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Language, law and loanwords in early medieval Gaul: language contact and studies in Gallo-Romance phonology

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Citation

Kerkhof, P. A. (2018, October 9). *Language, law and loanwords in early medieval Gaul: language contact and studies in Gallo-Romance phonology*. Retrieved from <https://hdl.handle.net/1887/66116>

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Issue Date: 2018-10-09

6 Between coulter and carruca in the Early Middle Ages

Introduction

Since the early bronze age, European farmers have tilled the land by using a plough to break open the soil before sowing the crops. In the millennia that followed, ploughing terminology improved slowly but steadily as new arable land was claimed (cf. Andersen e.a. 2013). A primitive plough type might lie behind the Proto-Germanic word **hōhan-* (cf. Goth. *hoha* ‘plough’) that can be connected to Proto-Slavic word **soxá* (cf. Old Russian word *soxá* ‘stake, plough’), a word that denoted both a wooden stake and a plough. Also the Proto-Indo-European etymology of the word shows that we are dealing with semantic narrowing from an older meaning ‘branch’ or ‘wooden stick’ (cf. Skt. *śákhā* ‘branch’, Lith. *šakà* ‘id.’, Derksen 2015: 439).

In the Roman period, farmers were using the scratch or ard plough that consisted of a wooden beam to which an obliquely placed share-beam and share were connected. Although different variants existed, the scratch plough that the Romans used was in principle the same tilling implement that the Germanic peoples used. We may note that Latin and the Old Germanic languages share an inherited formation for this plough type, implying that the plough that this formation referred to might reach far back into European prehistory (cf. Adams 1997: 434).

- Latin *arātrum* < PIE **h₂erh₃tróm*
- PGm. **ardra-* (cf. ON *arðr*) < PIE **h₂erh₃tróm*

Pliny recounts (*Naturalis Historia* 18: 272) that in his time an improved plough from Gaulish Rhaetia was gaining ground; a plough with wheels that was locally called *plau morati*, a word whose etymology is as of yet obscure.¹⁶⁷ We do know the later Gallo-Romance name for this wheeled-plough which was *carrūca*, a word that consisted of the Celtic root **karro-* ‘wagon’ plus the Celtic diminutive suffix **-ūka* (cf. OIr. *carr*, MW *carr* ‘id.’, see Matasović 2009: 191). Therefore originally the word *carrūca* probably meant ‘cartlet’ in Gaulish.

From the Carolingian period onwards, the word *carrūca* came to denote the heavy wheeled plough in contrast to the scratch plough that was still called *arātrum*. The original meaning ‘cart’ was also maintained, as is clear from the reflexes of *carrūca* in Old French and Old Provençal.

OFr. *charrue*, OProv. *carruga* ‘heavy plough, cartlet’ (FEW 2: 424)

¹⁶⁷ If Baist (1886: 285–286) is right in arguing that *plau morati* should be read as *ploum rhaeti* ‘rhaetic ploum’ it may contain the same etymon as the Germanic word **plōga-*, Langob. *plouum* (Edictum Rothari, 7th c. CE), OHG *pfluog*, OE *plōg* (see also Blažek & Dufková 2016).

It has been assumed that the Germanic word **plōga-* ‘plough’ (cf. OHG *pfluog*, ON *plógr*, OE *plōg* ‘id.’) was the Germanic term for this new heavy plough type.¹⁶⁸ When the heavy plough spread across Central Europe, Germanic plough terminology likewise spread to the Slavic speaking regions where the word for heavy plough was adopted as CSL. **plugъ* and the word for plough beam as CSL. **grędelъ* (Pronk-Tiethoff 2013: 86-87, 105).

This chapter will try to establish whether we can find linguistic traces of the proliferation and use of the heavy plough in Merovingian Francia, that is present-day France, the Low Countries and Germany. We will look for these traces in the Old High German glosses and the early medieval Germanic law codes. As such, the investigation in this paper may complement existing accounts both from the historiography of medieval technology and the archaeological record.

Technology

Before exploring the traces of the heavy plough in the historical linguistic record, we should first consider the technological aspects of the plough and its respective components. The antique scratch plough was relatively simple in design. It roughly consisted of four main parts, here listed in the order in which they occur when we start from the yoke to which the draft animals were attached and end with the share that cuts the soil:

- Yoke beam (Lat. *tēmō*)
- Plough beam (Lat. *būris*)
- Share beam (Lat. *dentilia*)
- Share (Lat. *vōmer*)
- Handles (Lat. *stiva*)

In the antique scratch plough, the yoke beam (Lat. *tēmō*) was the wooden part that connected the plough to the yoke. The yoke beam was connected to the plough-beam (Lat. *būris*), which, in turn, was connected to the share-beam (Lat. *dentilia*). In the share beam, the plowshare (Lat. *vōmer*) was embedded. Additionally, Roman ploughs had ridging implements consisting of ears (Lat. *aures*), a ridging-board (Lat. *tabellum*) or an asymmetrical share which could throw the soil on either side of the plough (White 1967: 139-140). The handles of the plough (Lat. *stiva*) stuck out in the opposite direction of the plough share and allowed the farmer to control the depth of the furrow. In one of the variants of the scratch plough, the Roman bow ard, the handles also served as a ploughtail that ensured stability. This explains why the same word (Lat. *stiva*) was used for both the handles and the plough tail.

¹⁶⁸ In some works (e.g. Comet 1997; Raepsaet 1997) the word ‘ard’, i.e. scratch-plough, is contrasted with the plough, i.e. heavy wheeled-plough. Because in the tradition of Indo-European linguistics, the ard-plough is also considered a plough, I consider the distinction between ard and plough not conducive to the discussion.

In comparison to this Roman scratch plough, the Gallo-Roman *carrūca* ‘heavy plough’ was definitely more complex. One of the innovations of the heavy plough was the use of the coulter (Lat. *culter*¹⁶⁹ ‘knife’) (Raepsaet 1997: 44), consisting of an iron knife stuck through a hole in the ploughbeam. It vertically cut into the ground and cleared away the roots of weeds before the ploughshare followed suit. The coulter was especially needed for heavier soils and was therefore mainly used in northwestern Europe (White 1967: 133). The origin of this ploughing innovation is disputed, with most scholars placing it in the Germanic and Celtic speaking lands to the north of the Roman empire; we may note that early coulters from the second to the fifth centuries CE have been excavated in Hungary, Germany, northern France and the British isles (Andersen e.a. 2013: 8).

Another innovation was the mould-board, a broad board-like implement attached to the share beam that dragged over the ground and turned the soil after the share had entered (Raepsaet 1997: 43). The fact that Isidore of Sevilla does not mention a mould-board or even a ridging-board among the components of a plough in his sixth century encyclopedia (Etymologies XX, cf. Throop 2005) might indicate that in his time the mouldboard was not yet common. Finally, we should mention the wheels of the Early Medieval *carrūca*. The wheels, attached to a fore-carriage under the plough beam, allowed the plough to become heavier since they lessened the burden to the animals. They also allowed for more work comfort and more control over the ploughing depth.

In Early Medieval continental manuscripts only the scratch plough without mould-board was regularly depicted. The reconstruction drawing of an Anglo-Saxon wheeled-plough in fig. 4 is based on one of the earliest depictions (MS Cott. Tiberius B V) of this new plough-type in its entirety. It was the use of the heavy plough in combination with new crop rotation systems that allowed for better harvests and bigger grain yields in the High Medieval period (Raepsaet 1997: 60; Andersen e.a. 2013: 2-3).

In Early Medieval Gaul, we see the replacement of the scratch plough by the heavy plough reflected in the replacement of Old French *arere* ‘scratch plough’ (< Lat. *arātrum*, FEW XXV: 83) by Old French *charrue* ‘heavy plough’ (< Gallo-Lat. *carrūca*). A continuation of the Old French word *arere* survives in the northeast corner of the Gallo-Romance dialect continuum in East Walloon *erére*,¹⁷⁰ where it is used as the default word for plough (Wartburg 1928: 123). The survival of the Latin word in Walloon points to the possibility that for some time the two kinds of ploughs were used alongside each other (cf. Raepsaet 1997: 45;¹⁷¹ Comet 1997: 24).

¹⁶⁹ The word *culter* in the meaning ‘coulter’ is not attested in Classical Latin, its occurrence in Pliny is due to a corruption in the text (White 1967: 133).

¹⁷⁰ We should note that influence of MidDu. *erren*, MHG *ern/eren/erren* ‘to plough’ might have facilitated the survival of the word in Walloon (De Vaan p.c.).

¹⁷¹ Raepsaet (1997: 45) calls attention to the fact that for various economic, geographic and botanical reasons the heavy plough and the ard could be used alongside each other and we cannot associate the use of either plough with a specific

An interesting complication of this general picture is that archaeologists have recently identified an intermediary plough type between the Germanic-Celtic heavy plough of Late Antiquity and the Carolingian heavy plough of the High Middle Ages (cf. Thomas e.a. 2016). This so-called ‘swivel-plough’ had a moveable mould-board and ‘floating’ coulter. It was called a swivel plough because the coulter could be placed on either side of the plough beam. In principle, the swivel plough can be regarded as an early version of the Carolingian heavy plough.

We may also note that Old French terminology associated with ploughs and ploughing kept a distinctively Gaulish signature. In addition to the semantic broadening of Gaulish **karrūka* to include the meaning ‘heavy plough’, we can identify the following Gaulish lexical relics among the Gallo-Romance words for plough parts and field cultivation.

- | | |
|---|---|
| • Gaul. <i>*sukko</i> ‘pig-snout’ | > OFr. <i>soc</i> ‘plough share’. |
| • Gaul. <i>*klēta</i> ‘hurdle’ | > OFr. <i>claie</i> ‘share beam’ |
| • Gaul. <i>*rika</i> ‘furrow’ | > OFr. <i>raie</i> ‘furrow, ditch’ |
| • Gaul. <i>*kambetta</i> ‘crooked implement’ | > OProv. <i>cambeta</i> ‘coupling of the plough’ |
| • Gaul. <i>*gasko</i> ‘ard plough’ | > OFr. <i>gaskiere</i> ‘plough land’ ¹⁷² |
| • Gaul. <i>*teimōn</i> ‘plough beam’ ¹⁷³ | > OFr. <i>timon</i> ‘plough beam’ |

It is possible that some of these Gaulish words were already in use in Roman times as plough terminology. This raises the question at what point the Gallo-Romans started to use the word *carrūca* for heavy plough. Curiously, in the Early Medieval law codes the Gallo-Latin word *carrūca* still exclusively referred to a cart:

- In the Salic law, a *carrūca* drawn by a horse is mentioned (Pactus Legis Salicae c. 63, Eckhardt 1969: 101). It is clear from the fact that the *carrūca* is drawn by a horse and not by a team of oxen that we are dealing with a cart here (*contra* Schmidt-Wiegand 1981: 21).
- In the Alamannic laws, the theft and the breaking of the front and rear wheels of a *carrūca* is mentioned (Pactus Legis Alamannorum c. 20, Eckhardt 1966: 26). The heavy wheeled plough was two wheeled which also makes it clear that we are dealing with a cart instead.

monoculture. Sigaut (1985) however points out that the cultivation of oats was closely associated with the new heavy wheeled-plough.

¹⁷² The Gaulish word **gasko* (cf. OIr. *gescae* ‘branch;’) would show the same semantic development as Gm. **hohan-* from ‘twig, branch’ to ‘ard plough’ (see FEW IV: 54).

¹⁷³ It has been argued that Lat. *tēmo* was borrowed into Gaulish as *teimon* which would explain the /i/ vowel of the Old French form *timon* ‘share beam’ (FEW XIII: 168).

This accords well with the observation that in the Old High German glosses, Gallo-Latin *carrūca* is exclusively translated with words meaning ‘wagon’ or ‘cartlet’ and not once with the meaning ‘plough’ (AAG XII: 151).

- OHG *wagan*
- OHG *reitwagan*
- OHG *karra*
- OHG *karruh*

It is only in a ninth century Carolingian capitulary (Capitularium Pistis, 869 CE) that we first find the word *carrūca* associated with ploughing. In this legal proclamation, it is used in the phrase *carruca indominicata*, which is interpreted by Niermeyer as ‘demesne arable field, as much land as can be ploughed by one wheeled plough in one season’ (cf. Niermeyer 1976: 148).

It seems therefore unlikely that in the Merovingian period the word *carrūca* had not yet acquired its meaning ‘heavy plough’ since two hundred years later it could be used as a land measure. This problem can be solved if we assume that we are dealing with a difference in register; in the written acrolect of Merovingian Gaul, the Latin word *arātrum* still covered all types of ploughs. In the spoken Gallo-Romance basilect however the two plough types may have already been distinguished, with the word *carrūca* denoting the heavy wheeled plough and the word *arātrum* the scratch plough. Our conclusion must be that the Gallo-Latin word *carrūca* does not help us in identifying the use of the heavy wheeled plough.

Vernacular plough terminology

A glimpse of the Germanic terminology for plough components can be caught from the Old High German glosses. In the case of the Latin term for ploughshare (Lat. *vōmer*), the scribes who entered the Old High German glosses made the following equations (AAG XII: 480):

- Plough share (Lat. *vōmer*)
 - OHG *waganso*¹⁷⁴ ‘share’
 - OHG *karst* ‘pick’
 - OHG *scaro* ‘share’
 - OHG *seh/seho* ‘pick-axe’

It is possible that different kinds of shares hide behind these different terms. OHG *seh* and OHG *karst* could have referred to a specific kind of ploughshare that hacked into the soil whereas a OHG *scaro* could have been associated with horizontal share-beams where the share

¹⁷⁴ OHG *waganso* is an etymological cognate to Latin *vōmer* (i.e. PGm. **wagnisan-*, cf. ON *vangsi*, ModNo. *vagnse*, see Kroonen 2013: 565), i.e. PIE **uog^{wh}-*.

cut into the soil. Still, we should also consider the possibility that the difference between *karst* en *seh* tells us nothing and some glossators were just confused about what plough part Latin *vōmer* actually was.¹⁷⁵

For the other plough parts we can draw up the following list of correspondences between the Latin terms and the Old High German words with which they were equated.

- Yoke beam (AAG XII: 448)
 - OHG *dīhsila*
 - OHG *grintil*
 - OHG *langwid*
- Plough-beam (AAG XII: 140)
 - OHG *pfluoghoubit*
 - OHG *pfluogeshoubit*
- Share beam (AAG XII : 435-36).
 - OHG *riostar*
- Plough tail (AAG XII: 435)
 - OHG *geiza*
 - OHG *pfluogeszagil*
 - OHG *pfluogsterz*
- Plough handles (AAG XII: 435)
 - OHG *geiza*
 - OHG *riostar*

Interesting is the polysemy of OHG *riostar*, referring to both the share beam and the plough handles. This makes sense if we take into account that in many depictions of medieval ploughs we see that the share beam and the plough handles are part of the same wooden component. When in the course of the Early Middle Ages the use of the mould-board became more common, the meaning of OHG *riostar* might have been extended to include the mould-board. By the Middle High German period this extension was a fact since MHG *riester* could refer to all parts of the plough that were attached to the share beam.

Coulter

It is clear from the evidence of the glosses that none of the above described words exclusively refers to a heavy plough and all of them may just as well refer to the scratch plough. The only plough part which can be directly tied to a heavy plough is the coulter, a knife-like plough component that was not part of the Roman plough (see Thomas e.a. 2016). The design of the

¹⁷⁵ The fact that the Latin word is not continued in Pre-French, the Romance language that German speakers were probably most familiar with, would not have made it any easier (Meyer-Lübke 1911: 722, REW 9448).

bow ard, the most common variant of the scratch plough, was virtually incompatible with the use of a coulter because of its curved plough beam. It is therefore likely that if we can establish that a Germanic word for coulter was in use in the Merovingian period, we might take this as evidence for the use of a heavy wheeled plough.

In the Old High German glosses, the vernacular term for coulter is hard to identify because most of our glosses come from copies of Christian-Latin texts that do not mention coulters.¹⁷⁶ Still, we may suspect that some Old High German words for ‘coulter’ are given as glosses to Latin *cultrum* ‘knife’, which in later Medieval texts does refer to the coulter.¹⁷⁷

- Coulter (AAG XII: 191).
 - OHG *seh*
 - OHG *mezzisahs*?
 - OHG *scaro*

OHG *seh* ‘pick’ (← Rom. **seka* < Rom. **sekare* ‘to cut’) was continued in Middle High German *sech* ‘coulter’ and still survives in Modern German *Sech* where it also has this meaning. It is therefore possible that already in Old High German the word *seh* had the meaning coulter. In the German speaking Rhineland also a OHG form **kolter* may have existed because the distribution of the etymon in Old English,¹⁷⁸ Middle Dutch and Middle Low German makes it likely that the word belonged to the so-called Rhineland lexical transfers from Late Antiquity (see Müller & Frings 1968: 207–09).

The gloss *mezzisahs* ‘meat knife’ on the other hand looks like a literal translation of the Latin meaning ‘knife’ and probably did not refer to the coulter at all. The glossing of *cultrum* with the OHG word *scaro*, a word mainly attested in the meaning ‘ploughshare’ (Lat. *vōmer*), may have been due to the possibility that both a ploughshare and a coulter were considered ‘knives’ on a plough. It is however also possible that the glossator did not know what Latin *vōmer* actually referred to which may have led him to conflate the terms.

Old Frankish plough terminology?

We can now take a look at the Salic Law where some scholars have assumed that an Old Frankish word for plough and an Old Frankish word for coulter can be found. Schmidt-Wiegand (1981: 18) argued that a Frankish word for plough is present in a law article on pushing a plough from another man’s field.

¹⁷⁶ This is understandable since most of these texts were written in southern Europe where the coulter did not exist.

¹⁷⁷ The confusion between Lat. *culter* and Lat. *cultrum* is undubitably due to Pan-Romance apocope of final **-um* which rendered Lat. CULTER → Rom. **kultre* and Lat. CULTRUM → Rom. **koltro* almost identical.

¹⁷⁸ The meaning ‘coulter’ for the Old English word is secured by its use in Ælfric’s colloquy: “Se smiþ secgð, hwanon sylan scear oþþe culter, þe na gade hæfþ buton of cræfte minon?” [ÆColl 0142 (220)].

Salic Law (Pactus Legis Salicae c. XXVII)

§ 16 *Si quis aratro de campo alieno anteostauerit aut iactauerit uel testauerit, mallobergo auuerphe* (C6), *sunt denarii DC qui faciunt solidos XV culpabilis iudicetur.* (Eckhardt 1962: 43).

If someone will have pushed a plow from another man's field or has thrown it off or he objects against it, in judicial speech *auuerphe*, these are six hundred denarii which constitute 15 solidi if he is judged guilty. (see Drew 1991: 90; Rivers 1986: 69-70).

According to Schmidt-Wiegand, the Frankish word would be hidden in the Malberg gloss <auuerphe> which is found in two manuscripts that belong to Merovingian redactions; the gloss reads <auuerphe> in manuscript C6 (late sixth century) and <anh unerbo> in the Herold manuscript (sixteenth-century print edition, see chapter 1) which led Schmidt-Wiegand to hypothesize that we are dealing with a compound involving the Frankish word **angōn* 'hook' (cf. OHG *ango*).

- MerLat. *angun unuerbo* ← Gm. **angōn* 'plough' + Gm. **werpe* 'throw'

The textual basis for reconstructing this word is uncomfortably small; we are dealing with only two manuscripts that preserve the gloss and in the only medieval one the presumed first element has largely disappeared. Furthermore, Schmidt-Wiegand's assumption that the <h> spelling of the Herold manuscript must go back to an older spelling <ch> for Frankish /g/ is problematic since <h> spellings for <ch> are only found in initial position. In my opinion, it is more likely that the first part of the gloss <auuerphe> contains a Germanic prefix **ā-* (see also ONW s.v. *werf*¹⁷⁹).

The Salic Law has also been thought to contain a word for coulter that would be featured in a law article concerning the theft of another man's '*cultellus*' (cf. Rivers 1986: 111; Drew 1991: 126). This assumption is made by Rivers in his 1986 translation and by Drew in her 1991 translation. In my translation I will use the more neutral term 'knife', which, as I will show, is more appropriate here.

Salic Law (Pactus Legis Salicae, c. LXVd, Eckhardt 1962: 235)

c. 65d. *De cultello sexxandro. si quis alteri cultellum furaverit et ei fuerit adprobatum, ipsum in loco restituat et insuper denarios qui faciunt solidos XV culpabilis iudicetur.*

"on a sexxandro knife. If someone will have stolen another man's knife and it is proven, may he put it back and furthermore pay (600) denaries, which constitute 15 solidi if he is judged guilty."

¹⁷⁹ Consulted at URL:

<http://gtb.inl.nl/iWDB/search?actie=article&wdb=ONW&id=ID5057&article=auuerphe&domein=0&conc=true>

Surprisingly, the law article on the *cultellus* provides a non-latin word in the title (i.e. de cultello **sexxandro**), a word which may very well go back to a vernacular Frankish expression that was corrupted in the Merovingian manuscript tradition. The univerbation should then be ascribed to the Merovingian scribe. This Frankish expression can be interpreted as a Germanic clause including the word **sahs* ‘knife’ and the word **anþar* ‘other’ (cf. Van Helten 1900 § 184). This would allow for the following etymologization.

- Lat. *cultello sexxandro* ← Gallo-Rom. **koltello* + Gm. **sahs *anþars* ‘another’s knife’

Still, it seems unlikely that this law article actually refers to the coulter of a plough. The law article is only found in the Merovingian B10 manuscript and is placed between a preceding article on the appropriation of fallow land and a following article on injuring pregnant women. The place of the article within the mostly thematically organized Salic Law makes an agricultural interpretation very improbable (*contra* Schmidt-Wiegand 1981: 20-21).¹⁸⁰ An earlier occurrence of ‘*cultellus*’ in the Salic law almost certainly refers to a regular knife since it is featured in a law article on fruit trees (*Pactus Legis Salicae*, c. VIII, Eckhardt 1962; 43).

Where are the coulters?

This leads us to another interesting observation; in the law codes of Early Medieval Gaul, the theft of coulters, an essential part of the heavy plough, is ignored. This is of course not significant by itself since the law codes were not meant to be exhaustive. However, the *Lex Burgundionum*, another law code from sixth-century Gaul, likewise ignores the coulter; it is interesting to note that in this law code the theft of a plough share is explicitly mentioned.

Burgundian Laws (Liber constitutionum XXVII § 9)

Si quis ingenuus vomerem furto abstulerit, duos boves cum iunctura et aparatu aratri domino tradere compellatur. (Von Salis 1892: 65).

If a free man will have taken away in theft a ploughshare, may he be forced to give two oxen with yoke and plough to the lord.

This objection becomes more significant if we take into consideration that ploughs in the Early Middle Ages could be left on the field after a day’s work. This habit we find implied in the earlier mentioned article of the Salic Law where the contingency of a farmer throwing a plough from another man’s field is covered.

¹⁸⁰ For this reason, also Schmidt-Wiegand’s assumption that we are dealing with an Old Frankish form ***seh?* (← Rom. **seka*) in the gloss <sexxandro> fails to convince (Schmidt-Wiegand 1981: 20). Note that for a Frankish gloss of the Merovingian period we would expect a form **sek-* with an unshifted /k/.

Other sources from the High and Late Middle Ages tell us that these derelict ploughs ran the risk of being robbed of their shares and coulter; this can be illustrated by an anecdote from the twelfth century *Roman de Rou*, a verse chronicle of the history of the Norman dukes. In one of the passages on the rule of duke Rollo, it is recounted that the peace that Rollo ensured meant that peasants would no longer have to remove the shares from the plough, as was their wont. Any ploughshare or coulter that was stolen would be compensated for by Rollo himself.

Roman de rou (*Roman de Rou* v. 1976-79, Pluquet 1823: 99)

*mal daignera sis fers de sa charue oster,
ne muchier desoz rée, ne a ostel porter,
por creime de larron, ne por creime d'emblem,
mal fera soc ne coltre ne apleit remuer.*

“He need not bother to remove the irons of his heavy plough, nor hide them beneath the furrow, nor carry them home for fear of thieves or taking, he need not bother removing ploughshare, coulter nor *apleit*.”¹⁸¹

We may therefore wonder why the Salic Law does not mention the theft of ploughs nor the contingency that ploughs could be robbed of shares and coulters. The absence in the law code of the theft of a plough is a curious omission for such a valuable tilling implement, but a possible answer to the second question could be that the ploughs of Merovingian Gaul were generally of the scratch or ard plough type, which did not necessarily have an iron plough share and coulter. The possibility that the scratch plough may have been the ‘default’ plough type of Merovingian Gaul, could be connected to the reduction of arable land under cultivation that characterizes the transition from the Late Roman economy to the Merovingian economy (Esmonde Cleary 2013: 271-86). Still, there is of course no way to prove or disprove this in any other way but through archaeological evidence which for this period remains ambiguous (Esmonde Cleary 2013: 452-54). In conclusion, we may remark that the testimony of the law codes from Merovingian Gaul does not provide additional evidence corroborating the use of heavy ploughs. It might rather point to the opposite, that is, to the limited role that the heavy plough may have played in Early Merovingian agriculture.

This is in line with historical research that has argued that the heavy plough only became the main instrument for land tillage in Carolingian times (White 1962; Bloch 1966) and archaeological research that states that only from the seventh century swivel ploughs became more and more common in Merovingian Francia (Henning 2009: 153-58; Thomas e.a. 2016).

¹⁸¹ In the translation of Burgess & Van Houts (2004: 33) Old French *apleit* is interpreted as ‘harness’.

Edict of Rothar

This brings us to a final observation. It has been argued that in the case of northern Italy the historical linguistic record does reflect the introduction of the heavy wheeled plough (cf. Van der Rhee 1970: 109-111; Schmidt-Wiegand 1981). This evidence comes from the seventh century edict of Rothar, a promulgation of Langobardic customary law, where we find the word *plouum* used alongside the Latin word *arātrum*.¹⁸²

Edict of Rothar (Edictum Rothari c. 288, Pertz 1868: 69)

288. *Si quis plouum aut aratrum alienum iniquo animo capellaverit, componat solidos tres, et si furaverit, reddat in actogild.*

If someone will have cut another man's **plovum** or aratrum, may he pay three solidi and if he will have stolen it, may have give it back in compensation.

The word *plouum* is commonly interpreted as a Romance adaptation of Germanic **plōga-*, a word that, as we have argued above, might very well refer to the heavy plough (Van der Rhee 1970: 109-111). The fact that the Langobardic word was taken over by the northern Italo-Romance dialects (cf. the *piodo/piovo* type of the AIS linguistic atlas, map 1434-45) makes it likely that the borrowing of the Germanic plough word was connected with the spread of a new plough type in Italy (Schmidt-Wiegand 1981: 31; Morlicchio 2004: 104).

In northern Gaul, however, hardly any Germanic terminology associated with ploughing was transferred into Gallo-Romance (cf. Gamillscheg 1934: 304; Schmidt-Wiegand 1981: 25).¹⁸³ It is plausible that this difference reflects the fact that the Germanic-speaking and Romance-speaking peoples of the Rhine border and northern Gaul shared roughly the same ploughing technology. In northern Italy however, the heavy plough was relatively unknown and there the influx of Germanic speakers did lead to the adoption of a new plough word.

Conclusion

To conclude, in this chapter I have surveyed the linguistic evidence that can be connected to the proliferation and use of the heavy plough in Merovingian Francia. We have found that the only vernacular plough terminology that can confidently be connected to the heavy plough or swivel plough is the word for coulter. The Old High German glosses allow the

¹⁸² The occurrence of *plovum* in the additions to the *Leges Baiuvariorum* is due to insertions from the Langobardic laws, as shown by Francovich Onesti (1999: 111).

¹⁸³ A notable exceptions would be Old French *haie* 'coupling of the plough' (cf. OFrnk. **hagja*) replacing the above mentioned Gaulish word **kambetta* (cf. FEW XVI: 41).

identification of just one word for coulter, namely OHG *seh*. Another word for coulter, a hypothesized OHG **kolter*, might have been used in the Germanic-speaking Rhineland, although this is uncertain and mainly based on its distribution, that is its occurrence in Old English, Middle Dutch and Middle Low German. We have also noted that the early medieval Germanic law codes curiously ignore the theft of a coulter in their legal provisions on agricultural offenses. This could be interpreted as evidence for the marginal role that the heavy plough may have played in Early Merovingian land cultivation. This situation will have improved in the Late Merovingian and Carolingian period as the 'swivel plough' and the heavy plough became more common.

In this regard, the linguistic record can be argued to complement the archaeological record, that is, its limited reflection of coulter-words and the absence of coulters in Merovingian law codes may reflect an intermediary phase in the evolution of Merovingian land tillage.

Figures

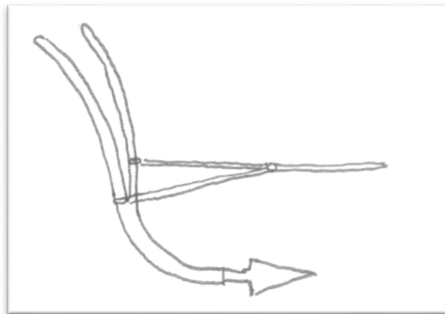


figure 5 'ard plough', based on illustration in f. 106
Utrecht Psalter 9th c. CE

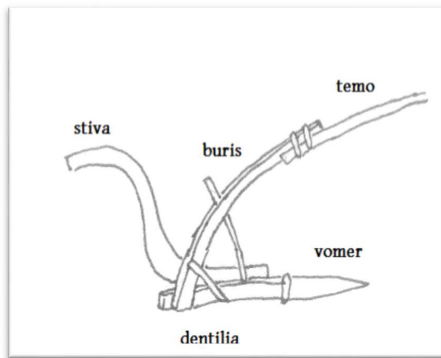


figure 6 Roman arātrum 'bow ard' Cherchel mosaic
4th c. CE

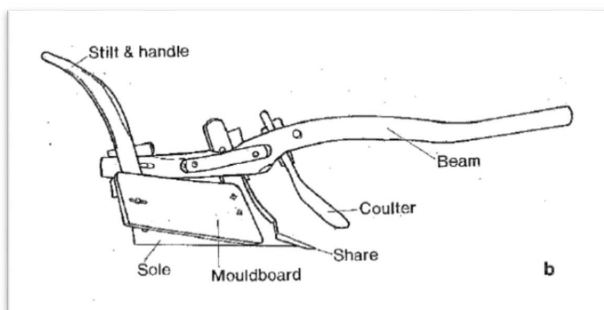


figure 7 Medieval heavy plough. Source: Fowler (2002)

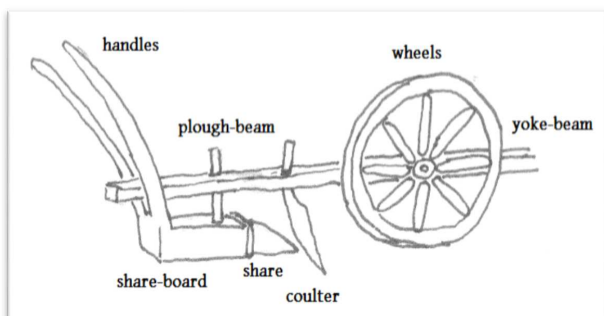


figure 8 Anglo-Saxon heavy wheeled plough based on illustration in MS
Cott. Tiberius B V, 10th C. CE