NA 4 dinars of the *Ifrīqiya* mint for the years 100/718-19 through 107/718-26, 110/728-29, 114/732-33, 117/735-36, and 121-22/738-41, and Series IP 4 dinars of the *al-Andalus* mint for the years 102/720-21 through 104/722-23, 106/724-25, 108/726-27, 114-115/732-34, 120/737-38, and 127/744-45.[208] As can be seen in Figure 78 below, they are all similar in layout to those struck elsewhere in the Caliphate, with clearly engraved legends in Arabic in both the obverse and reverse fields and margins. A single beaded circle outlines the obverse and reverse edges of the examples.

206 Walker recorded five *Ifrīqiya* and five *al-Andalus* dinars, and also discussed the differences in the legends. See WALKER 1956, pp. lvi-lix, 99-102. Miles also described six *al-Andalus* dinars and discussed the legends. See MILES 1950, pp. 27-8, 115-18.

207 KLAT 2002.

208 There is one unconfirmed example of *Ifrīqiya* dated 111/729-30 in CASANOVA 1896, no. 215, but without further details. It is unknown whether this example has Western or Eastern legends. There is also one unconfirmed dinar of *al-Andalus* dated 130/747-48 in the collection of the State Hermitage Museum.

Figure 78: Top: Series NA 4 dinar, with the mint name Ifrīqiya. AA17, L:147. Image courtesy of Steve Album Rare Coins. (4.28 g); Middle: Series IP 4 dinar, with the mint name al-Andalus. icaL19, L:14. Image courtesy of Baldwin's Auctions, Ltd. (4.30 g); Bottom: Post-Reform Dinar, without mint name (Damascus). AA17, L:146 . Image courtesy of Steve Album Rare Coins. (4.26 g) All dated 102/720-21. (scale x2)

Table 63: Number of Recorded and Imaged Examples of Series NA 4 Dinars, together with the Number of Obverse and Reverse Dies For Each Year

Year	Recorded	Imaged	No. of OD	No. of RD
100	3	2	1	1
101	16	15	8	7
102	14	12	6	6
103	7	7	3	2
104	4	4	3	3
105	3	3	2	2
106	1	1	1	1
107	3	3	1	1
110	1	1	1	1
114	3	3	3	3
117	2	2	2	2
121	1	1	1	1
122	2	2	1	1
TOTAL	59	55	33	31

Table 64: Number of Recorded and Imaged Examples of Series IP 4 Dinars, together with the Number of Obverse and Reverse Dies For Each Year.

Year	Recorded	Imaged	No. of OD	No. of RD
102	21	16	11	11
103	3	3	2	2
104	3	2	1	1
106	2	2	2	2
108	1	1	1	1
114	1	1	1	1
115	1	1	1	1
120	1	1	1	1
127	1	1	1	1
TOTAL	35	29	21	21

Table 63 and Table 64 above sets out the number of surviving examples by year for the Series 4 dinars struck at the *Ifrīqiya* and *al-Andalus* mints, together with the number of obverse and reverse dies for each year. Both mints at times re-used the obverse dies in subsequent years for the Series 4 gold and silver coinage. The tallying of the number of obverse dies is therefore of little value when calculating the total number of dies (see p. 352). This is also the case with the obverse dies of the no-mint *nisf* and *thulth* (see Table 71 on p. 245 below).

There are few surviving dinars from either the *Ifrīqiya* or the *al-Andalus* mint. The majority of the examples and dies for *Ifrīqiya* are from the years 101/719-20 and 102/722-23. Similarly, it appears that the *al-Andalus* mint only struck a substantial number of dinars in the first year (102/722-23) of production. After 102/722-23, production of dinars appears to have tapered off in both mints. Table 63 and Table 64 also shows several gaps in the numismatic record, but given that there are so few examples dated after 102/722-23 from either of the two mints, we cannot assume that the gaps indicate that gold coinage was not produced in those years. It is just as possible that examples have simply not survived. They must have been struck in low quantities, perhaps only one obverse and one reverse die for each of the later years.

DIFFERENCES BETWEEN THE WESTERN AND EASTERN LEGENDS

The dinars struck by the Umayyads up until at least 110/728-29 in the West (at *Ifrīqiya* and *al-Andalus*) and in the East (at Damascus and the 'Mine of the Commander of the Faithful in the *Ḥijāz*') are much alike, but they differ significantly in their respective legends. Table 65 below compares the Western and Eastern legends.

Table 65: Comparison of Western and Eastern Legends

Location	Western Legends	Eastern Legends
Obv. Margin	*ḍuriba hādhā* denomination *sanat date.* 'This *denomination* was struck (in) the year *date*'	*bism Allāh ḍuriba hādhā* denomination *bi* mint name *fī sanat* date. 'In the name of God this *denomination* was struck in *mint Name* (in) the year *date*.'
Obv. Field	*lā ilāha illā Allāh waḥdahu* 'There is no god but God.'	*lā ilāha illā Allāh waḥdahu, lā sharīka lahu.* 'There is no God but, God alone, He has no equal'
Rev. Margin	*Muḥammad rasūl Allāh arsalahu bi'l-hudā wa-dīn al-ḥaqq* As right (abbreviated)	*Muḥammad rasūl Allāh arsalahu bi'l-hudā wa-dīn al-ḥaqq li-yuẓhirahu 'alā 'l-dīn kullihi* 'Muḥammad is the messenger of God, He sent him with the guidance and the right religion, so he may reveal it is all religion, even if polytheists hate it.'[209]
Rev. Field	*bism Allāh al-raḥmān al-raḥīm* 'In the name of God the Merciful, the Compassionate.'	*Allāhu ahad Allāh al-ṣamad lam yalid wa-lam yūlad wa-lam yakun lahu kufu'an aḥad* '[He is] one God, God the eternal, who has not begotten nor has been begotten, there is no equal to Him[210]

209 Sura 9 (al-Tawba), v. 33 (in part).

210 Sura 112 (al-Ikhlaṣ).

As can be seen by Table 65 above, the differences between the Eastern and Western legends are substantial, although three of the four Western legends (obverse margin and field and reverse margin) can be easily explained as a simple shortening of the corresponding Eastern wording. This of course begs the question of why the *Ifrīqiya* and later *al-Andalus* mint chose to shorten the legends on their dinars? Once again this is easily explained, as the Western dinars simply duplicated the legends found on the *nisf* and *thulth* dated 91/709-10 to 103/721-22 that do not bear a mint name. This explanation, however raises another question - why did the mints in *Ifrīqiya* and *al-Andalus* copy the legends found on the smaller gold denominations instead of those found on the eastern dinars? These questions, along with the replacement in the reverse field of the Western coinage of Sura 112 (*al-Ikhlas*) with *bism Allāh al-raḥmān al-raḥīm*, are explored on p. 248.

DIFFERENCES IN FLAN DIAMETER

The *Ifrīqiya* and *al-Andalus* Series 4 dinars with Western legends are quite consistent in their epigraphy and their ornamentation, although up until 114/732-33 the *Ifrīqiya* dinars are smaller in diameter (see p. 310). The earliest dinars (dated 100/718-19) struck at the *Ifrīqiya* mint have a flan diameter of 16-17 mm, smaller than the 19-20 mm flan diameter of the dinars struck in the eastern Umayyad mints. In the following year, the majority of the surviving dinars (13 of 16 examples) continue to have a flan diameter of 16-17 mm, with the remaining examples having a diameter of 18-19 mm.[211] This larger diameter is maintained until 114/732-33. It should be noted, however, that the *Ifrīqiya* dinar diameter of 18-19 mm is still slightly smaller than the diameters of the contemporary dinars struck in *al-Andalus* and in the eastern mints.

211 The three large flan examples all have the same reverse die. This die is linked to a reverse die of the small flan type. One of the obverse dies of the large flan type is also linked to a small flan die. This confirms that the small flan and large flan types were struck in the same workshop.

INTRODUCTION OF EASTERN LEGENDS

The *Ifrīqiya* and *al-Andalus* mints began striking dinars with Eastern legends in 114/732-33 although, given that no confirmed examples of dinars survive from the previous three years for *Ifrīqiya* and the previous five years for *al-Andalus*, the shift to the Eastern legends may have occurred earlier.

Figure 79: Above: Series NA 4 dinar, dated 122/ 739-40 and with the mint name Ifrīqiya. W B.16=Nü508. Image courtesy of Münzkabinett, Staatliche Museen, Berlin. (4.28 g) Below: Series IP 4 dinar, dated 114/732-33 and with the mint name al-Andalus. TOI396=S81M, L:76. Image courtesy of Sotheby's. (4.34 g) (scale x2).

Other changes also occur in this year. The epigraphy for the dinars struck at both mints becomes more elongated. The flans for both mints also tend to be slightly larger than the earlier dinars and the weights slightly heavier (see p. 286). The beaded border on the *Ifrīqiya* dinars struck from 114/732-33 also changes, with more spacing

between individual beads (see Figure 80 below). The beaded border on the *al-Andalus* dinars does not show any change in design, however.

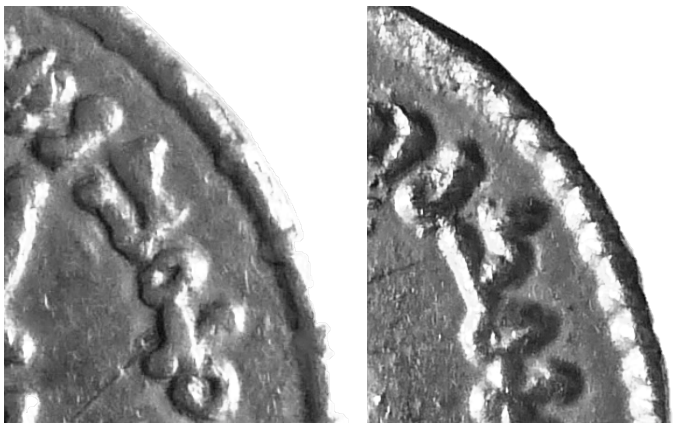

Figure 80: Detail showing differences in the beaded border of those Ifrīqiya dinars struck with Eastern Legends (left) and those dinars struck with Western Legends (right).

The final characteristic that distinguishes the *Ifrīqiya* and *al-Andalus* dinars of 114/732-33 onwards is the presence of two pellets (see Figure 79 above) on some of the reverse dies of the *Ifrīqiya* examples. Ornamentation on the Series 4 gold and silver coinage is explored more fully on beginning on p. 234.

SERIES 4 DIRHAMS

As I discussed at the outset of this chapter, the standard reference for the dirhams of the Umayyad Caliphate is Klat 2002. He recorded Series NA 4 dirhams from 97/715-16 to 132/749-50, with gaps in the chronology in the years 100/718-19, 121-122/738-40, 123/740-41, 126/743-44, and 127/744-45. Klat's chronology for the *Ifrīqiya* dirhams continues to be correct, with the exception of the appearance of one new example, dated 100/718-19.[212] For the Series IP 4 dirhams of *al-Andalus*, Klat's catalogue contains examples from 103/721-22 to 129/746-47, with a chronological gap in the year 128/745-46 and unconfirmed examples for the years 100/718-19,[213]

212 This example is gilt and mounted. Baldwin's Islamic Coin Auction 17, April 25, 2012, lot: 39 (3.21 g).

213 The unconfirmed al-Andalus example for the year 100/718-19 must be the one illustrated in ASSEMANI 1787, Pl. V, no. LII. Miles mentions this coin, although at the time of writing he was unable to obtain a copy of Pl. V of Assemani's catalogue.

123/740-41, 126-127/743-45, and 130-132/747-50.[214] An *al-Andalus* example can now be confirmed for the year 128/745-46.[215]

Figure 81: Above: Series NA 4 dirham, dated 98/716-17. P386, L:996. Image courtesy of Dr. Busso Peus Nachfolger. (2.34 g) Below: Series IP 4 dirham, dated 103/721-22. ME39, L:432=M28, L:43. Image courtesy of Morton & Eden. (3.00 g) (Scale x2)

Before discussing the *Ifrīqiya* and *al-Andalus* dirhams further, it should be noted that Klat records a dirham struck with a third mint name, *al-Maghrib*, found only for the year 105/723-24 (Figure 82 below). This example is in the Klat Collection.

He did note, however, that Vives examined the plate and declared the date to be 200 H. See MILES 1950, p. 114. I have also examined the engraving and I agree that it appears to be the later date.

214 KLAT 2002, p. 304-5.

215 Baldwin's New York Auction XXX, January 9, 2013, Lot: 407.

Figure 82: Series 4 dirham, dated 105/723-24, and with the mint name al-Maghrib. OHF 956. KLAT 2002, p. 240. (2.66 g) (scale x2)

Both the mint name and date are clearly engraved on the coin. Certain features set this coin apart from the *Ifrīqiya* and *al-Andalus* dirhams, however. First, the orientation of the marginal legends varies from other Series 4 dirhams. The obverse marginal legend on the *al-Maghrib* example begins at 8 o'clock, while the reverse marginal legend begins at 9 o'clock, an orientation that never occurs on the *Ifrīqiya* and *al-Andalus* dirhams. The *al-Maghrib* dirham also has *fī* prior to the date on the obverse marginal legend, a word not found on the corresponding *Ifrīqiya* and *al-Andalus* legend. Finally, although it is unclear from Figure 82 above, the epigraphy in general appears to be poor, suggesting that this may have been the product of an irregular mint, or even a modern fake.

Table 66 and Table 67 below set out the number of recorded examples of the Series NA 4 and IP 4 dirhams by year, together with the number of imaged examples and the number of obverse and reverse dies for each year.

Table 66: Number of Recorded and Imaged Series NA 4 Dirhams, together with the number of Obverse and Reverse Dies

Year	Recorded	Imaged	Obv. Dies	Rev. Dies
97	2	2	2	2
98	4	4	3	3
99	2	2	2	2
100	1	1	1	1
101	13	11	7	8
102	27	23	13	16
103	60	46	27	31
104	33	29[216]	17	17
105	22	18	14	8
106	16	14	7	6
107	7	6	4	4
108	5	5	2	3
109	8	7	4	4
110	13	12	5	5
111	25	23	18	19
112	40	31	21	22
113	24	20	12	13
114	36	31	20	14
115	4	3	2	2
116	17	16	12	11
117	14	12	7	7
118	11	10	6	5
119	7	6	4	5
120	3	3	3	3
124	9	8	4	4
125	3	2	1	1
128	6	6	4	3
129	2	2	1	1
130	2	2	1	2
131	2	2	1	1
132	5	4	2	2

216 Two examples without reverse image.

Table 67: Number of Recorded and Imaged Series IP 4 Dirhams, together with the number of Obverse and Reverse Dies

Year	Recorded	Imaged	Obv. Die	Rev. Die
103	2	2	2	2
104	24	20	8	11
105	16	12	9	7
106	22	19	9	10
107	15	11	2	3
108	17	12	4	6
109	13	11	6	5
110	33	28	13	10
111	30	30	13	12
112	7	7	4	4
113	21	19	11	6
114	40	35	16	17
115	9	6	5	4
116	42	34	21	16
117	18	12	10	6
118	37	34	30	19
119	20	18	12	9
120	8	6	5	4
121	23	20	15	12
122	16	14	9	7
124	8	4	3	3
125	3	1	1	1
128	1	1	1	1
129	7	6	4	4
130	Unconfirmed[217]			

Unlike the dinars, the Series 4, Post-Reform *Ifrīqiya* and *al-Andalus* dirhams are, from the time of their introduction, similar to those found elsewhere in the Umayyad Caliphate. The legends for all of the dirhams, no matter the mint name and date, are:

Obverse Field
lā ilāha illā/Allāh waḥdahu /lā sharīka lahu
'There is no God but, God alone, He has no equal'

Obverse Margin
bism Allāh ḍuriba hādhā 'l-dirham bi Mint name *sanat* Date
'In the name of God this dirham was struck (in) *mint name* in the year *date*.'

217 Reference to one without image in TIESENHAUSEN 1873, no. 647.

Reverse Field
Allāhu ahad Allāh al-ṣamad lam yalid wa-lam yūlad wa-lam yakun lahu kufu'an aḥad
'[He is] one God, God the eternal, who has not begotten nor has been begotten, there is no equal to Him.'

Reverse Margin
Muḥammad rasūl Allāh arsalahu bi'l-hudā wa-dīn al-ḥaqq li-yuẓhirahu 'alā 'l-dīn kullihi wa-law kariha al-mushrikūn
'Muḥammad is the messenger of God, He sent him with the guidance and the right religion, so he may reveal it is all religion, even if polytheists hate it.'

Despite the similarity in the legends, Umayyad dirhams have certain characteristics that can be used to differentiate issues struck at different mints. Walker listed five characteristics to note in any analysis of Umayyad dirhams:[218]

1. The position of *wa*, i.e. whether it is at the beginning of the third line or at the end of the second line of the *kalima*;

2. The presence or absence of *fī* in the date legend;

3. The orientation of the marginal legends;

4. The differences in the epigraphy; and,

5. The presence or absence of certain points (or pellets).

The first four proposed observations are not that useful when discussing the *Ifrīqiya* and *al-Andalus* dirhams and therefore can be dismissed quite quickly. For all of the dirhams of both regions, *wa* is found at the end of the second line of the reverse field legend, the same as the dirhams struck in the East after 90/708-9. Similarly, the *fī* before *sanat* is absent from the obverse margin for all of the *Ifrīqiya* and *al-Andalus* dirhams. The word *fī* also disappeared from Damascus in 80/699-700 and from Wāṣit in 98/716-17.[219] The obverse legends on both the *Ifrīqiya* and *al-Andalus* dirhams begin at either 12 or 1 o'clock. For the *Ifrīqiya* dirhams, the reverse marginal legend begins anywhere from 10 to 3 o'clock, although most of the reverse marginal legends

218 WALKER 1956, p. lxiv.

219 KLAT 2002, pp. 303-18.

begin between 2 and 3 o'clock. For the *al-Andalus* coins, the reverse marginal legends begin anywhere between 12 and 4 o'clock, although again most are between 2 and 3 o'clock. There is no chronological pattern for the orientation of the obverse or reverse margins for either of the mints. Finally, with regards to the epigraphy, slight changes do occur. Prior to 110/728-29, the epigraphy for the *Ifrīqiya* dirhams appears more rounded (similar to the epigraphy of Damascus dirhams), and then adopts a more angular style in that year until the end of the Umayyad period (similar to the Wāṣit dirhams; see examples in Figure 83 below). In *al-Andalus*, the epigraphy is rounded up until 105/723-24, and then varies between rounded and angular until the end of the Umayyad period, with no clear chronological pattern. Changes in the epigraphic style are likely due to changes in the die engraver.

Figure 83: On left, obverse of Series NA 4 dirham with rounded epigraphy. KC AR6266. Image courtesy of Khalili Collection (2.84 g) On right, obverse of Series NA 4 dirham with more angular epigraphy. MAN 2004.116.22. Image courtesy of the Museo Arqueológico Nacional, Madrid. (2.12 g) Both dated 110/728-29. (scale x2)

SERIES 4 ORNAMENTATION

Three types of ornamentation are found on the Series 4, Post-Reform gold and silver coinage. The first type of ornamentation is the beaded circle. As I have already noted, for both the *Ifrīqiya* and *al-Andalus* dinars there is only a single beaded circle around the outside edge of the coin. For Series NA 4 dirhams, the engravers placed four beaded circles on the outer edge of the obverse dies, while on the reverse there is

a beaded circle surrounding the field, the marginal legend, and then another beaded circle. This pattern is maintained for all of the *Ifrīqiya* dirhams struck from 97/715-16 to 132/749-50. The same pattern is seen on the *al-Andalus* dirhams, except for one set of coins dated 111/729-30 that on the obverse have an inner beaded circle on the obverse, then the marginal legend, followed by three further beaded circles. (see Figure 84 below). This pattern is found on seven of the 13 obverse dies for that year.

Figure 84: Differences in the pattern of the beaded circles on the obverse of Series IP 4 dirhams, dated 111/729-30 and with the mint name al-Andalus. On left: TuebAA2BG. Image courtesy of the University of Tübingen, Tübingen (2.77 g); On right, TC 111Andalus(4). Image courtesy of the Tonegawa Collection (2.94 g) (scale x2)

The second type of ornamentation is the placement of pellets (or points) and/or symbols in the field and/or margin of both the obverse and reverse of the coins.

Table 68 below sets out this type of ornamentation for both denominations by mint and year. I have not recorded in the table the single pellets that are often found in the centre on the obverse and/or reverse of the examples, as I do not believe that they have any special significance.

Table 68: Pellets and other Symbols found on the Series 4 Dinars and Dirhams of *Ifrīqiya* and *al-Andalus*[220]

Year	*Ifrīqiya*		*Al-Andalus*	
	Dinar	Dirham	Dinar	Dirham
97	✗	**h(2); k (2)**	✗	✗
98	✗	**h(3)**	✗	✗
99	✗	✔	✗	✗
100	✔	**l(1)**	✗	✗
101	**a(1); b(1)**	**h(1); l(1); m(1)**	✗	✗
102	**c (1); d(1)**	**n(1); o(2); p(1)**	**h(2)**	✗
103	**a(1)**	**a(2)**	**h(2); i(2)**	✔
104	✔	**h(1); k(1)**	**h(1); i(1)**	✔
105	**a(1)**	**h(2)**	✗	✔
106	✔	**e(3)**	✔	✔
107	**e(1)**	✔	✗	✔
108	✗	✔	✔	✔
109	✗	✔	✗	✔
110	✔	✔	✗	✔
111	✗	**q(1)**	✗	✔
112	✗	✔	✗	✔
113	✗	✔	✗	✔
114	**f(1)**	✔	✔	✔
115	✗	✔	✔	✔
116	✗	✔	✗	✔
117	**f(2)**	**◆(5)**	✗	✔
118	✗	**◆(5); b(1)**	✗	✔
119	✗	**◆(5)**	✗	**◆(2?)**
120	✗	**◆(2)**	**j(1)**	✔
121	**f(1)**	✗	✗	✗
122	**f(1); g(1)**	✗	✗	✔
123	✗	✗	✗	✗
124	✗	**◆(4); ∪(1)**	✗	✔
125	✗	**r(1)**	✗	✔
126	✗	✗	✗	✗
127	✗	✗	✔	✗
128	✗	**∗(4)**	✗	✔
129	✗	**∗(1)**	✗	✔
130	✗	✔	✗	✗
131	✗	✔	✗	✗
132	✗	✔	✗	✗

220 The number of dies that have each pellet or symbol are enclosed by brackets. An ✗ indicates that the denomination was not struck in that year.

Abbreviations for Table 68

a=pellet at the end of the obverse marginal legend.
b= pellet below *tā' marbūṭa* of *sanat* on reverse.
c= pellet below second *mīm* of *Muḥammad* on obverse.
d= two pellets in centre of reverse. (one may be a flaw in the die)
e= pellet below *miʾa* on the obverse.
f=two horizontal pellets (. .) at the bottom of reverse.
g=pellet above *miʾa* on the obverse. (possible die engraver error)
h= pellet below *bā'* or *rā'* of *ḍuriba* on obverse.
i=Two vertical pellets (:) at the bottom of reverse.
j=possible small pellet above *'alif* of *ahad* on reverse.
k= pellet below first digit of date.
l= pellet below *dhāl* of *hādhā*.
m=pellet at bottom of reverse.
n= pellet in reverse field.
o= pellet below *ḥā'* of *waḥdaha*.
p= pellet left field.
q= two vertical pellets (:) top of reverse field.
r=large pellet (possibly diamond) at bottom of reverse field.
◆=diamond shaped pellet at bottom of reverse field
∪=at bottom of reverse field.
∗=8-pointed star at the bottom of obverse field.

One or more pellets are frequently found on the *Ifrīqiya* dinars with Western legends dated from 101/719-20 to 107/724-25. There is no clear pattern, other than the repeating of a pellet at the end of the obverse marginal legend for the years 101/719-20, 103/721-22 and 105/723-24. Pellets also appear frequently on the *Ifrīqiya* dirhams up to 106/724-25. One pellet is found at the end of the obverse marginal legend for a dirham of 103/721-22, but otherwise the pellets of the dirhams are found at different locations from that of the dinars. By far the most common location for a pellet is under *bā'* or *rā'* of *ḍuriba* on the obverse marginal legend, found in the years 97/715-16, 98/716-17 and 101/719-20. There is then a gap but this pellet location is again found in 104/722-23 and 105/723-24. Interestingly, between 102/720-21 and 104/722-23 a pellet is found in the same location on the *al-Andalus* dinars.

In 111/729-30, two vertical pellets appear at the top of the reverse die on one of the *Ifrīqiya* dirhams. No further pellets are observed until 117/735-36, when a diamond-shaped pellet is found on the majority of the reverse dies of the *Ifrīqiya* dirhams up until 124/741-42. In that year both a diamond-shaped pellet is found on three of the dies, while a u-shaped symbol is found on one of the reverse dies. In the following year a large pellet, possibly diamond-shaped, is found on one of the dies. The final symbol found on the *Ifrīqiya* dirhams of 128/745-46 and 129/746-47 is an eight-pointed star. In addition, as I mentioned above, two horizontal pellets are found at the bottom of the reverse field of the *Ifrīqiya* dinars with Eastern legends. There may also be a pellet above *mia* on one die of an *Ifrīqiya* dinar dated 122/739-40, but this is likely simply an engraver error.

There are far fewer pellets on the gold and silver, Post-Reform coinage of *al-Andalus*. For the dirhams, there are no pellets or other symbols on any of the years except possibly in 119/737, where there may be diamond-shaped pellets at the bottom of the reverse field on two of the dies, similar to the *Ifrīqiya* dirhams of that year. It is difficult to confirm based on the images and the condition of the coins. This is similar to what we would find on the *Ifrīqiya* dirhams of 117/735-36 to 124/741-42.

For the *al-Andalus* dinars, as I already mentioned above there is a pellet below *bā'* of *ḍuriba* on the obverse of a small number of dies for the years 102/720-21 to 104/722-23. In 103/721-22 and 104/722-23, two vertical pellets are also found at the bottom of the reverse field of the *al-Andalus* dinars. It may be that the use of a pellet under *bā'* reflects the transfer of mint personal from *Ifrīqiya* in 102/720-21, when we first see the introduction of Post-Reform *al-Andalus* dinars. Pellets below *bā'* are also found on some, but not all of the dies of the Post-Reform dinars of Damascus (dated 91/709-105/723-24) and on the dinars of the 'Mine of the Commander of the Faithful

in the *Ḥijāz*', suggesting that this was a common design element on the dinars of this period.

The third type of ornamentation, found only on the dirhams, are annulets. Annulets are small circles (or circles within circles) found in varying number between the two outermost beaded circles of the obverse and reverse dies. The annulet patterns for the dirhams of *Ifrīqiya* and *al-Andalus* up until 132/749-50 are found in Table 69 and Table 70.

Table 69: Obverse and Reverse Annulet Patterns for the Series NA 4 Dirhams[221]

Year	Klat No.	Obverse	Reverse
97	85	o o o o o	o o o o o
98	86	o o o o o	o o o o o
99	87	o [o o o o]	o o o o o
100	------	[o o o o o]	o o [o o o]
101	88	o o o o o	o o o o o
102	89	o o o o o	o o o o o
103	90.1	[o o o o o]	o o [o o o]
	90.2	o o o o o	o o o o o
	------	oo oo oo oo	o o o (o o)
104	91	o o o o o	o o o o o
105	92 a	o o o o o	o o o o o
	92 b	o o o o o	oo oo oo oo oo
106	93.1	oo oo oo oo oo	oo oo oo oo oo
	93.2	oo oo oo oo oo	oo oo oo oo oo
107	94	oo oo oo oo oo	oo oo oo oo oo
108	95	oo oo oo oo oo	oo oo oo oo oo
109	96.1; 96 2	oo oo oo oo oo	oo oo oo oo oo
110	- - - - - -	oo oo oo oo oo	oo oo oo oo oo
	97 a	oo oo oo oo oo	oo oo oo oo oo
	97 b	o o o o o	o o o o o
	-----	o o o o o	oo oo oo oo oo
111	98a	oo oo oo oo oo	oo oo oo oo oo
	98b	◎ ◎ ◎ ◎	o o o o o
112	99	◎ ◎ ◎ ◎	o o o o o
113	100	◎ ◎ ◎ ◎	o o o o o
114	101	◎ ◎ ◎ ◎	o o o o o
115	102	◎ ◎ ◎ ◎	o o o o o
116	103a	◎ ◎ ◎ ◎	o o o o o o
	103b	oo oo oo oo	o o o o o
	------	◎ ◎ ◎	oo oo oo oo
117	104	◎ ◎ ◎	o o o o o
118	105	◎ ◎ ◎	o o o o o
119	106	◎ ◎ ◎	o o o o o
120	107	◎ ◎ ◎	o o o o o
124	108a	◎ ◎ ◎	o o o o o
	108b	◎ ◎ ◎	o o o o o
125	109	o o o o o	o o o o o
128	110	o o o o o	o o o o o
129	111	o o o o o	o o o o o
130	112	o o o o o	[o o o o o]
131	113	o o o o o	[o o o o o]
132	114	o o o o o	o o o o o

221 Four hyphens (----) indicates that this annulet pattern is not found in Klat.

Table 70: Obverse and Reverse Annulet Patterns for the Series IP 4 Dirhams[222]

Year	Klat no.	Obverse	Reverse
103	116	o o o o o	o o o o o
104	117	o o o o o	o o o o o
105	118a	o o o o o	o o o o o
	118b	o o o o o	o o o o o
106	119	o o o o o	o o o o o
107	120	o o o o o	o o o o o
108	------	o o o o o	o o o o o
	121	oo oo oo oo	oo oo oo oo
109	122	oo oo oo oo	oo oo oo oo
110	123	oo oo oo oo	oo oo oo oo
111	124a	oo oo oo oo	oo oo oo oo
	124b	oo oo oo oo	oo oo oo oo
	124c	◎ ◎ ◎ ◎	o o o o
112	125a	◎ ◎ ◎ ◎	oo oo oo oo
	125b	◎ ◎ ◎ ◎	oo oo oo oo
	125c	◎ ◎ ◎ ◎	◎ ◎ ◎ ◎[223]
113	126	◎ ◎ ◎ ◎	oo oo oo oo
114	------?	Unclear?	Unclear?
	127	◎ ◎ ◎ ◎	oo oo oo oo
115	128	◎ ◎ ◎ ◎	oo oo oo oo
116	129	o o o o	oo oo oo oo
117	130	o o o o	oo oo oo oo
118	131	oo oo oo oo	oo oo oo oo
119	132	oo oo oo oo	oo oo oo oo
120	-----	oo oo oo oo	oo oo oo oo
	133	o o o o	oo oo oo oo
121	134	oo oo oo oo	oo oo oo oo
122	135	oo oo oo oo	oo oo oo oo
124	136	oo oo oo oo	oo oo oo oo
125	137	oo oo oo oo	oo oo oo oo
128	-----	(oo oo oo oo)	(oo oo oo oo)
129	138	oo oo oo oo	oo oo oo oo

Until 99/717-18, the obverse and reverse annulet patterns throughout the Umayyad Caliphate are the same as those found in *Ifrīqiya* – 'o o o o o'. After this year, the annulet patterns changed on a regular basis at nearly every mint except Damascus.[224] In *Ifrīqiya*, this pattern continued until 105/723-24, while in *al-Andalus* the pattern

222 Hyphens (----) indicates that this annulet pattern is not found in Klat.

223 Klat records this reverse differently, see KLAT 2002, p. 70.

224 DESHAZO & BATES 1972, p. 110.

continued until 108/726-27. After these dates the annulet patterns change periodically.

As proven by DeShazo and Bates, the annulet patterns for the dirhams for Iraq appear to correspond to changes in the various governors of the region, with each annulet pattern characteristic of a single governor.[225] The correspondence of the annulet patterns and the symbols found on the Post-Reform dinars and dirhams of *Ifrīqiya* and *al-Andalus* to changes in the governor in those two regions is explored beginning on p. 444.

225 IBID., pp. 110-18.

SERIES 4 NISF AND THULTH

Previous scholars have long argued over the provenance of a series of Post-Reform *nisf* and *thulth* struck without a mint name between the years 91/709-10 and 103/721-22.[226] Some scholars have suggested a western provenance (*Ifrīqiya* and/or *al-Andalus*), while others have argued that they were struck alongside Post-Reform dinars in Damascus (see p. 246 below for arguments for and against the two attributions). There are surviving examples of the *nisf* and the *thulth* without a mint name for the years 91-92/709-11, 94/712-13, 96-97/714-16, 99-101/717-20, and 103/721-22. They were also struck in 102/720-21 with the mint name *al-Andalus*.

The obverse and reverse of both the *nisf* and *thulth* without a mint name and those with the mint name *al-Andalus* are bordered by a single beaded circle, similar to the dinars struck throughout the Umayyad Caliphate. None of the examples have any other type of ornamentation, with two exceptions. Small pellets are in many cases found in the centre of the obverse and/or reverse of the coins, while on the reverse of all of the *nisf*s a large, frequently misshapen, pellet is found at the bottom of the reverse field. The legends are also the same as those found on the dinars of *Ifrīqiya* and *al-Andalus* prior to 111/729-30 (see p. 224), although the obverse field legend of the no-mint *thulth* omits the final line – *wahdaha*. The *thulth* bearing the mint name *al-Andalus* retain this word, however (compare the obverse *thulth* in Figure 85 and Figure 86 below).

226 Walker noted that S. N. Naqshabandi, (Sumer, i, 1945) recorded a *nisf* dated 90/708-9. See WALKER 1956, p. 88. Walker also noted that Tiesenhausen recorded a *thulth* dated 106/724-25 (no. 2745) in the Gagarine Collection. See WALKER 1956, p. 94.

Figure 85: Above, nisf dated 101/719-20, without mint name. IcaL19, L:12. (2.07 g). Below, thulth dated 101/719-20, without mint name. IcaL24, L:4098. Both images courtesy of Baldwin's Auctions, Ltd. (1.41 g) (scale x4)

Figure 86: Above, nisf date 102/720-21, with the mint name al-Andalus. icaL19, L:15. (2.14 g) Below, thulth dated 102/720-21, with the mint name al-Andalus. icaL19, L:16. Both images courtesy of Baldwin's Auctions, Ltd. (1.46 g) (scale x4)

Table 71: Number of Specimens of Series NM 4, together with the Number of Obverse and Reverse Dies by Year

Year	Denomination	Recorded	Imaged	No. of OD	No. of RD
91	*nisf*	9	8[227]	3	4
	thulth	13	10	6	5
92	*nisf*	12	10[228]	5	6
	thulth	19	16[229]	7	8
94	*nisf*	6	6	3	4
	thulth	26	21[230]	9	8
96	*nisf*	11	10[231]	5	6
	thulth	37	26	10	7
97	*nisf*	2	2	1	1
	thulth	4	3	2	2
99	*nisf*	8	8	4	3
	thulth	32	23[232]	9	7
100	*nisf*	18	17[233]	6	6
	thulth	59	43	17	19
101	*nisf*	3	2	2	2
	thulth	16	13	4	5
102[234]	*nisf*	5	5	1	1
	thulth	8	8	1	1
103	*nisf*	NONE			
	thulth	17	15	4	4
	TOTAL	**295**	**246**	**99**	**98**

227 For one example, only reverse image.

228 For one example, only reverse image.

229 For one example, only reverse image.

230 For two examples, only reverse image.

231 For one example, only reverse image..

232 For two examples, only reverse image.

233 For two examples, only reverse image.

234 With the mint name *al-Andalus*.

Table 71 above sets out the number of obverse and reverse dies for each denomination in each year. Although we know that the *al-Andalus* mint struck gold fractionals in 102/720-21 (from only one die for each denomination), the attribution for the *nisf* and *thulth* without mint name is uncertain. By including the no-mint fractionals in this dissertation I have adopted the premise that they have a Western, most likely North African, origin. Given my premise, and the uncertainty surrounding this group of coins, it is important to review the arguments and evidence for and against this attribution.

Walker also suggested a North Africa and/or Iberian Peninsula provenance for the no-mint fractionals. His argument was two-fold. First, Walker noted that it is only in North Africa and in the Iberian Peninsula that an Islamic administration struck transitional fractionals (Series 1 through 3 Islamic semisses and tremisses), with no evidence that this practice was copied in the Eastern Caliphate. Walker further noted that the Caliphal mint in Damascus struck dinars without a break from 77/696-97 to 132/749-50, and always with Eastern legends. Dinars struck in *Ifrīqiya* and *al-Andalus*, however, always had the same legend as the *nisf* and *thulth* up until at least 110/728-29 (see p. 224).[235]

Walker's opinion remained the accepted one until 1986, when Bates questioned Walker's attribution. It struck Bates as strange that Walker would place the Series NM 4 fractionals in the North Africa and/or Iberian Peninsula mints during the same period that the Western mints struck gold transitional fractionals (see Table 72 for a comparison of the dates for the Series 1-3 semisses and tremisses and Series NM 4 *nisf* and *thulth*). Bates believed Walker made this mistake because he treated the 'Arab-Latin' and 'Post-Reform' coinage separately in his catalogue. For Bates, it

235 WALKER 1956, pp. lviii-lix, 99.

seemed unfathomable that either North Africa or the Iberian Peninsula would continue the slow evolution of Arab-Latin coinage and, at the same time, introduce Series 4, Post-Reform fractions, disregarding the fact that they could have been struck in different workshops. As for the differences between the Western legends found on the *nisf* and *thulth* and the Eastern legends found on the dinars of Damascus, Bates explained the differences as simply a lack of space on the smaller fractionals, and thus changes needed to be made. Pending further evidence, it seemed more appropriate to Bates to regard the fractionals without mint name as products of the same mint that issued the full dinars without a mint name, i.e. Damascus.[236]

There are several types of evidence that can be used in assessing whether the no-mint fractionals were struck either in North Africa/the Iberian Peninsula or in Damascus: the epigraphy; die links; the metrology; the archaeological record; the legends; the denominations; the iconography; the chronology; and finally, the metrological and metallurgical aspects of the coinage.

Certain pieces of evidence can be dismissed immediately. The epigraphy used on the dinars of *Ifrīqiya* and Damascus is very similar during the period in question, and therefore a comparison of the epigraphy of these two mints to the epigraphy of the no-mint fractionals yields no clues. There are also no die links between the *Ifrīqiya* dinars dated 100/718-19 and 101/718-19 and the no mint *nisf*, potentially possible given the small differences in the size of the flan between the two denominations. A metrological investigation also yields little evidence supporting either explanation (see p. 292 and p. 298), with the weights of the surviving no-mint fractionals appearing to be one half and one third of 4.28 g.

Unfortunately the most potentially decisive piece of evidence, the archaeological

236 BATES 1986, pp. 259-60.

record, is also inconclusive. Until very recently, no archaeological reports recorded the presence of a no-mint *nisf* or *thulth* in any region. In 2012, however, a single no-mint *thulth* (dated 103/721-22) was found in an excavation at Wadi El Natrun, west of the Nile Delta in Egypt.[237] This location, between *Ifrīqiya* and Damascus, does not provide evidence for or against one or the other attributions.

Despite Bates's assertion, the remaining evidence appears to point to a North African origin. Let's first consider the legends. As I previously discussed on p. 224, three of the four marginal and field legends found on the Series NM 4 fractionals appear to be a simple shortening of the legends found on the dinars struck in Damascus. The legend found on the reverse field of Series NM 4 is substantially different from that found on the Caliphal dinars, however, and reads *bism Allāh al-raḥmān al-raḥīm (*In the name of God, the Merciful and the Compassionate). This legend is analogous to the Latin reverse marginal legend found on the majority of the Series NA 2, Phase 2 coinage struck at the same time as the introduction of Series NM 4, and begins with *in nomine domini misericordis* (in the name of the Lord, the Merciful). It is not likely that the Caliphal mint would adopt a legend found on a provincial issue: nor is it likely that the *Ifrīqiya* mint would adopt the legend of a fractional for its dinars, unless the fractionals were already in circulation in North Africa.

The fact that Series NM 4 are *nisf* and *thulth* also suggest a North African provenance. As Walker argued, it is only in North Africa, and later in the Iberian Peninsula, that an Islamic administration definitely struck transitional gold fractionals. As outlined beginning on p. 208, they adopted the Byzantine method of differentiating between the Islamic tremisses and semisses, with all of the tremisses

237 One found in Egypt in 2012. http://www.drhawass.com/blog/press-release-umayyad-coin-discovered-near-wadi-el-natrun.

having on the reverse a T-bar on steps and all of the semisses having on the reverse a globe on pole on steps. As can be seen in Figure 85 and Figure 86 above, this was also the method used to differentiate the Series 4 *nisf* from the *thulth*. It seems logical to assume therefore that the use of a globe at the bottom the reverse of the *nisf* was modelled on the Series NA 2, Phase 2 Islamic semisses.

Further evidence that can be utilized in assessing the provenance of the no-mint fractionals is the chronology of the coinage struck in North Africa and the Iberian Peninsula during the period in which the no-mint fractionals were also minted. As I already noted, Bates found it perplexing that Walker would suggest a North African provenance for the no-mint fractionals when the administration of that region was already producing Islamic semisses and tremisses. This question can, of course, be turned around: why would the Caliphal mint begin to strike gold in fractional denominations after having already struck dinars for 15 years, especially as the Eastern dirhams may have fulfilled the same monetary purpose as the no-mint fractionals, (i.e. to provide a coin that was a fraction of the value of the dinar)?

Table 72: Comparison of the Dating of the North African and Iberian Peninsula Issues with the Dating of the No-Mint Fractionals

***hijri* Date**	**North Africa/*Ifrīqiya***					**No-Mint Name**	**Iberian Peninsula/*al-Andalus***				
	NA 2 frac.	NA 3 solidi	NA 4 dinars	NA 4 dirhams	NA 4 fulūs	NM 4 frac.	IP 2 solidi	IP 3 frac.	IP 4 dinars	IP 4 frac.	IP 4 dirhams
91	✔?	✗	✗	✗	✔	✔	✗	✗	✗	✗	✗
92	✔	✗	✗	✗	✔	✔	✗	✗	✗	✗	✗
93	✗	✗	✗	✗	✔	✗	✔	✗	✗	✗	✗
94	✗	✗	✗	✗	✗	✔	✔	✗	✗	✗	✗
95	✔?	✗	✗	✗	✔	✗	✔	✗	✗	✗	✗
96	✔	✗	✗	✗	✔	✔	✗	✗	✗	✗	✗
97	✗	✔	✗	✔	✔[238]	✔	✗	✗	✗	✗	✗
98	✗	✔	✗	✔		✗	✗	✔	✗	✗	✗
99	✗	✔	✗	✔		✔	✗	✗	✗	✗	✗
100	✗	✗	✔	✔	✔?	✔	✗	✗	✗	✗	✗
101	✗	✗	✔	✔	✗	✔	✗	✗	✗	✗	✗
102	✗	✗	✔	✔		✗	✗	✗	✔	✔	✗
103	✗	✗	✔	✔	✗	✔	✗	✗	✔	✗	✔

238 No date, but with the name Muḥammad ibn Yazīd, the governor of *Ifrīqiya* from 97/715 to 99/717-18.

Table 72 sets out the datable North African and Iberian Peninsula coinage that was struck from 91/709-10 to 103/711-12, the period in which the no-mint fractionals were also struck. As Bates pointed out, the dates for the no-mint fractionals overlaps with the Series NA 2, Phase 2 fractionals struck in Indiction VII and Θ (struck from 89-92/707-11) and Phase 3 semisses and tremisses, struck in 95-6/713-715. The table also includes the dated Series 4 *fulūs* not considered previously in the argument regarding the provenance of the no-mint fractionals. What becomes clear from an analysis of the dating of all of the coinage represented in Table 72 above is that the overlap between the Series NM 4 fractionals and the North Africa and Iberian Peninsula coinage is not as clear-cut as Bates has suggested. Although there are overlaps in the dates for the no mint fractionals and the Series 1 through 3 semisses and tremisses, the overlaps do not preclude a North African provenance.

The introduction of Series NM 4 in 91/709-10 corresponds with the introduction of the dated Post-Reform *fulūs* in North Africa.[239] This year mostly overlaps with Indiction VIII, a year in which we have no confirmed surviving Series NA 2, Phase 2 solidi. If the Series NM 4 fractionals are of North African provenance, then the proposed dating of the introduction of post-reform epigraphic coinage in North Africa to 91 AH fits with the historical record, as it would be after the conquest of Ṭanja, but prior to the invasion of the Iberian Peninsula. For the governor of North Africa at the time, Mūsā b. Nuṣayr, the completion of the conquest of North Africa would have provided an opportunity to begin the transition from the Latin Epigraphic to Post-Reform coinage, while still acknowledging the unique denominational makeup of the North African transitional issues. The introduction of Series NM 4 fractionals may have been met with resistance in the marketplace, however, leading to a

239 The dated *fulūs* included in Table 72 are only those that were likely struck in Qayrawān or its vicinity. See WALKER 1956, pp. 289-91.

reintroduction of Series NA 2, Phase 2 in Indiction Θ (91-2/710-11). Another possible explanation is that Mūsā decided to introduce a Post-Reform issue for trade purposes and/or for remittances to Egypt. The introduction of no-mint fractionals would have met the need of providing high quality coinage while respecting the Caliphal monopoly over the issuance of the Post-Reform dinars.

The issuance of both a local coinage (i.e. Series NA 2, Phase 2 and later issues) and a coinage for trade and remittances to other levels of the Umayyad government (i.e. Series NM 4) in North Africa has a parallel in the monetary system in place in Sīstān in the Far East of the Umayyad Caliphate. In this province, the Islamic administration issued both a debased Arab-Sasanian coinage with a degraded engraving style and stylized legends for local use and at the same time struck caliphal-style dirhams.[240] The issuance of multiple precious metal currencies in the same region suggests that the Islamic administration in Sīstān used the different types of coinage for distinct purposes, with the Arab-Sasanian coinage intended for local use and the Post-Reform coinage for fiscal uses, including remittances to the Caliphal capital. The evidence provided by coin hoards appears to confirm this observation, as no hoard yet found contains both dirhams and debased Arab-Sasanian drachms.[241]

Mūsā travelled to the Iberian Peninsula in 93/711-12, a year in which no examples of Series NM 4 survive. A small number of dies survive from 94/712-13, perhaps because of the need for additional coinage for circulation. There is again a gap in the numismatic record in 95/713-14, with Series NM 4 examples again struck in 96/714-15 at the same time as the striking of the rare Series NA 2, Phase 3 coinage. A small number of Series NM 4 coins and dies survive from 97/715-16, the same year in which the North African mint introduced both Series NA 4 dirhams and the Series

240 Dirhams are known from 90-103 and 129-30. See SEARS 1999, p. 21.

241 ALBUM 1998, p. 13.

3, bilingual solidi. No examples survive dated 98/716-17. Production of Series NM 4 coinage appears to have increased in 99/717-18, judging by the number of surviving dies and reached peak production in 100/718-19, the same year that the mint in North Africa introduced Series NA 4 dinars. Production of Series NM 4 dwindled after that year, and ceased entirely in 103/721-22. The lowering and finally discontinuation of Series NM 4 coincides with the increase in production of Series NA 4 dirhams that, judging by surviving dies, was quite rare prior to 102/721-22.

Further evidence points to a Western provenance. As can be seen in Table 71, the levels of production also appear to coincide with events in North Africa. The highest number of surviving dies of both denominations is found in the years 92/710-11 (just prior to the invasion of the Iberian Peninsula), 96/714-15 (after Mūsā returns to North Africa), and 100/718-19, the same year as the introduction of *Ifrīqiya* Post-Reform dinars with the mint name *Ifrīqiya*. As I have already mentioned, production of Series NM 4 also dwindled with the increased striking of *Ifrīqiya* Post-Reform dirhams.

The final piece of evidence pointing to a North African provenance for Series NM 4 is the results of metallurgical analysis (see p. 334). Although inconclusive, the elemental makeup of this series is most similar to that of Series NA 4, and not the Caliphal mint in Damascus.

IRREGULAR MINTS AND MODERN FAKES

For the purposes of this dissertation, I define an irregular mint as a mint whose nature we do not fully understand (i.e. whether it was official, unofficial or a counterfeiter's mint). Given the diversity and low number of examples described below it is difficult to make judgments regarding the nature of the irregular mints. Some of the coins may be contemporary forgeries. This is unlikely the case with those examples with a relatively high gold content, as forgers would likely have struck counterfeit coins for maximum profit. Perhaps the official mint struck the coins in a period of crisis, for example when an increase in output was needed or when the mint did not have access to skilled workers to cut the dies. In these cases the dies would probably have been destroyed once a proper engraver was found. Given that the Latin legends on the official transitional gold coins were often blundered it is unlikely that most of the users of the currency would have noticed the difference.

The investigation of the output of irregular mints is a line of inquiry that has not been taken up by previous scholars, although several of those who have studied Series IP 2 have noted that these issues were likely the product of one or more mint without delving further. Related to the discussion of unofficial mints is the identification of modern fakes which, when included in works as genuine issues, cloud the analysis of the coinage.

The identification of a coin as either the product of an irregular mint or a modern fake rests on the identification of one or more anomalous characteristics:

1. Epigraphy that varies substantially from the norm;
2. Bungled legends;
3. Unique dies;
4. Weight lower than the majority of similar coinage; and,

5. Gold content that varies from the average fineness of a particular series (either too low or too high).

In most cases, the examples discussed below exhibit several of the above characteristics. I will begin by discussing the coinage likely struck at irregular mints, followed by a discussion of the modern fakes.

IRREGULAR MINTS

I consider 21 examples included in my study of the coinage of North Africa and the Iberian Peninsula during the Umayyad Caliphate to be the products of irregular mints.

SERIES NA 1

None of the recorded examples of this series appear to be the product of an irregular mint.

SERIES NA 2, PHASE 1

I consider five Series NA 2, Phase 1 examples to be the product of one or more irregular mints. Four of the five examples are illustrated in Figure 87 below.[242]

242 The fifth Series NA 2, Phase 1 example is a tremissis found in the Banque Centrale de Tunisie (BCT). BCT7, no. 2102.0004. (1.21 g). The image of this example is unclear, but it appears to have the same obverse die as the SICA1 example in Figure 87 above, although the reverse dies are different.

Figure 87: Four examples of Series NA 2, Phase 1 coinage likely struck at one or more unofficial mints. From Top: Solidus, dated Indiction III (85-6/704-5). KC AV330=NFA, L:292. Image courtesy of the Khalili Collection (4.20 g); Solidus, unclear date. S93J, L:169. Image courtesy of Sotheby's. (4.27 g); Tremissis, undated. SICA1, 740=P276, L:1063. Image courtesy of the Ashmolean Museum, Oxford. (1.17 g); Tremissis, undated. KC AV1130. Image courtesy of the Khalili Collection. (1.43 g) (scale x4)

Lets first turn to the two Series NA 2, Phase 1 solidi. The obverse and reverse legends on KC AV330 are:

Obv: NS . . [III]TFCƆF[T6]M[O]MN//NICЯЄTЯ
Rev: ININCƆNICCSЄFЄ[S]I[Я]S//CIN6IIII

Although many of the letters of both the obverse and reverse margins are readable, the obverse and reverse marginal legends as a whole are incomprehensible, with some

letters retrograde. The weight of this example is also lower than most of the other Series NA 2, Phase 1 solidi (4.20 g), although the gold content of 82% Au is what would be expected for Series NA 2, Phase 1 (see p. 326).[243] The legend on the second solidus (S93J, L:169) is even more barbarized, although there are some similarities in the epigraphy between this example and KC AV330. The weight of this example, in contrast, is similar to the Series NA 2, Phase 1 solidi (4.27 g), while the gold content is unknown.

As for the anomalous tremisses, certain letters on their legends are readable, but the majority of the legends are off flan. The SICA1 example appears to be copied from an official Series NA 2, Phase 1 coin bearing 'ONNIΩ' in the obverse field, while KC AV1130 appears to be a copy of an example bearing 'NICRЄTR' in the obverse field. The weight of the SICA1 example is also lower than the other tremisses of this Series and Phase. Gold content for both of these examples is similar to the official mint issues.

SERIES NA 2, PHASE 2

I have identified 10 Series NA 2, Phase 2 examples as the products of one or more irregular mints - one solidus, three semisses, and six tremisses. I will discuss these examples by denomination, beginning with the solidus in Figure 88 below.

243 JONSON ET AL forthcoming.

Figure 88: Above: Anomalous Series NA 2, Phase 2 solidus, dated Indiction VII (89-90/708-9). ME39, L:413, Image courtesy of Morton & Eden. (4.29 g) (scale x4)

The solidus has corrupt marginal legends, although individual letters are still readable. The tentative readings of the marginal and field legends are:

Obv: [A]RƧƏCIИƧPII . . . . . //ƧʎIMIƧ
Rev: [Ƨ]ƧƏƧV . P . CCИΛƏИIИƏИ[ARK]//IИƏCVII

The layout of this coin appears to be similar to that of an official Indiction VII solidus, with a corrupt SIMILIS in the obverse field and the Indiction date in the reverse field.

Although I have categorized this solidus as Series NA 2, Phase 2, it is just as likely that this is a poor copy of a Series IP 2 solidus, dated Indiction XII (94-5/713-14). The marginal obverse legend appears to read IN SPaNia (lower right hand quadrant of obverse in Figure 88 above), while the epigraphy and marginal legends on both faces of the coin are similar to other Iberian Peninsula examples. Further, as I have discussed on p. 186, some of the Series IP 2 secondary mint examples wrote Indiction XI as ΛI. It is conceivable that the engraver of the coin in Figure 88 made a similar mistake, substituting VII for XII.

The three Series NA 2, Phase 2 semisses in Table 73 share certain characteristics (Figure 89 below).[244]

244 I was unable to illustrate the example JV9, Lot: 222.

Figure 89: Two examples of Series NA 2, Phase 1 Semisses struck at irregular mints. Above: W HSA.2=HSA 1001.1.8138. Image Courtesy of the American Numismatic Society, New York. (1.99 g) Below: BCT 5, no. 2102 0002. (1.87 g) (scale x4)

Table 73: The Legends found on the Series NA 2, Phase 2 Semisses struck at Irregular Mints

Coll. Ref.	WT	Obv/ Rev	Marginal Legend	Field	Hor. Line Above Field
W HSA.2=HSA 1001.1.8138	1.99	O	[NN] . . . . ƧNIƧNINVCʎAʎI	ƧIMIΛIƧ	IΛI
		R	FΛƧ∂ . . . . NCTN	G/3	
BCT 5, no. 2102 0002	1.87	O	[NN]Є6Ƨ:N[IƧ]VNCVIƧΔΛ[VI]	ISIMIΛƧ	ΛƧ
		R	INN∂[NNM]ƧRCƧʎ∂ . RTIN[Λ]	G/3	
JV9, Lot:222	2.01	O	. . . . V[A]IV . . . . N[C]	SIMIΛƧ	ΛƧ
		R	NN . . . . N . [S]S∂FTIN[Λ]FR	G/3	

All three of the examples have legends that contain many more errors than the official Series NA 3, Phase 2 semisses. Their epigraphic styles also vary, both between the three irregular mint examples themselves and when compared to the official coinage. Although the weights of all three of the examples are lower than the mint standard for the official coinage of this series, only one example, BCT5, is substantially lower. The gold content of the one example tested, HSA 1001.1.8138, is

76.3% Au, also lower than the other tested Series NA 2, Phase 2 examples (see p. 327).[245]

The six irregular Series NA 2, Phase 2 tremissis examples are reproduced in Figure 90 below, with their legends replicated in Table 74.

245 JONSON ET AL forthcoming.

Figure 90: Series NA 2, Phase 2 tremisses, likely struck at one or more irregular mints. From Top: L100bis. Image courtesy of the Bibliothèque nationale de France, Paris. (1.40 g); COI255. (1.41 g); BM ORN: 19.400.801.60. Image courtesy of the Trustees of the British Museum, London. (1.19 g); ESB, L:842. Image courtesy of Emile and Sabine Bourgey Numismatique (1.21 g); L 101 (1.21 g); ME69, L:2. Image courtesy of Morton & Eden. (1.13 g) (scale x4)

Table 74: The Legends found on the Series NA 2, Phase 2 Tremisses struck at Irregular Mints

Coll. Ref.	WT	Obv/ Rev	Marginal Legend	Field	Hor. Lines Above Field
L100bis	1.40	O	. . . . SИIS[V]	SΛINIS	ΛI
		R	. . . . ИIИSЯSS[IO]	T/2	
COI255	1.41	O	. . . ϬIH[S]	SΛINIS	ΛI
		R	. . . . . IИIИIϬИ	T/2	
BM ORN: 19.400.801.60	1.19	O	. . . . . ϬII	⅃ƐΛIИ⅃	И
		R	unreadable	T/2	
ESB, L:842	1.21	O	. . . . . A . . .	IIV[O]	none
		R	unreadable	T/2	
L101	1.21	O	unreadable	NINS	none
		R	unreadable	T/2	
ME69, L:2	1.13	0	. . FPINXVCI . . . C . .	ИIΛIS	I
		R	ININƆNN . . Ǝ . . .	T/2	

The legends found on the six irregular tremisses are illegible, although in some cases individual letters or series of letters can be discerned. The reverse marginal legend on L100bis, for example, appears to be an attempt to replicate the reverse marginal legend found on the official Series NA 2, Phase 2 tremisses, but in this case the legend is retrograde. This is the only retrograde legend of any of the known coins of this series and phase. The obverse and reverse marginal legends on ME69, L:2 are also somewhat readable, although the obverse and reverse marginal legends have been transposed. The epigraphy varies significantly between the irregular examples, suggesting multiple die engravers and potentially multiple irregular mints.

As can be seen in Table 74, four of the six examples have a weight lower than the official mint examples, which vary between 1.31 and 1.41 g. The gold content of the four irregular mint examples tested also varies. In the cases of L101 and L100bis, the gold content as measured by the SG method was 76% Au and 72% Au respectively, although when measured using LA-ICP-MS the results were 85% Au and 75% Au.[246]

246 JONSON ET AL forthcoming.

As discussed on p. 325 the gold content as measured by the SG method is consistently below that of the results using the LA-ICP-MS method, but the discrepancy is rarely as high between the two methods as that found when measuring the gold content of L101.

The fact that L101 is the product of an irregular mint does not explain the discrepancy between the LA-ICP-MS and SG results. The hypothesis that it is a plated coin can be rejected. If L100bis or L101 consisted of silver or a copper core covered with a gold-based alloy foil, the gold concentration as determined by the SG method would be much lower. It is possible that this coin is cast and perhaps contains bubbles that would lower its SG, further evidence that these coins were struck at an irregular mint.[247]

The additional two examples tested for gold content were only tested using the SG method. The British Museum example, BM ORN: 19,400,801.60, has a gold content of 92% Au, while ME69, Lot: 2 tested 37% Au. The results for the Morton & Eden tremissis are similar to the results of Series IP 2 coinage struck at secondary mints in the Iberian Peninsula, suggesting that this example may have been struck there.

The invasion of the Iberian Peninsula in 93/711, and the resulting discontinuation of the striking of Series NA 2, Phase, may have resulted in a shortage of coinage of this type, leading to the establishment of an irregular mint(s) in North Africa. The other possibility is that these coins were struck at irregular mints in the Iberian Peninsula after the invasion.

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SERIES IP 2

As I outlined starting in the Typology beginning on p. 160, the majority of the Series IP 2 coinage appears to be the product of an unknown number of secondary mints which copied the coinage struck at the main mint. The majority of the secondary mints were likely housed with various elements of the invading army, although other mints that were part of the administration of the invading armies may have struck some of the issues. It is impossible at this time, however, to differentiate between those coins struck at official secondary mints operating with the army and those that may have been struck at counterfeiting mints.

SERIES NA 2, PHASE 3

I have not identified any Series NA 2, Phase 3 examples as being struck at an irregular mint.

SERIES NA 3

I have identified one Series NA 3 solidus as likely being the product of an irregular mint (Figure 91 below).

Figure 91: Series NA 3 solidus, struck at an irregular mint; KMK Collection (no number). Image courtesy of the Kungl Myntkabinettet, Stockholm. (4.24 g) (Scale x4)

The marginal legends on this example are:

Obv: [ƨʌə]ETIN[A]FRKANXCVIIIN
Rev: INNƏNINƏƨ[NN]ƨƨIƨ[NƏ]ƨ[N]I[Ə]NI

This coin tested for a gold content of 36.4% Au, considerably lower than the other coins tested from this series (see p. 332). The gold content result by itself might be

enough evidence to suggest that this coin was struck at an irregular mint, but evidence for this association is found in the marginal legends, which are bungled and poorly engraved, and further by the fact that this coin is not die linked with any of the other coins of this series.

SERIES IP 3

I have isolated two of the Series IP 3 fractionals from the discussions on p. 204 and p. 333. Both of these examples, one found in the Khalili Collection (KC AV1075) and the other in the collection of the Museo Arqueológico Nacional in Madrid (MAN 2004.117.17), show a lower gold content than the other coins of this series (49.2% and 59% Au respectively), which average above 80% Au. Neither of the Iberian Peninsula fractionals have die links with any other coins of the series, although it should be noted that all but one of the fractionals with a gold content over 80% has the same obverse die. The epigraphy appears to be slightly more barbaric, although not overly so. Also of note is the poorly formed flan of the Tonegawa Collection coin and the fact that the MAN semissis is clipped to the weight of a tremissis.

Figure 92: Series IP 3 Fractionals, struck at an unofficial mint; Above: KC AV1075=Sp34, L:11. Image courtesy of the Khalili Collection. (1.94 g). Below: MAN 2004.117.17. Image courtesy of the Museo Arqueológico Nacional, Madrid (1.59 g). (Scale x4)

A final Series IP 3 solidus, again shows a lower gold content than the other coins of the series (37.3% Au).

Figure 93: Series IP 3 solidus, possibly struck at an irregular mint. BM 1971.0605.1=P276, L:1030. Image courtesy of the Trustees of the British Museum, London. (4.10 g) (Scale x4)

This coin has no die links with the other examples of Series IP 3, but the weight (4.10 g) is no lower and the epigraphy no worse than many of the other examples of this series.

SERIES NA 4 AND SERIES IP 4

I have not recorded any Series NA 4 or Series IP 4 irregular issues.

SERIES NM 4

I have recorded two Series NM 4 examples that may have been the issues of an irregular mint. These examples, reproduced in Figure 94 below, have clearly bungled legends and no die links with other examples of the series.

Figure 94: Above: Series NM 4 nisf, dated 91/709-10 and likely struck at an unofficial mint. SICA2, no. 86= Sp22, L:169. (2.05 g). Image courtesy of the Ashmolean Museum, London. Below: Series NM 4 thulth, dated 101/719-20 and likely struck at an unofficial mint. IcaL22, L:110. Image courtesy of Baldwin's Auctions, Ltd. (1.38 g) (scale x4)

MISTAKES AND MODERN FAKES

I have identified six coins as modern fakes, although I believe that three of the examples were initially identified as casts and only later, as they passed from collection to collection, became mistakenly identified as real coins.

MISTAKES

Figure 95, Figure 96, and Figure 97 below compare three coins housed in the Alhambra Collection, Granada with three coins housed in the Münzkabinett, Staatliche Museen, Berlin.

Figure 95: Comparison of two Series IP 2 solidi, dated Indiction XI. Above: Alhambra 10262 (3.18 g) Below: Nü73. Image courtesy of the Münzkabinett, Staatliche Museen, Berlin (4.23 g) (scale x4)

Figure 96: Comparison of two Series IP 2 Solidi of the AI type. Above: Alhambra 010211 (2.46 g) Below: Nü74. Image courtesy of the Münzkabinett, Staatliche Museen, Berlin (4.43 g) (scale x4)

Figure 97: Comparison of two Series NA 2, Phase 3 Solidi. Above: Alhambra 010263. (2.66 g) Below: W B.12=Nü70. Image courtesy of the Münzkabinett, Staatliche Museen, Berlin (4.33 g) (scale x4)

At first glance, one might think that each pair of coins above were struck from the same obverse and reverse die, with the only substantive difference being the lighter weight of the Alhambra coinage. More detailed analysis, however, reveals that the three examples housed in the Alhambra Collection are copies (electroplated casts), of the Berlin coins. Confirmation that the Alhambra coins are fakes is at least partially confirmed by Codera who noted "De este tipo sólo hemos visto una copia galvanoplástica que posee el Sr. Gayangos, de un dinar existente hoy en el Museo de Berlin".[248] This is undoubtedly Alhambra 010263 in Figure 97 above. Unfortunately,

248 Translated as 'Of this type, we have only seen an electroplated copy in the possession of Sr. Gayangos of an existing dinar today housed in the Museum of Berlin.' See CODERA 1879, p. 42.

the above Alhambra examples have been published as genuine Series IP 2 and Series NA 2, Phase 3 examples.[249]

MODERN FAKES

Three anomalous Series NA 3 solidi, all with the same obverse and reverse dies, appear to be modern fakes as opposed to the product of an irregular mint. Two of the three examples, both housed in the British Museum, are helpfully labeled as fakes in that institution. The Staatliche Museen example in Figure 98, however, has been published as a genuine Series NA 3 coin.[250] The dies used in the striking of these three coins appear to be copies of another example in the Staatliche Museen, Bode 1935-125 (Figure 99).

Figure 98: Modern forgery of Series NA 3 solidus. Stk1928-302. Image courtesy of the Münzkabinett, Staatliche Museen, Berlin. (4.19 g). (Scale x4)

Figure 99: Series NA 3 solidus. Stk1935-125. Image courtesy of the Münzkabinett, Staatliche Museen in Berlin. (4.20 g). (Scale x4)

249 CANTO AND IBRĀHĪM 1997.

250 MEDINA 1992.

Obv: ƧLƆFRTINΛFRKANXCVIIN
Rev: INNƆNINƆƧNƧƧIƧNƆƧI

There are three reasons for categorizing these coins as modern fakes. First, unlike the unofficial mint example on Page 264 above, which has a low gold content, the example in Figure 98 tested 90.0% Au, significantly higher than other coins of this series. These examples also features epigraphy unlike any other coin struck in North Africa or the Iberian Peninsula up until the introduction of Series NA 4, Post-Reform solidi in 100/718-19. Although the legends are easily read, spaces appear between the letters of the legend at 2 o'clock on both the obverse and reverse. Gaps of this size are never found on the North African/Iberian Peninsula Series 1 to 3 examples, with the engravers instead completing a legend with 'nonsense' letters if they find that they have space at the end of the legend.