Attributing the Melle coins of Charlemagne (768-814) and Charles the Bald (840-877), particularly single finds from the Netherlands

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Coinage bearing the royal title CARLVSREXFR ('Charles, King of the Franks') and the mint name METVLLO, for Melle in Poitou (Fig. 1; MG 1063; *MEC* 1.923-933; Depeyrot 606), is by far the most frequently found of all Carolingian coin types from any one particular mint; although the *Christiana religio* type of Louis the Pious (814-840) is more numerous (e.g. Coupland, 2014d: 273, Table 12.4), it was minted at all Louis' mints across the empire, whereas all the coins under discussion here were minted at a single mint, Melle.



Fig. 1: Denier of Charlemagne (768-814) or Charles the Bald (840-877) from Melle. Private collection. Photograph Simon Coupland

One of the reasons for this is that Melle was the site of the only known Frankish silver mine in the eighth and ninth centuries, and as a result its mint was one of the most productive, if not the most productive, in the empire. A second reason is that this METVLLO type was minted by two different rulers over two lengthy periods, namely by Charlemagne (768-814) during the production of his monogram type between 793 and 814, and by Charles the Bald (840-877) between 840 and circa 864 (Grierson & Blackburn, 1986: 235-240; Coupland, 1991: 131-133; 2010c; 2014b: 325-326). As we shall see below, stylistically there is no way of attributing coins to one ruler or the other, nor is there any discernible difference in metrology, nor, as Guillaume Sarah's research has shown, can coins of the two rulers be distinguished by metallurgical analysis (Sarah, 2009; 2010). An unfortunate result of these facts is that unless these Melle coins are found in a securely datable context such as a hoard or an archaeological stratum, it is currently impossible to attribute them to either reign. There is a similar problem with the oboles (half-deniers) of the same type, bearing the reverse design of the mint name METVLLO, but on the obverse the royal monogram KRLS filling the field (Fig. 2; MG 1060; *MEC* 1.934; Depeyrot 622).

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Fig. 2: Obole of Charlemagne or Charles the Bald from Melle. Private collection. Photograph Simon Coupland

It would therefore be extremely helpful to our understanding of the Carolingian monetary economy if it were possible to find a way of attributing some or all of these coins to either Charlemagne or Charles the Bald.

Methodology

The question is all the more significant because of the large number of single finds of these METVLLO coins which have been discovered: at the time of writing (April 2015) I know of 185 (107 deniers and 78 oboles: see Table 6), representing no less than 8.6% of the total of 2,156 Continental single finds from the period 751-864 (figure as of 1 April 2015). This figure represents a combination of finds unearthed in archaeological excavations, recorded in numismatic or historical publications,[1] listed in numismatic databases, described on detectorist websites, or reported to me through the kindness of strangers (Coupland 2010b; 2014d). The numismatic databases used are:

- British Isles, EMC (http://www-cm.fitzmuseum.cam.ac.uk/dept/coins/emc [1 April 2015]);
- the Netherlands, NUMIS (http://numis.geldmuseum.nl/nl/zoek/collectie [12 October 2014]; unfortunately currently not accessible to the public);
- Italy, Ermano Arslan's list (www.ermannoarslan.eu/Repertorio/RepertorioAMAg giornamento [1 April 2015]).

The detectorist sites used are:

- Belgium: http://www.bmdt.be/news.php
- France:
  - http://www.detectionpassion.fr/;
  - http://www.lefouilleur.com/forum;
  - http://www.la-detection.com/dp/;
  - http://www.loisirs-detections.com/forum/;
  - http://www.numismaticom.com/forum.
- The Netherlands:
  - http://www.bonatiele.nl/FDETUK/medievalcoins.html;
  - http://www.muntenbodemvondsten.nl;
  - http://www.bodemvondstenwereld.nl

Most of these sites are accessible only to members.

Only coins with a definite provenance have been included, even if that provenance is no more precise than a French *département* or a Dutch province.

[1] Single finds from Belgium are helpfully collated in Dengis (2009ff), with new volumes being published regularly. I am grateful to M. Dengis for sharing information about recent finds with me.

As has been said, there is at present no way of determining whether unprovenanced coins of the METVLLO type in public and private collections or which are offered for sale by coin dealers were minted by Charlemagne or Charles the Bald. By contrast, those coins found in contemporary hoards can generally be dated with considerable confidence, because of the two highly effective recoinages which took place during the intervening reign of Louis the Pious. It is clear from the evidence of a significant number of hoards that these recoinages in the 810s and the 820s removed virtually all earlier coins, including Charlemagne's monogram coinage, from circulation (Coupland, 2010: 304-305). During the intervening period the earlier coins were no longer legal tender, and, in the words of the emperor Louis' *Admonitio ad omnes regni ordines* of 825: 'anyone who produces a different *denarius* during trading from that day [St. Martin's Day] onwards shall have it taken away from him by the count or his officers' '*Quicumque ab illa die alium denarium negotiandi causa protulerit, a comite et ministris eius auferatur ab eo*' MGH, *Capit*. I, p. 306). It is thus near certain that METVLLO coins in hoards of the 840s, found alongside issues of Pippin II of Aquitaine (845-848), Lothar I (840-855), or Charles the Bald, were all minted by the latter after 840, rather than being coins of Charlemagne still in circulation or brought back into circulation.

In the pages which follow we shall see how analysis of the number and distribution of METVLLO coins in hoards from the reigns of Charlemagne and Charles the Bald reveals significant differences between the two periods, despite the identical appearance of the coins in question. Under Charlemagne these Melle coins travelled great distances and mixed freely with coins from other mints across the empire. By contrast, the hoards from Charles the Bald's reign which contain METVLLO coins, although more numerous, cluster much more closely around the mint itself, except for those which represent loot taken during the Viking incursions of the time. They demonstrate that coinage circulated far less widely after the breakup of the empire in 840, largely remaining inside much more restricted currency pools within the respective kingdoms. This permits the attribution of hoards containing only coins of the METVLLO type to Charles the Bald rather than his grandfather.

If the dating of monogram coins of Melle in coin hoards is generally straightforward, the same cannot be said for stray finds, that is, single coins (or pairs of coins from a common period found together) without any context, casual losses rather than deliberately concealed deposits. Very occasionally they are found in datable strata during archaeological excavation, such as for instance a Melle obole found in the De Geer II area at Wijk bij Duurstede, where otherwise only coins of Charlemagne and Louis the Pious were found (Fig. 3).[2]

[2] I am grateful to Gavin Williams for information about this find and images of the coin.



Fig. 3: Obole of Charlemagne from Melle found at Wijk bij Duurstede 2010. WIJD-09MET101. *Photograph* ADC *Archeoprojecten.*

This is uncommon, however, and more often strata are dated by the coins found in them. In the past these stray finds were few and their significance limited, but thanks to the pioneering work of the late Mark Blackburn and the growing number of finds published by metal detectorists, the value of such finds has greatly increased. While hoards can be invaluable in revealing which coins were circulating together at any one time, the order of minting, and how far coins could travel, they provide only a snapshot of the currency owned by one individual (or group) in one place at one time, and their deposition is more likely to have been influenced by regional factors such as religious belief, war or political instability, than by economic prosperity (Armstrong, 1998; Coupland, 2006). By contrast, single finds represent a random sample of coins lost by all sorts of people in the course of their normal everyday life, and particularly if they are found in sufficiently large numbers at numerous different locations, can offer wider and deeper insights into the contemporary monetary economy (Blackburn, 1990; 1993; Coupland, 2010b; 2014d). These can include the relative amounts of coin in circulation over time, the productivity of different mints, patterns of circulation and the development of the monetary economy.

Thanks to the growing amount of information on the internet and the willingness of detectorists and fellow enthusiasts to share information about both their own finds and other discoveries of which they are aware, I have been able over the past few years to build up a remarkable list of Continental stray finds from the period between 751 and 864 (after that date it is impossible to distinguish between Charles the Bald's *Gratia Dei rex* (GDR) coins and later issues). To give one pertinent example: in 1965 Völckers could list 80 single finds of Charlemagne's monogram coinage from mints other than Melle and another 16 of Melle monogram coins; in 2009 I knew of 148 of the former and 45 of the latter; and at the time of writing I am aware of 250 and 185 respectively (Völckers, 1965; note that entries III.20, 29, 35, 44, 48, 69, 72, 78-79 and 85-86 have been discounted as they formed part of the hoard of 1845/6).

As was noted above, the frustrating fact about these 185 single finds of METVLLO coins is that hardly any can be ascribed to either Charlemagne or Charles the Bald due to the lack of any datable context. I know of just five exceptions: the obole illustrated above which was found in a datable archaeological context (Fig. 3), another obole whose highly unusual monogram is similar to other early coins of Charlemagne (Fig. 15 below), and three deniers each found with one other coin from a different mint which permits their dating (see note 3 and Fig. 4 and 27). There is currently no way of attributing the other 180 coins to either monarch.

Having said that, it is the contention of the present article that there is a way of using the differing circulation patterns of Melle's coinage under Charlemagne and Charles the Bald which are revealed by contemporary hoards, coupled with the insights offered by this large corpus of single finds, to draw some theoretical conclusions about the likely attribution of the stray finds of METVLLO coins from the Netherlands and Germany.

It is important to note that the number of single finds from any one particular area (country, region or even settlement) depends on a number of factors, some of which have nothing to do with the Carolingian era. A large number of finds might reflect, for instance, the popularity of the site among metal detectorists, a high rate of reporting of finds, archaeological excavation of the site (an especially significant factor at Wijk bij Duurstede in the Netherlands), or a concentrated effort by a scholar or institution to record all local finds (e.g. Jeanne-Rose, 1996, or, at a national level, see the lists above). A small number of recorded finds might conversely be the result of the inaccessibility of a site or an unwillingness to report a discovery made contrary to the local laws restricting metal detecting, a particularly limiting factor in France, where large numbers of finds are undoubtedly going unrecorded. However, while these factors mean that the number of finds from one geographical area cannot simply be compared with those from another, regional analysis of finds can reveal changing patterns of local monetary activity over time, and an overall picture can be built up by combining figures from different regions to disclose patterns of circulation, the relative productivity of different mints, and the growth or shrinkage of the monetary economy over time. In the specific case of the METVLLO coinage, the number of finds of Charlemagne's monogram coinage from other mints can be compared with the number of finds of other coins produced by Charles the Bald before 864 to estimate the rough proportion of METVLLO coins which can be ascribed to each ruler in a particular region or at a particular site. As we shall see, when the patterns of circulation revealed by contemporary hoards are also taken into consideration, analysis of the single finds suggests that the overwhelming majority of the stray finds of METVLLO coins found in the Netherlands should be ascribed to Charlemagne, as is probably also the case for comparable single finds from Germany. This will not permit the definite attribution of any one particular single find, but will nonetheless give a well-founded estimate of the likelihood of that individual coin having been minted by Charlemagne or Charles the Bald.

Production of METVLLO coinage under Charlemagne (793-814)

As has already been stated, Charlemagne minted the monogram coinage type from his major coinage reform of 793 (for this dating see Coupland, forthcoming a), when it replaced the smaller, lighter, pre-reform coins, until 813 or even 814, since it is now apparent that the portrait coinage was a token issue

produced at Aachen rather than a currency minted across the empire (Coupland, 2014b: 319; forthcoming a).
Table 1 lists the hoards consisting of monogram coinage deposited between 793 and 814 containing METVLLO coins (Coupland, 2011a: nos. 18-22; 2014a: S4; Coupland & Moesgaard, forthcoming).

Hoard	Country|location	Monogram coins of Charlemagne	Monogram coins of Melle
Bondeno	IT|Emilia-Romagna	uncertain	uncertain
Borne	NL|Overijssel	15	3
Château-Roussillon ('Ruscino')	FR|Pyrénées-Orientales	6	1 (obole)
Ibersheim	DE|Rheinland-Pfalz	15	3
Montmain	FR|Seine-Maritime	6	2
Steckborn	CH|Thurgau	3	1
Wiesbaden-Biebrich	DE|Hessen	44 recorded	3

Table 1: Hoards of Charlemagne's monogram coinage (793-814) containing coins of Melle

In addition, Melle deniers of a king Charles in the hoards from Apremont and Belvézet, both concealed during the early 820s, and in the first hoard from Wijk bij Duurstede (1845/46), which dates from 823-840, must also be coins of Charlemagne (Coupland, 2011a: nos. 27-28, 49). Furthermore, two other coins of this type have been found with a single other monogram issue of Charlemagne, indicating that they too were minted by him, at Castricum (Noord-Holland) and Münster (Nordrhein-Westfalen: Fig. 4).[3]



Fig. 4 – Denier of Charlemagne from Melle found at Münster (Nordrhein-Westfalen), Domfriedhof, 1989. Münster, Westfälisches Museum für Archäologie. Photograph courtesy of Peter Ilisch

[3] Castricum 1988: NUMIS 1006438-1006439 (one Pavia, one Melle, no image); Münster 1989: Stiegemann & Wemhoff, 1999: 1.389 (one Melle, one Toulouse).

The presence of an obole in the Château-Roussillon hoard demonstrates beyond doubt that these half-deniers were struck during Charlemagne's reign. As can be seen from Fig. 5, Depeyrot 625 is incorrect: the obole has no cross on the obverse, and the coins it was found with indicate that it is unquestionably a coin of Charlemagne. Haertle rightly notes that 'the attribution of this obole to Charles the Bald seems contradictory and questionable in the light of the total composition of this hoard' (Haertle, 1997: 308), yet elsewhere he states baldly that 'comparisons with the deniers [*sic*] from Marsum, Bonnevaux or Schouwen permit no doubt that the denier [*sic*] in question dates from the time of Charles the Bald' (Haertle, 1997: 55). The coins at Marsum, Bonnevaux and Schouwen are in fact oboles, but all the coins found at Schouwen, including this one, are single finds, and the obole found there is therefore not necessarily 'aus der Zeit Karls des Kahlen'; indeed, the other finds from the site suggest it is more likely of Charlemagne (see below).



Fig. 5: Obole of Charlemagne from the Château-Roussillon hoard (Pyrénées-Orientales), 1962. Present whereabouts unknown. Photograph from Bénézet and Gasc (2014), courtesy of Jérôme Bénézet.

That Charlemagne struck monogram oboles is also supported by the existence of oboles from the pre-reform period, including a large number from Melle (Schiesser, 2009; Coupland, forthcoming a). It is therefore unfortunate that Grierson and Blackburn mistakenly stated in *Medieval European Coinage* that the production of oboles only began under Louis the Pious (*MEC* 1: 206).[4] Melle was not the only mint to strike monogram oboles under Charlemagne: ten other likely locations are currently known (Coupland, forthcoming a). Not since Völckers' study of 1965 have multiple monogram coins of Melle which can definitely be attributed to Charlemagne been brought together for comparison, and he was only able to illustrate two, from the Wiesbaden-Biebrich hoard (Völckers, 1965: Plate H, XLII, 19-20). The coins from Domburg and Böbingen he also pictured are single finds, and therefore not attributable with any certainty (Völckers, 1965: Plate H, II, 57 and LIII, 1; on the Domburg coin see below). Here deniers from the Borne, Ibersheim, Wiesbaden-Biebrich and Montmain hoards are illustrated (Fig. 6-14) permitting a stylistic comparison

[4] This error has subsequently been reproduced by others (e.g. Depeyrot, 2008: 88-89, 139) but Philip Grierson himself told me it was a simple oversight, and had indeed referred to oboles in his earlier survey of Charlemagne's coinage: Grierson, 1965: 518.

both amongst themselves (none were struck from the same dies), and with the coins of Charles the Bald pictured below (Fig. 16-19).



Fig. 6-8: Deniers of Charlemagne from Melle found at Borne (Overijssel) 1987. Museum Twentse Welle, Enschede. Photographs courtesy of Bouke Jan van der Veen.



Fig. 9-11: Deniers of Charlemagne from Melle found at Ibersheim (Rheinland-Pfalz) 1880. Museum der Stadt Worms im Andreasstift. Photographs courtesy of Wolfram Giertz.



Fig. 12: Denier of Charlemagne from Melle found at Wiesbaden-Biebrich (Hessen) 1921. Stadtmuseum Wiesbaden. Photograph courtesy of Dr. Bernd Blisch.



Fig. 13: Denier of Charlemagne from Melle found at Wiesbaden-Biebrich (Hessen) 1921. Münzkabinett der Staatlichen Museen zu Berlin (Kluge, 2014: no. 218). Photograph courtesy of Prof. Dr. Bernd Kluge.



Fig. 14: Denier of Charlemagne from Melle found at Montmain (Seine-Maritime) 2015. Present whereabouts unknown. Photograph from Coupland & Moesgaard, forthcoming.

From these images it is clear that the type was remarkably correct and consistent in appearance, with no errors in the legends and a regular alignment of the reverse legend (if the monogram is viewed vertically, the cross beginning the +METVLLO legend falls at about 1 o'clock, or at 30-50º). This was by no means the case at all Charlemagne's monogram mints, as Kluge's recent catalogue of the early Carolingian coins in the Berlin collection shows (Kluge, 2014: 75-81). There are some minor differences of style between the dies: some coins are very precise, with the A of CARLVS barred (definitely on Fig. 4 and 13, possibly also 9), and nearly all are neatly engraved, with the obverse legend consistently aligned so that the opening cross and the letters R, S and X line up with the arms of the central cross. A few dies – here represented by one of the coins from Borne (Fig. 8) and an obole from Wijk bij Duurstede (Fig. 15) – are less precisely engraved, but these are very much the exception rather than the rule.



Fig. 15: Obole of Charlemagne from Melle found at Wijk bij Duurstede 1991. Leiden-RMO = WD788-2-32 (Haertle, 1997: no. 845). Photograph NUMIS 1033614.

In fact, among the many hundreds of METVLLO coins which I have seen, the overwhelming majority are neat and consistent in appearance, with correct legends. There is however one group of coins which do not display this quite remarkable uniformity of style, namely a small number of deniers, often cruder in appearance, on which the cross at the start of the mint name appears in a different place, the monogram is deformed, and/or the royal title is abbreviated to CARLVSREX. These hitherto very rare variants can now be dated to the reign of Charles the Bald thanks to the appearance of a hoard from Poitou-Charentes which contains a number of these coins together with one denier of Louis the Pious and several issues of Pippin II of Aquitaine (Coupland, forthcoming b). These aberrant coins of the 840s thus highlight the homogeneity of Charlemagne's monogram coins from Melle. Because Melle was the site of the only known Frankish silver mine at this time, and therefore one of the most prolific mints not only under Charlemagne, but also under Louis the Pious and Charles the Bald (Coupland, forthcoming a; 1990: 33; 1991: 134), numerous die-cutters must have been working there over the 20 years of the monogram type's production, and it is the uniformity of the coinage which is noteworthy, rather than the existence of a small number of coins which are less precise in their appearance.

Production of METVLLO coinage under Charles the Bald (840-877)

Embroiled in a fraternal war of succession following the death of Louis the Pious in 840, Charles the Bald evidently did not prescribe a single coinage type for his mints during the first 24 years of his reign. As a result the various mints adopted their own choice of reverse design, in some cases striking coinage of several different designs over the course of that time (Coupland, 1991). At Melle the principal coinage type produced was the monogram coinage which is the subject of this article; a monogram type was also struck at Bourges, Toulouse and probably Agen (Coupland, 1991; Sarah, 2010; Coupland, 2014a: 219). This METVLLO type is found in significant numbers in numerous contemporary hoards (Table 2 below), and four are illustrated here (Fig. 16-19).



Fig. 16-17: Deniers of Charles the Bald from Melle found at Saint-Même-le-Tenu 2009. Private collections. Photographs Simon Coupland.



Fig. 18-19: Deniers of Charles the Bald from Melle found at Poitou-Charentes n.d. Present whereabouts unknown. Photographs Jean Elsen et ses fils s.a.

As a comparison with Fig. 4 and 6 to 14 shows, the style of these coins is very similar to those which are definitely attributable to Charlemagne. One even includes a barred A (Fig. 19; cf. also Fig. 27) though this feature is not at all common among these coins of Charles the Bald. Another trait absent from many METVLLO coins minted between 840 and 864 is a chevron in the central monogram, though one can be seen on both deniers pictured here from the Saint-Même-le-Tenu hoard (Fig. 16-17).

The hoards from the first part of Charles the Bald's reign containing these METVLLO coins are listed in Table 2, and clearly there are many more such hoards than were listed in Table 1, from the reign of Charlemagne.[5] A simple numerical comparison gives a highly misleading impression, however, for it is important to appreciate that overall many more hoards are known from this period than from Charlemagne's reign, and that this is almost certainly not the result of economic expansion, but of political instability, Viking incursions and social upheaval (Armstrong, 1998; Coupland, 2006).

Four contemporary Viking hoards also included METVLLO coins: from Norway, Jæren (*c*. 823 or *c*. 840: 1 denier)[6] and Søndre Bø (840-845: 1 denier); from Ireland, Mullaghboden (845-850: at least 1 denier) and from Sweden, Kättilstorp (851-860: 3 deniers) (Garipzanov, 2005: no. 20; Coupland, 2011a: nos. 58, 93, 116). METVLLO coins were also present in a number of later Frankish hoards, nearly all from the latter part of Charles the Bald's reign: Entrammes (864-870: 1 or 2 oboles), Foissy-lès-Vézelay (864-870: 2 deniers), Matha (*c*. 860-870: 2 deniers and 14 oboles; see below), Saint-Cyr-en-Talmondais (864-877: 27 deniers and 11 oboles) and Zelzate (875-877: 1 obole); also Bligny (882-887: 6 deniers) (Coupland, 2011a: nos. 131, 137, 154, 174; 2014a: S18, S20).

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[5] Coupland, 2011a: nos. 54-55, 63, 72-73, 75, 77, 79-82, 90-91, 96-97, 99, 105, 108, 117-118; 2014a: S9, S11-12; forthcoming b; Vicq-sur-Gartempe: unpublished (see note 10).

[6] Not included in Coupland, 2011a as it contained only two Carolingian coins, as well as two Mercian coins from 796-821 and 821-823. The dating of this coin of Melle determines the date of the hoard.

Hoard	Country|location	Number of extant Carolingian coins	METVLLO coins of Charles (deniers + oboles)
Achlum (850-864)	NL|Friesland	499	1
Angers II (845-850)	FR|Maine-et-Loire	29	3 + 2
'Aquitaine?' (845-846)	FR|?	57	28 + 2
Brion (840-864)	FR|Maine-et-Loire	5	4
Brioux-sur-Boutonne (848?)	FR|Deux-Sèvres	145	4 + 6
Burgum (840-850)	NL|Friesland	4	1
Campeaux (840-864)	FR|Calvados	uncertain	uncertain
Corrèze (840-*c*. 865)	FR	3	3
Deux-Sèvres (840-*c*. 865)	FR	*c*. 90	*c*. 90
Indre-et-Loire I (845-864)	FR	160	15
Langon (840-845)	FR|Gironde	uncertain	uncertain
La Tessoualle (840-845)	FR|Maine-et-Loire	3	1 + 1
Le Faouët (840-*c*. 865)	FR|Côtes-d'Armor	uncertain	uncertain
Lésigny-sur-Creuse	FR|Vienne	5?[7]	1?
Lussac-les-Châteaux (845-850)	FR|Vienne	4	2
Melle II (840-*c*. 865)	FR|Deux-Sèvres	at least 9	at least 9
Paule (840-*c*. 865)	FR|Côtes-d'Armor	3	3
Pilligerheck (855-864)	DE|Rheinland-Pfalz	2,111	1
Poitou-Charentes (845-846)[8]	FR	46	40
Prinçay (840-*c*. 865)	FR|Vienne	3	3
Rijs (850-855)	NL|Friesland	46	1
Roermond (853-854)	NL|Limburg	1,130	8-16[9]
Saint-Emilion (840-864)	FR|Gironde	uncertain	uncertain
Saint-Même-le-Tenu (840-845)	FR|Loire-Atlantique	*c*. 103	*c*. 90
Vicq-sur-Gartempe (840-845)[10]	FR|Vienne	11	'several'

Table 2: Coin hoards from 840-864 containing Charles the Bald's METVLLO *coinage (Fig. 25)*

The distribution of these hoards is highly significant for the hypothesis advanced in the present article, as is the contrast between the patterns of circulation revealed by a comparison of Table 1 and Table 2, and both topics shall be considered below. Before that, however, it is important to mention three other coinage types from Melle which were struck during the reign of Charles the Bald, two of them before the coinage reform of 864 and the other most likely as a direct result of it.

The two additional types bearing the mint name of Melle minted between 840 and 864 were clearly struck on a much smaller scale than the monogram coinage. One, known from just three coins, none of them found in hoards, bears the mint name around a temple on the reverse (Sarah & Bailleul, 2014: 50-51; Coupland, 1991: 133-134), a type paralleled by a unique denier from Bourges (Coupland, 1991: 128). It seems likely that this temple coinage was struck in the early 840s, perhaps at the same time as coins bearing the legend *Christiana religio* instead of the mint name: this was the pattern followed at other mints at this time, including nearby Tours and Orléans (Coupland, 1991: 138-139, 144, 146-147; Coupland & Moesgaard, 2012: 223). The second mint-signed type has the mint name META-LLVM filling the reverse field: it is represented in two hoards, Brioux-sur-Boutonne and Plessé (Coupland, 2011a: nos. 99, 101) and by just two single finds. It was probably minted for a short period in 848, after Charles wrested control of Melle back from his nephew Pippin II, to whom he had been forced to grant sovereignty over the area in 845. The introduction of a new and quite different coinage type would demonstrate even to the illiterate the change of ruler (Coupland, 1991: 132-133; Sarah & Bailleul, 2014: 48-49), and again a parallel is known at Bourges (Coupland 1991: 128-129).

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[7] This reconstructed hoard has a very unlikely composition, ranging from a denier of Charlemagne dating from 768-793 to a coin of Odo (888-897): Coupland, 2011a: no. 90; cf. Jeanne-Rose, 1996: 245 (note); Cabinet Numismatique Albuquerque (Rouen) auction 9, 30 June 1988, lots 253-260. It is more plausible that just five coins formed part or all of the original deposit: two *Christiana religio* deniers of Louis the Pious (one of them from Melle), one METVLLO denier and a *Christiana religio* denier (from Orléans) of Charles the Bald, and a Melle obole of Pippin II.

[8] An as yet unpublished hoard also containing one *Christiana religio* denier of Louis the Pious (from Melle) and five Melle deniers of Pippin II: Coupland, forthcoming b.

[9] The hoard was reconstructed after it had been partially dispersed, but included at least 8 METVLLO coins, and perhaps as many as 16. I think it unlikely that a coin reading MET+VLLO formed part of the original hoard (van Gelder, 1985: 42, no. 39): see below.

[10] An unpublished hoard of eleven coins whose precise contents cannot be established, but there were three or more *Christiana religio* deniers of Louis the Pious, and of Charles's METVLLO coinage several deniers and one obole.

It should be noted that there are two further mint-signed types of Melle which cannot be securely dated because each is known only from a single specimen. Indeed, this extreme scarcity makes it uncertain whether they should truly be seen as distinct coinage types, or whether they do not rather represent an experiment or even a moneyer's error. Both are essentially variants on the standard monogram coinage, one bearing a cross on both faces (and the unusual title CAROLVSREX: Sarah & Bailleul, 2014: 51-52), the other distinguished by a monogram on each face (Fillon, 1856: 147).[11]



Fig. 20: Denier of Charles the Bald from Melle. Niort, Musées de l'agglomération niortaise, Breuillac no. 23, collection Rondier. Photograph: Jean-Paul Bailleul.

This also seems the appropriate place to refer to the poorly executed monogram coins which were referred to earlier, a number of which have turned up in the Poitou-Charentes hoard mentioned earlier (Coupland, forthcoming b). The deposit undoubtedly dates from the 840s, since it includes a single *Christiana religio* denier of Louis the Pious (from Melle) and 5 Melle deniers of Pippin II, as well as 37 METVLLO coins of Charles the Bald and 3 hybrid coins (mules) bearing Charles's name and Pippin's monogram. Among Charles's METVLLO coins, 16 are of the standard type, 8 have the cross opening the mint name at atypical angles (0°, 90°, 190°, 240°, 270°), 13 have the short title +CARLVSREX, and among the latter most have a deformed monogram, with the L and the S exchanging places and on their sides (*couché*). These variants were presumably the result of the chaos and confusion at the mint caused both by the political turmoil which resulted from the change of ruler in the mid-840s (Coupland, forthcoming b). Jean-Paul Bailleul has suggested in an unpublished paper that perhaps some of these coins, such as those bearing the legend CARLVSREX, were minted at an alternative location in Charles's territory while Pippin was minting at Melle (Bailleul, unpublished). This is unlikely, but the existence of hybrid coins bearing either Pippin's name and Charles's monogram (Fig. 21), or Charles's name and Pippin's monogram (Fig. 22; Coupland, 2010c: 192; forthcoming b) shows that the Melle mint must have been striking monogram coinage in Charles the Bald's name in 845, when Pippin took control of the mint.

[11] The coin is now in the Rondier collection in Niort – I am grateful to Jean-Paul Bailleul for this information and photographs of the coin.



Fig. 21: Hybrid denier of Charles the Bald and Pippin II of Aquitaine from Melle. Private collection. Photograph Simon Coupland.



Fig. 22: Hybrid denier of Charles the Bald and Pippin II of Aquitaine from Melle. Private collection. Photograph Jean Elsen et ses fils s.a.

What is particularly remarkable about these coins is that several specimens of each variety are known, none struck from the same dies. The most likely explanation for these mules is that a workman minting Pippin's new coinage accidentally picked up an old die from Charles's reign in the workshop. Hard though it may be to believe that this could have happened in so many cases, given the productivity of the Melle mint it is not difficult to believe that there might have been many such old dies around. The only question that remains is whether this was a simple mistake or a deliberate ploy on the part of moneyers concerned to make a political statement of allegiance to the ousted king Charles the Bald. The mint may even have struck coins in both rulers' names for a brief time (Coupland, forthcoming b).

All these coins can be seen essentially as variants of the METVLLO monogram coinage described earlier and illustrated in Fig. 16-19, but at some point in the 860s, probably 864, when a major coinage reform was undertaken throughout the West Frankish kingdom, a deliberate alteration was made to the coinage, creating what should be seen as a new and distinct type. A small cross (+ or ×) was added to the royal title, between the letters MET and VLLO on the denier (Fig. 23) and in the bottom left quadrant of the monogram on the obole, between the letters K and L (Fig. 24; MG 1061, 1064; *MEC* 1.935-964; Depeyrot 625, 627).



Fig. 23: Denier of Charles the Bald and his successors from Melle. Private collection. Photograph Simon Coupland.



Fig. 24: Obole of Charles the Bald and his successors from Melle. Private collection. Photograph Sébastien Chaillot, Bourg-numismatique.

This type with the cross in the mint name then became immobilised, being minted even after Charles's reign ended in 877; there are no coins of Melle minted by his successors Louis II (877-879), Charles the Fat (884-887) or Odo (888-897). This continuation of minting in the late ninth and early tenth centuries is clear from the presence of large numbers in the hoards from Marçay ('Bonnevaux', 888-895),[12] Saumur-Thouars (898-900)[13] and Cuerdale (*c*. 905), and alongside the even later MET-ALO type at Chef-Boutonne ('Javarzay', 930-950) (Coupland, 2011a: nos. 179, 197, 218, 249). Although it has been proposed that the additional cross on these coins was added to distinguish feudal issues or coins struck elsewhere, such as Poitiers (*MEC* 1: 238), the evidence of these hoards and other, smaller finds demonstrates that it in fact replaced the type without the cross, which was no longer minted. Given that it would scarcely be credible for royal minting at Melle to cease entirely at this time (Jeanne-Rose, 1995: 177, n. 48), there is every reason to believe that the MET+VLLO coinage was the standard type produced at the mint from the 860s until *c*. 925, when it was replaced by the MET-ALO coinage. The style of the MET+VLLO coins appears to have coarsened over time, so that later issues are almost invariably less neat in appearance, with broader lettering and more errors in the legends (missing letters, retrograde S, etc.).

If this development is clear, a complicating factor is that there are a small number of hoards which appear to date from the first years of Charles the Bald's reign containing coins with the additional cross. The clearest instance is the Chaumoux-Marcilly hoard (Coupland, 2011a: no. 53) which includes over 200 *Christiana religio* coins of Louis the Pious, other early issues of Charles the Bald, and no coins of Pippin II, and thus appears to date from 840-845. The original publication clearly states that the two Melle deniers of Charles present read MET✕VLLO [*sic*], and that no METVLLO issues were present (Chenu, 1932: 106, 113). I have previously concluded that coins with an additional cross were consequently struck in the first five years of Charles's reign, since other hoards appeared to support this (Coupland, 1991: 132; 2010: 190-192). However, on closer inspection it turns out that other reports of early hoards supposedly including these coins have little or no substance. Thus although Gariel reported their presence in a hoard found 'near Melle' in 1878, the find

[12] Depeyrot, 2008: no. 622 is incorrect – only one obole of Charles was of this type; the other 250 or so all included a small cross (Depeyrot 625). The fact that Fillon described these oboles simply as 'avec croisette' and added no further comment about them or illustration of them implies that they were of the usual type with the cross in the bottom left quadrant of the monogram, rather than the very rare variety with a cross in the reverse legend: Fillon, 1856: 43-44; *contra* Haertle, 1997: 92/018-019.

[13] The hoard was also said to contain one denier and one obole without the additional cross, but in his publication of the hoard Fillon suggested that at least the obole may have been added by the jeweller who collected the coins (Fillon, 1856: 149).

in question was actually the hoard from Brioux-sur-Boutonne which he had already described, and whose original publication shows that it contained no such coins (Gariel 1883-1884, 1.75-77; Bardonnet 1882). One is said to have been present in a hoard found at Lésigny-sur-Creuse in 1955 (with a regular METVLLO coin) but the fact that the find was reconstructed and reportedly also included a coin of Odo means that this MET+VLLO coin might likewise date from the 880s (see note 7 above). A single MET+VLLO denier supposedly formed part of the Roermond hoard, dating from 853-854 (Coupland, 2011a: no. 117; 2011b), but this coin was handed in later, when the hoard was being reassembled, and thus may well not have been part of the original deposit (see van Gelder, 1985: 13-14, 19). The Bressuire hoard unquestionably contained coins of Charles the Bald from Melle with the additional cross, in this case ten deniers and two oboles, and the presence of one Louis the Pious *Christiana religio* denier led to it previously being dated to the 840s (Coupland, 2011a: no. 52; Baigl, Clairand and Jeanne-Rose, 1995: 1153).[14] However, hoards such as Luzancy (864-865), Questembert (864-877) and now Entrammes (864-870: Coupland, 2011a: nos. 128, 134; 2014a: S20) demonstrate that it was quite possible for *Christiana religio* coins of Louis still to be in circulation in the second half of the 860s, and the absence of coins from any other of Charles's mints now leads me to believe that the mid to late 860s is a more likely date for the hoard's deposition (on the significance of this factor, see below). Finally, a recent hoard which almost certainly included both monogram types is the fascinating find from Matha (Charente-Maritime), which reportedly contained 11 deniers with the additional cross as well as 2 deniers and 14 Melle oboles without it, alongside coins of Charles from Agen and Toulouse and Arabic dirhams from Al-Andalus (Coupland, 2014a: S18). Unfortunately the description of the hoard is sketchy and not all the types are adequately reported, but the fact that no *Christiana religio* coins of Louis the Pious are said to have been present suggests that the MET+VLLO coins date from the 860s rather than 840-845, and are thus the most recent coins in the hoard. This leaves the Chaumoux-Marcilly hoard as the only possible indicator that Melle coins with an additional cross may have been minted in the early 840s, and given the overwhelming evidence for their production after 864 and the lack of any supporting evidence for minting in the early years of Charles's reign, it seems unwise to build a case on this one reported find. It is even possible, if unlikely, that these two specimens could date from the 860s. Taking all the evidence in consideration, it seems reasonable to presume that any hoards consisting solely of these coins and indeed all single finds date from 860-925 rather than the early 840s. As we shall see below, the distribution pattern of these finds (both hoards and single finds) tends to confirm this.

[14] There is an error in Coupland, 2011a: 227, n. 27. The oboles are not of type MG 1060 but 1061: see Baigl, Clairand & Jeanne-Rose, 1995.

Circulation of METVLLO coinage under Charlemagne and Charles the Bald

As was stated earlier, it is not the overall number of hoards from the two reigns which is important, as this was influenced by the political and military situation more than by the economic context. What is significant, however, is the distribution of the hoards containing coinage minted in Melle, revealing the circulation patterns of these coins, and the proportion of contemporary hoards which this represents. When these figures are compared for the two reigns, a significantly contrasting and very interesting picture emerges. Table 3 sets out the number of hoards from the period 793-814, when Charlemagne's monogram coinage was in circulation, and 840-864, the equivalent period during the reign of Charles the Bald, and shows the proportion of hoards containing coins of Melle country by country (in the case of Charles the Bald this includes the hoards from Chaumoux-Marcilly and Plessé, containing METXVLLO and METALLVM coins respectively).[15]

	No. of hoards, 793-814[16]	No. (%) containing Melle coinage	No. of hoards, 840-864[17]	No. (%) containing Melle coinage
France	2	2	46	22
Germany	3	2	2	1
Belgium	0	–	2	0
The Netherlands	2	1	27	4
Switzerland	2	1	0	–
Italy	1	1	0	–
Total	**10**	**7 (70%)**	**77**	**27 (35%)**

Table 3: The proportion of coin hoards containing Melle coins of Charlemagne or Charles the Bald, 793-814 and 840-864

[15] Coupland, 2011a: nos. 53, 101; see the discussions above.

[16] Coupland, 2011a: nos. 16-22; 2014a: S3-4; Coupland & Moesgaard, forthcoming.

[17] Coupland, 2011a: nos. 51, 53-57, 59-75, 77, 79-92, 94-114, 117-121; 2014a: S9 (which includes Checklist 76 and 78), S10-17; four recent unpublished hoards: two from the Netherlands and the two from France included in Table 2 above. On the reasons for omitting no. 52, Bressuire, see above.

Although the number of hoards from Charlemagne's reign is small, and even smaller in the case of each country, the proportion of hoards containing coins of Melle is twice as high as in the later period, and the geographical spread of hoards containing these coins is much wider. This matches the trend which can be more broadly observed during the two reigns. Under Charlemagne, monogram coinage circulated widely throughout what was in effect one huge currency pool, with coins mingling freely right across the empire. Thus contemporary hoards tend to contain coins from a wide range of mints, with for instance Bourges, Dorestad, Melle, Pavia, Toulouse and Tours represented at Château-Roussillon in southern France, and coins from Bourges, Dax, Dorestad, Mainz, Melle, Pavia, Toulouse and perhaps Aachen turning up together at Borne in Overijssel (Coupland, 2011a: nos. 19-20). The same phenomenon can be observed in the single finds unearthed at Wijk bij Duurstede (Fig. 28 below). As for the occurrence of coins of Melle in Charlemagne's hoards, Table 3 demonstrates that they have turned up in the north, south, east and west, with only three contemporary hoards known which did not contain any. Two of these consisted primarily of pre-reform issues, with just one monogram coin in each (Coupland, 2011a: nos. 16-17); the third was a small hoard of four coins found at Trier in Rheinland-Pfalz (Coupland, 2014a: S3).

By contrast, during Charles the Bald's reign the circulation of West Frankish coins tended not only to remain much more within the borders of the kingdom (which were roughly similar, though by no means identical, to modern France), but also increasingly to be concentrated around the mint of origin (Metcalf, 1990: 78-79; Coupland, 1991: 154; 2011b: 32-39). At the extreme, the Auzeville hoard from the early 850s contained only one denier not minted at Toulouse among nearly 400 coins, while more typical are the hoards from the Vallée de la Risle, in which 13 of the 15 coins minted after 840 were from the local mint of Orléans, and Bray-sur-Seine, where 58 of the 69 post-840 coins were from nearby Sens (Coupland, 2011a: nos. 60, 103, 107, with additions[18]). This trend is very much reflected in the circulation of the coins of Charles the Bald from Melle: as Tables 2 and 3 above show, just five hoards containing these have turned up outside France, one from Germany and four from the Netherlands, and of these five hoards, four included only one such coin (the exception is Roermond, which is an exceptional hoard in many respects: Coupland, 2011b). When the 46 French hoards from the first part of the reign are analysed region by region, an equally clear picture of regionalised circulation within the West Frankish kingdom emerges (Table 4).

[18] I became aware of five further coins from the Bray-sur-Seine hoard, all of Charles the Bald from Sens, in November 2013.

	No. of hoards, 840-864	No. containing Melle coinage[19]	% containing Melle coinage
North[20]	10[21]	1[22]	10%
West[23]	18[24]	16[25]	89%
South-west[26]	5[27]	2[28]	40%
Central[29]	7[30]	3[31]	43%
South[32]	1[33]	0	0%
East[34]	5[35]	0	0%
Total	**46**	**22**	**48%**

Table 4: The proportion of French coin hoards containing Melle coins of Charles the Bald, 840-864

[19] As in Table 3, this again includes the Plessé and Chaumoux-Marcilly hoards: cf. note 15 above.
[20] Normandy, Nord-Pas-de-Calais, Picardie and Île-de-France.
[21] Coupland, 2011a: nos. 57, 60, 73-74, 94, 98, 107, 110-112.
[22] Campeaux.
[23] Brittany, Pays de la Loire and Poitou-Charentes (where Melle is located).
[24] Coupland, 2011a: nos. 55, 72, 77, 79-83, 90-91, 96, 99, 101; 2014a: S9, S12, S16; forthcoming b; Vicq-sur-Gartempe.
[25] La Tessoualle, Brion, Le Faouët, Melle II, Prinçay, Deux-Sèvres, Angers II, Lésigny, Lussac, 'Aquitaine', Brioux-sur-Boutonne, Plessé, Saint-Même-le-Tenu, Paule, Poitou-Charentes, Vicq-sur-Gartempe.
[26] Aquitaine and Midi-Pyrénées.
[27] Coupland, 2011a: nos. 51, 54, 75, 89, 103.
[28] Langon, Saint-Émilion.
[29] Centre, Limousin and Auvergne.
[30] Coupland, 2011a: nos. 53, 87, 97, 100, 113; 2014a: S11, S14.
[31] Chaumoux-Marcilly, Indre-et-Loire, Corrèze.
[32] Languedoc-Roussillon, Rhône-Alpes and Provence-Alpes Côte d'Azur.
[33] Coupland, 2014a: S13.
[34] Burgundy, Franche-Comté, Champagne-Ardenne, Alsace and Lorraine.
[35] Coupland, 2011a: nos. 56, 61, 85, 109; 2014a: S15.

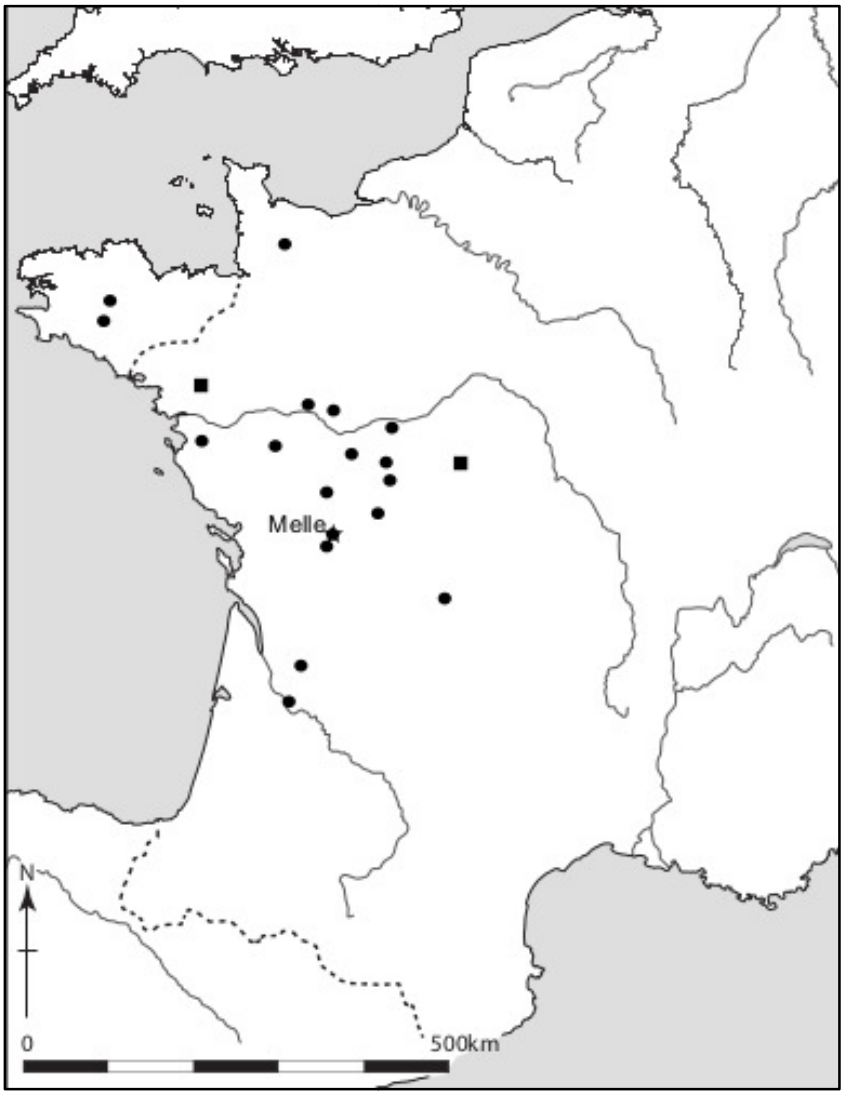

Fig. 25: French coin hoards containing Melle coins of Charles the Bald, 840-864
(●: METVLLO *coins;* ■*: other types*)

There is thus a very clear concentration of hoards containing Melle's coinage around the mint itself, in the *régions* of Brittany, Pays de la Loire and Poitou-Charentes, with a smaller number found in the immediately adjacent *régions* of Aquitaine, Basse-Normandie, Centre and Limousin, and no finds beyond this (Fig. 25: 'Aquitaine' and Poitou-Charentes have been omitted due to the lack of precision).

This tendency towards limited circulation within the Frankish kingdoms became even more marked in the later part of the ninth century, as the comparable figures for the hoards containing MET+VLLO coins makes clear.
Remarkably, not one of these has turned up in any hoard from Belgium, the Netherlands, Germany, Italy or Switzerland. What is more, of the 14 French hoards, all but one are from the *régions* of Pays de la Loire and Poitou-Charentes (Coupland, 2011a: nos. 52, 123-127, 179, 181, 197, 214, 249; 2014a: S18-19), the one exception being from the *département* of Indre-et-Loire, which borders both *régions* just mentioned (Coupland, 2011a: no. 199). Three hoards from England also contain MET+VLLO coins (Cuerdale, Harkirke and Silverdale: Coupland, 2011a: nos. 218, 221; 2014a: S23), but all are Scandinavian in character, and these coins thus almost certainly represent loot taken by Viking war bands on incursions into the Continent, very plausibly from the same area where all the French hoards have been discovered. The same is true of the single KR+LS obole found in a hoard from Stolpehuse in Denmark (Galster, 1953: 34, no. 41). The trend which was observed above of a reduction in the breadth of circulation between the latter part of Charlemagne's reign and the first part of Charles the Bald's has thus gone one stage further still, with these coins travelling a very limited distance from their place of origin.

The evidence of coin hoards: conclusions

This progressive narrowing of the pattern of circulation is not a new discovery, but the increase in the number of hoards over the course of the ninth century (cf. Coupland, 2014a: 213, Table 1) makes it all the more striking, and permits two important conclusions. The first is that if a coin hoard is discovered which contains **only** coins of the METVLLO type, this hoard is much more likely to date from the reign of Charles the Bald, when circulation was restricted and coins from different mints mixed less freely, than from the age of Charlemagne, when hoards contained coins from numerous mints, both near and far. I have previously used this argument to attribute a number of small hoards containing only this type, and in one case another parcel of coins from the find has subsequently come to light which has confirmed the proposed attribution to Charles the Bald (Coupland, 2010c: 192-193, cf. 2013b; 2014b: 325-326). As was noted earlier, the fact that the Bressuire hoard almost exclusively consists of MET+VLLO coins (and one coin of Louis the Pious) indicates that it, too, should be dated to the 860s. This is consequently a useful indicator permitting the dating of other future hoards containing only coins of Melle to the reign of Charles the Bald, whether the coins include the additional cross or not. Having said that, no hoards from Charlemagne's reign are currently known from the region around Melle, and such a find might alter our perception of circulation at the time. Moreover, the Trier hoard, mentioned earlier (Coupland, 2014a: S3), shows that a hoard from this era could contain three coins from the

same mint with only one coin from elsewhere (in that case three from Agen and one from Pavia, all a long way from the find spot). It is thus the case that the larger the number of coins in the find, the more secure the attribution, since this provides a clearer indication that the hoard was indeed reflecting the wider coinage stock in circulation.

The second conclusion that can be drawn from this comparison of the two reigns is that METVLLO coins of a king Charles which are found far from Poitou, particularly outside the borders of the West Frankish kingdom but within the boundaries of the Carolingian empire, are surely more likely to be coins of Charlemagne than of Charles the Bald. This is particularly true of coins which turn up as single finds in the Netherlands, Germany, Italy or Switzerland, though not of finds from Scandinavia or the British Isles, which might well represent loot taken by Vikings on Continental raids (described in Coupland, 1995 and Henderikx, 1995). As Table 6 below reveals, this affects only one coin from Italy and one from Switzerland; in Germany it is rather more (12), but in the case of the Netherlands a very large number of single finds has been recorded, 73 coins, not that many fewer than the 81 coins found in France. There are three reasons for this: the punitive laws restricting metal detecting in France, the excellent central database in the Netherlands, NUMIS, which makes available for study many (if by no means all) such coin finds, and the long-standing professional excavation of the most significant port in the Frankish north, Carolingian Dorestad, at Wijk bij Duurstede (Willemsen, 2009; Willemsen & Kik, 2010). This one site alone accounts for no fewer than 40 of the METVLLO finds made in the Netherlands (Table 7). There are other features of these single finds which can also prove helpful in considering the attribution of these METVLLO coins, however, and it is on these which the remainder of the article will focus.

The evidence of single finds: coins of Melle

Table 5 lists the recorded single finds of coins of Melle, by number and by proportion, during the first part of Charlemagne's reign, the reign of Louis the Pious, and that of Pippin II of Aquitaine. Charlemagne's portrait coinage has not been included because of the extremely small numbers (Coupland, 2014c), Louis' *Christiana religio* type has been omitted because relatively few coins are illustrated, which is the only way to permit attribution, and the comparable coins minted after 864 cannot be taken into account because of the impossibility of distinguishing individual *Gratia Dei rex* coins of Charles the Bald from later issues.

	All single finds [1]	Single finds, Melle [2]	[3] = [2]/[1]	All single finds (NL) [4]	Single finds, Melle (NL) [5]	[6] = [5]/[4]
Charlemagne Pre-reform (768-793)	218	34	16%	72	4	6%
Louis the Pious Portrait (814-816)	54	11	20%	40	3	8%
Louis the Pious Class 2 (816-822/3)	249	51	21%	91	9	10%
Pippin II of Aquitaine (845-848)	49	10	20%	11	2	18%

Table 5: Single finds of coins of Melle under Charlemagne, Louis the Pious and Pippin II

In comparing these figures it should be borne in mind that over 100 mints are known from the pre-reform period, compared with just 13 or 14 minting Louis' portrait coinage, 45 the Class 2 coinage, and 8 known to have been active under Pippin II. It is therefore quite remarkable that the proportion of coins from Melle among the stray finds from three of these coinages is virtually identical, at just over 20%. It is also interesting to note a steady increase in the proportion of Melle coins among stray finds in the Netherlands over the period in question. If these percentages are then applied to the numbers of single finds from the two periods under discussion, we would expect overall stray finds of between 45 and 63 monogram coins of Charlemagne from Melle (that is, representing between 16% and 20% of all finds) and some 19 of Charles the Bald (20%); in the Netherlands 11-14 of Charlemagne (6%-8%) and 7 of Charles the Bald (18%). These projected figures are, however, hopelessly inaccurate underestimates, given that the overall finds of METVLLO coins number 185, with no fewer than 73 of these occurring in the Netherlands (see Table 6 below).

There is no reason to suspect that the finding of this coinage type has been reported or recorded in disproportionate numbers; indeed, quite the opposite is to be expected, since there is clear evidence from Wijk bij Duurstede in the nineteenth century that the more common Carolingian types were not always fully recorded, as they were of little interest to numismatists (Coupland, 1988: 9-10). The most likely explanation is consequently that there must have been a significant expansion in monetary production at Melle during the reigns of

Charlemagne, Charles the Bald, or both, meaning that extrapolating from the number of finds from the preceding or succeeding reigns would be a fatally flawed exercise. There remains then the second method of estimation, using the comparative numbers of single finds from the two periods in question, namely of Charlemagne's monogram coins from mints other than Melle, and of coins of Charles the Bald minted between 840 and 864.

The evidence of single finds: Charlemagne's monogram coins and early coins of Charles the Bald

Table 6 sets out the number of single finds country by country, using only single finds with a secure provenance recorded in printed publications, on the internet, or by helpful archaeologists, numismatists or detectorists. The final column lists the number of METVLLO coins found, using the format deniers + oboles.

	No. of single finds, Charlemagne monogram type (excluding Melle)	No. of single finds, Charles the Bald pre-864 (excluding METVLLO coins)	No. of single finds CARLVSREXFR/ METVLLO (deniers + oboles)
France	31	39	45 + 36
Belgium	4	1	10 + 2
Germany	17	5	10 + 2
The Netherlands	179	30	35 + 38
Italy	9	1	1 + 0
Switzerland	5	0	1 + 0
Austria	1	0	2 + 0
Spain	2	0	3 + 0
Total	**248**	**76**	**107 + 78**

Table 6: Single finds of coins of Charlemagne's monogram type and of Charles the Bald, 840-864

The figure which immediately stands out is the astonishing 179 finds of Charlemagne's monogram coinage in the Netherlands. Yet this figure masks the fact that three-quarters of these coins were found at just three 'productive' sites: 8 from the beach at Domburg, 11 from Schouwen and no fewer than 116 (108 deniers and 8 oboles) from Wijk bij Duurstede, the site of Carolingian Dorestad (on the singular importance of these three sites see Völckers, 1965; Blackburn, 1993; Op den Velde & Metcalf, 2003: 62-67; Coupland, 2002; 2010b; on 'productive' sites in general see Pestell & Ulmschneider, 2003; and on the Continent in particular Coupland, 2014d: 267-270). It is important to note, however, that even if these figures are removed from the equation, the remaining total of 44 monogram finds still exceeds the 31 known from France, in large part for the reasons outlined above.[36] This means that it is possible to consider the attribution of the METVLLO coins in the Netherlands without this being skewed by the huge number of single finds from Wijk bij Duurstede/ Dorestad, which potentially reflect very specific economic developments there (see Coupland, 1988; 2002; 2010a; 2010b).

Fig. 26 shows the distribution of all the finds of METVLLO coinage from the Netherlands, demonstrating that they occur right across the country and can thus be taken as a random and representative sample of the coinage circulating in the region at the time.

Table 7 breaks the figures in Table 6 down by giving the relevant figures for the two 'productive' sites of the beach at Domburg and Schouwen as well as Wijk bij Duurstede and the rest of the Netherlands.

	No. of single finds, Charlemagne monogram type	No. of single finds, Charles the Bald pre-864	No. of single finds CARLVSREXFR/ METVLLO (deniers + oboles)
Domburg	8	8	3 + 2
Schouwen	11	2	0 + 1
Wijk bij Duurstede	116	12	15 + 25
Other sites	44	8	17 + 10
The Netherlands	**179**	**30**	**35 + 38**

Table 7 – Dutch single finds of Charlemagne and Charles the Bald

[36] I know of several more finds illustrated on Dutch detectorist websites, but unfortunately the finder would not provide details as to where the find was made, so that it is impossible to be certain that the coin was discovered in the Netherlands.



Fig. 26: Single finds of METVLLO *coins of a king Charles in the Netherlands Map design: Menne Kosian (Rijksdienst voor het Cultureel Erfgoed)*

Significant differences emerge from this breakdown: while Schouwen appears to reflect the general situation across the Netherlands as a whole, Wijk bij Duurstede has an unusually large number of finds of monogram coins of Charlemagne, and Domburg an atypically large number of finds of coins of Charles the Bald. This has important implications for any consideration of the attribution of the METVLLO coins, so that the sites will be examined separately in the following discussion.

The evidence of single finds: the case of Domburg

Looking more closely at the figures from the beach at Domburg, other evidence confirms the surprisingly high level of economic activity at the site in the second half of the ninth century, a time when elsewhere in the Netherlands there is very little evidence of the importation of West Frankish coin. Thus besides the 8 early coins of Charles the Bald listed here, 4 of Pippin II of Aquitaine were found at the site, along with 21 of Lothar I and – much more significant – 13 or 14 deniers of the *Gratia Dei rex* type minted by Charles the Bald after 864 and subsequently by Charles the Simple (898-922) (Coupland, 2002, with additions; 2010b).[37] These figures are remarkable given the extreme rarity of these GDR coins elsewhere in the Netherlands. Only five are listed in the NUMIS database of Dutch coin finds, which lists hundreds of single finds of Carolingian coins: deniers of Orléans from Driesum (Dantumadeel) and Quentovic from Leeuwarden, a Maastricht obole from Maastricht, and deniers of Tournai from Ommen and Soissons from Sluis: Haertle, 1997: nos. 574 , 640, 655, 696; unpublished.[38] Finds of GDR coins are also hardly ever reported on detectorist websites in the Netherlands: I have only come across one Dutch find among the scores of Carolingian coins reported on the three websites I regularly visit (see methodology section), and unfortunately the find spot of that coin is not stated.[39] This makes the 13 or 14 GDR coins found at Domburg a remarkably high number, implying that the local monetary economy enjoyed significantly closer links to the West Frankish kingdom at this time than was the case elsewhere in the Netherlands. The three METVLLO deniers and two oboles found at the site are consequently just as likely to have been minted by Charles the Bald as by Charlemagne. Attribution to Charles the Bald is even more likely for the other METVLLO denier found on Domburg but not on the beach, at Kasteel Westhove (Fig. 27), since it was found together with the immediately preceding type, a *Christiana religio* penny of Louis the Pious. As was noted above, this type was separated from the monogram coinage of Charlemagne by two very efficient recoinages during the reign of Louis the Pious.[40]

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[37] I am grateful to Wybrand Op den Velde for information about the additional coins, from the Boogaert collection.

[38] NUMIS 1009921, 1017150, 1017786, 1021604, 1074620 respectively.

[39] http://www.bonatiele.nl/FDETUK/medievalcoins.html; http://www.muntenbodemvondsten.nl; http://www.bodemvondstenwereld.nl; the latter two sites are accessible only to members. The one possible GDR coin is: http://www.muntenbodemvondsten.nl/index.php?topic=110892.0 [16 March 2015]. Other GDR coins illustrated on the sites are described as having been acquired or bought rather than found locally.

[40] NUMIS 1008711 (Melle), 1008712 (*Christiana religio* Group P: Coupland, 2013a: 362-364). Pers. comm. Vincent van Zandwijk. On the recoinages see above.



Fig. 27 – Denier from Melle, probably of Charles the Bald, found at Kasteel Westhove (Domburg, Zeeland) 2000. Private collection. Photograph www.muntenbodemvondsten.nl/index.php?topic=95161.0, 16 March 2013, courtesy of Vincent van Zandwijk

This seems the appropriate place to examine the single finds of the variant Melle monogram coins with an additional cross in the place name, since they were minted at a similar time to the GDR coinage. I know of 25 Continental single finds, just 2 of them from the Netherlands and the rest all from France. The latter are not, however, evenly spread across France: no fewer than 20 are from the *région* of Poitou-Charentes,[41] the other three from the neighbouring *département* of Maine-et-Loire. It is therefore quite remarkable that there are two finds in the Netherlands: from Franekeradeel and Kortehemmen, both in Friesland.[42] Given the complete lack of finds from the rest of France, Belgium, or the southern Netherlands, how did these two coins end up here? The likely answer to this question is suggested by the two single finds of this type from England (Chigwell in Essex and South Pickenham in Norfolk),[43] as well as the hoards found in England and Scandinavia mentioned earlier. Just as those MET+VLLO coins were almost certainly taken to the British Isles by Scandinavian raiders, the probable explanation for the occurrence of these two coins in Friesland is that they were similarly carried here by Scandinavians, who we know were living in the Netherlands at the time (Coupland, 1998; Besteman, 2006-2007).

Could the same therefore be true of the 13 or 14 GDR coins found at Domburg, which is, as has been emphasised, a surprisingly large number: do these similarly represent Viking loot? After all, several Scandinavian objects have been found on Domburg, including hairpins and other toiletry items (Willemsen, 2004: 147). In this case the evidence is less clear, since whereas the Melle coins with an additional cross evidently did not circulate much beyond a small currency pool around the mint itself, the GDR coins found at Domburg were minted at Bruges, Ghent, Laon, Le Mans, Orléans (two), The Palace (one or two), Quentovic, Reims, St-Quentin, Valenciennes and *Curtisasonien* (two), a Neustrian mint whose precise location is still uncertain (Coupland, 2002: 232,

[41] Two from Charente, five from Charente-Maritime, five from Deux-Sèvres, seven from Vienne, and one from somewhere in Poitou-Charentes.

[42] NUMIS 1004892 (Franekeradeel), 1073768 (Kortehemmen).

[43] EMC 1989.0073, 1994.0174.

plus additions). While these coins could theoretically have been taken from the Continent as loot by the Great Viking Army, the location of most of these mints in the north of the West Frankish kingdom means that the coins did not have far to travel, and could equally plausibly have found their way to Domburg through internal Frankish trade.

The evidence of single finds: the case of Wijk bij Duurstede

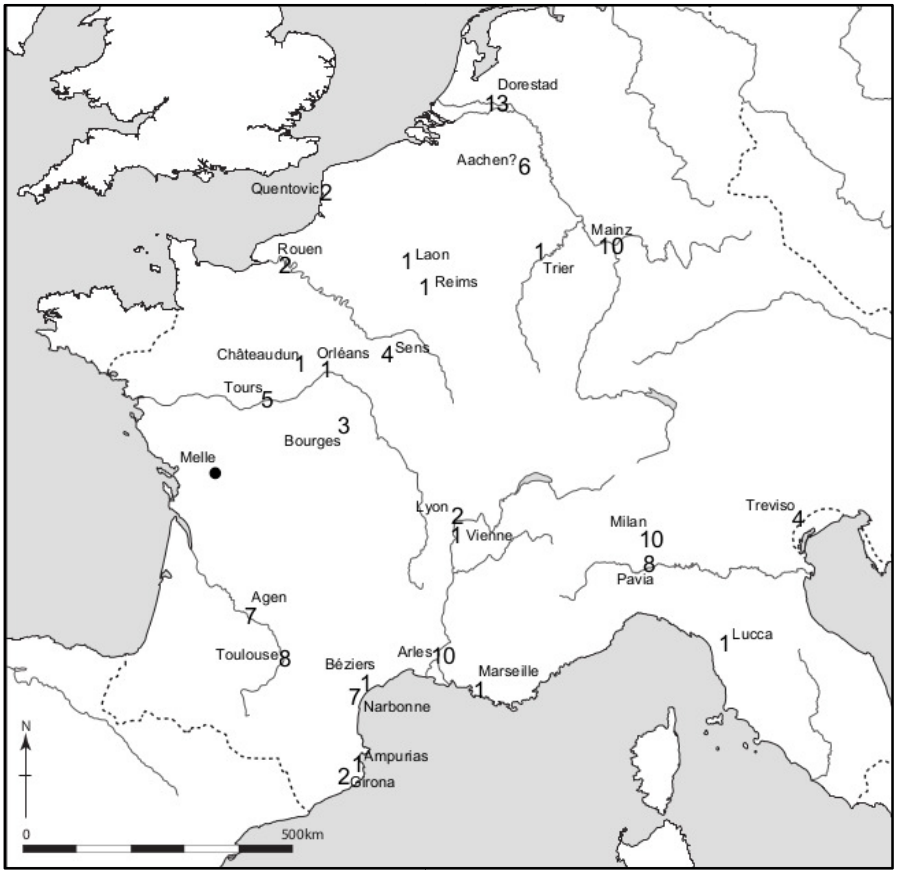

Fig. 28: Single finds of monogram coins of Charlemagne at Wijk bij Duurstede (TVNNIS *and* EXMETALLONOVO *have been omitted due to their uncertain locations*)

At Wijk bij Duurstede the situation is precisely the opposite of that at Domburg, with the 116 monogram coins of Charlemagne from mints other than Melle outnumbering the total of 12 early coins of Charles the Bald by a factor of ten to one. In addition there is just one recorded find of a coin of Pippin II

of Aquitaine, 17 coins of Lothar I, and no GDR coinage at all (Coupland, 2002: 230, with additions). This reflects the trend that can be observed over the course of the period 751-864, with Dorestad apparently experiencing a remarkable expansion in the latter part of Charlemagne's reign, growth continuing in the 820s, but then a rapid decline in the 840s, with no evidence for coin production at the site and no finds from the site after 855, apart from a single fragment of a possible local coinage minted by Arnulf of Carinthia (887-899) at the end of the century (Coupland, 2010a and 2010b, correcting Coupland, 1988 and 2002; van Herwijnen & Ilisch, 2006). What is more, these monogram coins of Charlemagne were reaching the port from all over the empire, matching the picture of widespread circulation of the type seen above in contemporary hoards (Fig. 28).
It is therefore not unreasonable to assume that the proportion of METVLLO monogram coins found at Wijk bij Duurstede matches that of the other monogram coins of Charlemagne and early coins of Charles the Bald found at the site. That would mean that of the 15 deniers and 25 oboles of the METVLLO type, 36 are likely to be coins of Charlemagne, and just 4 minted by Charles the Bald.
The two coins illustrated here are consistent with this, in that one was discovered in a context which supports an early dating (Fig. 3), while another is attributable to Charlemagne on the grounds of its primitive style (Fig. 15).

Single finds from Schouwen, the rest of the Netherlands and Germany

As was noted earlier, Table 7 reveals that Domburg and Wijk bij Duurstede are anomalies in the context of the Netherlands, while the finds from Schouwen mirror those from the rest of the country, with more than five coins of Charlemagne found to every one of Charles the Bald (11:2 at Schouwen, 44:8 elsewhere). The larger number of single finds and much larger number of find spots makes this ratio a significantly more reliable guide to the probable proportions of these coins in general circulation in the Netherlands than the hoards listed in Tables 1-3. On this basis it is therefore likely that the one monogram obole of Melle found at Schouwen was struck by Charlemagne, and that of the 16 deniers and 10 oboles of the METVLLO type found elsewhere in the Netherlands, some 22 should be ascribed to Charlemagne, compared with around 4 to Charles the Bald. As was mentioned earlier, the fact that at Castricum (Noord-Holland) the Melle denier was found together with a monogram coin of Charlemagne from Pavia indicates that it, too, is almost certainly from the early period (note 3 above). Apart from rare exceptions like this, determining whether a specific individual coin should be attributed to Charlemagne or to Charles the Bald is, as was indicated at the start of the article, currently impossible. But at least this analysis of hoards and, more significantly, single finds, gives a

well-founded basis for making general assumptions about the attribution of the METVLLO coins which keep turning up in Dutch contexts.

Finally, in neighbouring Germany the number of single finds from all periods is significantly smaller, reflecting in part my lack of familiarity with German detector sites, the absence of an equivalent to NUMIS, and also undoubtedly the more limited use of coin in the Frankish east at this time, as is evident not only from the smaller number of hoards but also the paucity of mints (Coupland, 2014d: 277). The find data gives a not dissimilar picture to that in the Netherlands, however, as is to be expected from what was revealed about the circulation of these coinages in the hoard evidence set out earlier. Thus the 17 finds of monogram coins of Charlemagne compared to 5 of Charles the Bald (and no finds at all of coins of Pippin II) suggest that the great majority of the 10 deniers and 2 METVLLO oboles found on German soil were, like the bulk of those unearthed in the Netherlands, struck by Charlemagne. As in the Netherlands there is some supporting evidence to confirm this, in the form of the numismatic and archaeological contexts. Thus in Münster cathedral the presence of a penny of Charlemagne from Toulouse alongside the METVLLO denier found there (Fig. 4) demonstrates that the coin of Melle can similarly be dated to 793-814 (note 3 above), while at Paderborn the fragment of a Melle *denarius* was found during excavation of the cathedral which gave an archaeological dating to the reign of Charlemagne (Berghaus, 1973: 27).

Conclusion

It is to be hoped that further detailed study of the style and composition of the METVLLO coinage might in time permit the attribution of individual coins, but for the moment this analysis of their distribution both in hoards and as single finds offers useful guidance to permit the tentative attribution of at least some of these coins of Melle. Those turning up in hoards containing only this type can thus be judged with some confidence to have been minted by Charles the Bald, while stray finds from Wijk bij Duurstede can virtually all be attributed to Charlemagne, as can the great majority of single finds from the Netherlands (apart from the anomalous beach at Domburg) and, with a slightly lesser degree of confidence, Germany.

Abbreviations

MEC: Grierson & Blackburn, 1986
MG: Morrison & Grunthal, 1967

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