

The Long Morning of Medieval Europe

New Directions in Early Medieval Studies

Edited by

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Ashgate: Aldershot 2008

Chapter 2

Strong Rulers – Weak Economy? Rome, the Carolingians and the Archaeology of Slavery in the First Millennium AD

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Rome did not die in a battle. Rome's death lasted centuries. It survived for a thousand years in Byzantium, and Charlemagne attempted a rebirth in the eighth century. Curious though it may seem, important elements for understanding Rome's decline emerge from an analysis of what happened, or more precisely, of what went wrong with Europe's economy when powerful and, militarily, successful Frankish rulers tried to reinvent the Roman villa estate.¹ Conversely, how the late antique agrarian economy fostered Rome's downfall, at least in the West, illuminates the Carolingian situation. This chapter will use archaeological data to explore comparatively the problem of productivity in the late Roman and Carolingian countrysides, focusing on the interplay of coercion, the logic of farming organization, and technology.

Archaeology addresses this question by analyzing material remains of late Roman and early medieval times. Founded on natural sciences such as botany, soil micromorphology, zoology, chemistry and climatology, the results of settlement archaeology are particularly important. Nor can archaeologists ignore recent research based on written sources. We should not misconstrue a dense written record as the objectively illuminated reality of that time, and we underestimate the tight connection of medieval writing and power structures at our peril.²

¹ For the late antique roots of the Carolingian estate, see Peter Sarris, "The Origins of the Manorial Economy: New Insights from Late Antiquity", *English Historical Review*, 69 (2004): 279–311.

² I am most grateful to Mike McCormick and the undergraduate and graduate students and colleagues of Harvard's History Department for a semester of remarkable discussions of the early medieval written record, its relations to archaeological findings, and the advances of scientific archaeology. This unforgettable experience peaked in the New Directions conference and two interdisciplinary workshops I had the pleasure of organizing with Mike at Harvard in autumn 2005. I am especially grateful to Jennifer Davis and Mike for their patience with an archaeologist's foibles.

Writing was in the hands of the mighty.³ It is not therefore impossible that the eighth century's sharp increase in documents such as polyptychs, donations or capitularies reflects the growing economic power of the Carolingian high nobility rather than a more productive organization of the whole society. Overlooking this simple insight, earlier work has sometimes tended to equate abundant charters and economic efficiency. In light of the scarce written evidence between 500 and 700 AD, we should be cautious about assuming an economic "awakening of the eighth century", so long as we do not really know how economic (especially rural) organization worked in the first post-Roman centuries, that is before the Carolingian manor spread over Europe.⁴ In the light of archaeology, it could turn out that the establishment of the Carolingian villa, the bipartite estate or manor, was merely an awakening of power structures whose impact on the rural economy was more quantitative than qualitative.

When evaluating the success or failure of modern organizations, it seems normal to begin with their economic efficiency and their ability to react flexibly to changing challenges. How can we consider the end of the "Roman empire as a business concern" or its "hostile takeover" by new social forces without such an economic perspective? Territorial conquest as it occurred in the late Roman West does not necessarily transform the economy. Yet the very principles of agriculture, the basic form of economic production of the pre-modern world, changed fundamentally in this period. Judging from the growing archaeological record, rural *villae* and *servi*, villas and slaves, survived in the Frankish heartland mostly as terms in the written records. In contrast, rural settlement patterns and social structures as they appear on the ground, for instance in cemeteries as well as in agricultural practices, indicate a broad new logic of organization.⁵

³ For more details, see Walter Pohl and Paul Herold (eds), *Vom Nutzen des Schreibens*, Denkschriften der Österreichischen Akademie der Wissenschaften, Philosophisch-historische Klasse, 306 (Vienna, 2002) and Rosamond McKitterick (ed.), *The Uses of Literacy in Early Medieval Europe* (Cambridge, 1995).

⁴ Jean-Pierre Devroey, "The Economy", in Rosamond McKitterick (ed.), *The Early Middle Ages: Europe 400–1000* (Oxford, 2001), pp. 97–129, here p. 104.

⁵ Chris Wickham's discussion of the "logic of the economic system" is most stimulating: *Land and Power* (London, 1994), pp. 77–98. For him, in the second century the slave mode of production declined, which, at its core, had consisted of the agricultural use of chattel slaves. The new system that unfolded in the second and third centuries would have consisted of: "the combination between a greater autonomy for what can now be called peasants, the dominance of an economic system based essentially on subsistence agriculture, and the end of effective intervention by landlords in the procedure of production ..." (p. 85). Wickham is skeptical that late or provincial villas can be associated with slavery (for example, p. 87: "Who is to say that every villa was a slave villa?"), but the archaeological finds presented in this paper suggest coerced labor in the late Roman countryside. From an archaeological perspective, I would hesitate to locate the crucial turning point in the second and third centuries inside the Roman Empire. I have argued that the new economic logic did indeed begin then, but outside the empire, and that it gradually expanded into former Roman territories in the fourth and fifth centuries: Joachim Henning, "Germanisch-romanische Agrarkontinuität und -diskontinuität im nordalpinen Kontinentaleuropa — Teile eines Systemwandels? Beobachtungen aus archäologischer Sicht", in Dieter Hägermann, Wolfgang Haubrichs and Jörg Jarnut, with Claudia Gieffers (eds), *Akkulturation — Probleme einer germanisch-romanischen Kultursynthese in Spätantike und frühem Mittelalter*, Ergänzungsbände zum

What are the reasons for this reorganization that had begun some hundred years before Clovis conquered Gaul?

The nature of the reorganization itself may supply the answer. The shift from the classical Roman villa to the use of tenant labor in the late empire was an important step toward a new organization of the rural world. But was this change a complete turnaround, which solved *the* basic problem of earlier villa organization, namely how to increase the productivity of rural labor in an essentially exploitative system? The use of slave or dependent labor could be highly oppressive and required a combination of incentives and coercion. Roman agricultural writers had long discussed this problem with surprising frankness. Columella, for instance, advised winning over selected slaves to the owner's side by intensive conversation and convincing them that their good work was indispensable for the whole villa community. Unfortunately, this approach probably worked mainly on slaves of rather limited intelligence. The other slaves – the critical ones for improving productivity, for example in the highly sophisticated vineyards – wound up doing their fieldwork in chains.⁶

Archaeological finds of Roman-era slave chains (see Figure 2.1) throw doubt on the idea that a shift to the self-managing *colonus* on late antique estates actually solved the problem of servile productivity.⁷ Although Rostovtzeff presented only those well-known first-century iron shackles from the villas around Pompeii, iron shackles and fetters are not confined to the first two

Reallexikon der Germanischen Altertumskunde, 41 (Berlin, 2004), pp. 396–435. On the other hand, Wickham's description of the "new logic" seems an excellent starting point for defining the post-Roman economic system.

⁶ Columella, *De re rustica* 1.3 and 7–8. See also Andrea Carandini, "Columella's Vineyard and the Rationality of the Roman Economy", *Opus*, 2 (1983): 177–203.

⁷ Since 1990, I have identified over 400 iron slave or prisoner shackles from all over Europe, from the pre-Roman Iron Age through around 1500 AD. I am especially grateful to F. Hugh Thompson (d.1995), who had independently begun collecting iron shackles from Roman and pre-Roman times, for a most generous exchange of archaeological data between 1991 and 1993. Due to technical problems and errors that arose in the posthumous publication of his *The Archaeology of Greek and Roman Slavery* (London, 2003) and in his late article "Iron Age and Roman Slave-Shackles", *Archaeological Journal*, 150 (1993): 57–168, his typology and datings require revision in small but sometimes decisive details. My own study, which focused on post-Roman shackles ("Gefangenenfesseln im slawischen Siedlungsraum und der europäische Sklavenhandel im 6. bis 12. Jahrhundert", *Germania*, 70 (1992): 403–26), probably arrived too late for him to fully exploit. Earlier (William H. Manning, *Catalogue of the Romano-British Iron Tools, Fittings, and Weapons in the British Museum* (London, 1985), pp. 61–4) as well as more recent efforts to classify Roman shackles (Ernst Künzl, "Schlösser und Fesseln", in Ernst Künzl, *Die Alamannenbeute aus dem Rhein bei Neupotz*, Monographien des Römisch-Germanischen Zentralmuseums, 34 (4 vols, Mainz, 1993), vol. 1, pp. 365–78), either rely on too small a selection (Manning studies only Roman material from the UK) or seem too general (Künzl only distinguishes between two types, and misidentifies some objects, for example an animal chain from the iron hoard of Brović in Serbia; the objects from Mannersdorf in Austria are plow, animal and kitchen chains). My new, more detailed typology incorporates as many aspects as possible of Thompson's classification and combines these with my organization of the post-Roman material collected in central and eastern Europe (Henning, "Gefangenenfesseln"). The full publication with classification and detailed dating of the abundant material is in preparation.

centuries AD and their “plantation slavery”.⁸ When, in the later third century, Germanic invaders surprised and devastated the Roman farmhouses of the western provinces, the farms’ cellars were filled not only with iron tools, but also with slave chains (see Figure 2.2).⁹ Afterwards some buildings of such former villas experienced new and different uses. Rural populations occupied former villa sites, although some impressive building compounds, sometimes even palaces (which typically lacked production installations) still existed in the countryside.¹⁰ The period of the second Germanic wave of devastation of the mid-fourth to the early fifth century produced an archaeological picture of shackle finds that differs surprisingly little from earlier times.¹¹ Coins assign the best-dated examples of such chains to the second half of the fourth century in a late Roman well on a Rhenish villa site, and in a Roman iron hoard uncovered in the Palatinate near a villa that might still have been functioning in the fourth century.¹² The archaeological data from some 18 villa sites that mostly date from the earlier third through the fourth centuries is revealing. Even more shackles and related objects come from late antique *vici* (non-agrarian hamlets, small

⁸ Michael Rostovtzeff, *Social and Economic History of the Roman Empire* (Oxford, 1926), pt. 9.2.

⁹ Pedro Manuel Berges Soriano, “Las ruinas de ‘Els Munts’”, *Información Arqueológica*, 3 (1979): 81–7, here p. 84 (Altafulla, Spain: shackles with human bones from a Roman villa basement, destroyed in the second half of the third century); Rudolf Laur-Belart and Victorine von Gonzenbach, “Römische Zeit”, *Jahrbuch der Schweizerischen Gesellschaft für Urgeschichte*, 37 (1946): 66–86, here pp. 76f., pl. 10, fig. 2 (Jona, Switzerland: shackles from a cellar or secondary building of a Roman villa, late third century); Willem Caes, “De landbouw in Noord-Gallie: Een onderzoek naar de Gallo-Romeinse landbouwwerktuigen uit België” (unpublished licentiate thesis, Leuven University, 1984), catalog (Jette, Belgium: shackles from a Roman villa cellar, with agricultural implements, destroyed in the third century). From a late Roman basement: Mark Reginald Hull, *Roman Colchester*, Society of Antiquaries Report, 20 (London, 1958), pp. 106–18, pl. 21. From an oil mill’s cellar belonging to a Roman villa, found with human bones in Milreu, distrito de Castel Branco, Portugal: I thank the excavator, Felix Teichner, for sharing this unpublished find from the second half of the third century.

¹⁰ The palace-like building of Bad Kreuznach (built around 250 AD) was transformed into a *burgus*, a fortified tower, in the fourth century: Ronald Knöchlein, “Die nachantike Nutzung der Bad Kreuznacher Palastvilla”, *Mainzer Archäologische Zeitschrift*, 2 (1995): 197–209; cf. too the large villa of Echternach: Jeannot Metzler, Johny Zimmer, and Lothar Bakker, “Die römische Villa von Echternach (Luxemburg) und die Anfänge der mittelalterlichen Grundherrschaft”, in Walter Janssen and Dietrich Lohrmann (eds), *Villa-Curtis-Grangia* (Munich, 1983), pp. 30–45, here p. 38, fig. 5. At Vieux-Rouen (Somme, France) – <http://crdp.ac-amiens.fr/crdp/picarchieo/PDF/fichesagache_C.pdf> – archaeological investigation showed that the large second-century Roman villa was transformed into a palace without signs of farming installations in the fourth century. Further late Roman rural palaces: Bad Dürkheim (Rheinland-Pfalz: with a fourth-century *burgus*), Saint-Just-en-Chaussée (Oise, France), Blanzly-les-Fismes (Aisne, France), Mogorjelo (Bosnia and Herzegovina), Kostin brod (Bulgaria) and several cases around Trier (Konz, Leudersdorf, Nennig, Wittlich, and so on).

¹¹ See especially the well-dated shackles from Epiais Rhus (France, fourth-century Roman villa context), Cologne (a well with late Roman material), Mainz (fourth-century building with a set of iron tools), Great Chesterfort (UK, late Roman iron hoard).

¹² Respectively, at Bengel: Wolfgang Binsfeld, “Metallgerät aus einem römischen Brunnen”, in *Römer-Illustrierte*, 2 (Cologne, 1975), pp. 183f., and Helmut Bernhard, “Der spätrömische Depotfund von Lingenfeld”, *Mitteilungen des Historischen Vereins der Pfalz*, 79 (1981): 5–103.

towns), fortifications, urban centers, and even burials (Figure 2.2).¹³ These late Roman iron manacles, shackles, and fetters illustrate that the Roman agricultural system continued to rely on physically coerced labor. Whether tenants or slaves dominated on late Roman villas, it is hard to deny that the countryside was organized by the elite and exploited for the aristocracy's own benefit.¹⁴ The *Codex Theodosianus*, which indicates that iron shackles could also be used for *coloni* who fled from an estate, shows that independently of their legal status, agricultural workers were subjected to coercive force in order to make them work.¹⁵

To my knowledge, no late antique rural settlement structure in the territories under continuous Roman control compares to the distinctive rural structures documented in large numbers outside the imperial frontier and from post-Roman Gaul or, very exceptionally, in areas temporarily occupied by Germanic groups in the mid-fourth century.¹⁶ These settlements were surely true villages – that

¹³ Virton "Chateau Renard" (Belgium, shackles from a fourth-century fortification): documentation of the Service national des fouilles, Brussels. I am grateful to A. Cahen-Delhaye and C. Massart (Brussels) for these unpublished data. Tekić ("Treštanovačka gradina", Požeško-slavonska županija, Croatia: a male skeleton with a riveted iron neck-ring without grave goods in a late fourth-century cemetery of which 140 graves, some with grave goods, have been excavated: Dubravka Sokač-Štimac, "Rimska nekropola na Treštanovačkoj gradini", *Požeški zbornik (Slavonska Požega)*, 4 (1974): 115–40, here p. 129, with fig. I would like to thank the excavator, Dubravka Sokač-Štimac, for her very detailed and partially unpublished information, as well as Dragan Božić, Ljubljana, for his linguistic help.

¹⁴ On the question of late Roman *coloni*, see Elio Lo Cascio (ed.), *Terre, proprietari e contadini dell'impero romano: dall'affitto agrario al colonato tardoantico* (Rome, 1997). I would like to thank J. Kyle Harper for his advice about late antique slavery.

¹⁵ *Codex Theodosianus* 5.17.1 (332 AD); see also *Codex Justinianus* 11.53.1 (371 AD), 11.51.1 (386 AD), 11.52.1 (392 AD). For the progressive conflation of slaves and *coloni* after the third century and the debate about any difference between them, see Klaus-Peter Johné, "Von der Kolonenwirtschaft zum Kolonat", in Klaus-Peter Johné (ed.), *Gesellschaft und Wirtschaft des Römischen Reiches im 3. Jahrhundert* (Berlin, 1993), pp. 64–99.

¹⁶ An early exception dated to the mid-fourth century comes from east of the Seine estuary, near Rouen. The publication of the first half of the excavated settlement area showed the reconstruction of an organized settlement consisting of multiple farmsteads separated by fences, thus a "true village": Paul Van Ossel, "Die Gallo-Romanen als Nachfahren der römischen Provinzialbevölkerung", in Alfried Wieczorek et al. (eds), *Die Franken: Wegbereiter Europas* (2 vols, Mainz, 1996), pp. 102–9, here p. 108, fig. 80. The complete settlement layout published five years later by Valérie Gonzalez, Pierre Ouzoulias and Paul Van Ossel, "Saint-Ouen-du-Breuil", *Germania*, 79 (2001): 43–61, here p. 46, fig. 3, no longer shows the fences. They are now assigned to the Gallo-Roman period and figure on a different map (*ibid.*, p. 45, fig. 2). The intense historical debate in France about the rise of "true villages" has culminated in the model of a gradual "mutation" of Roman villas into "true villages", a process which is thought to have been completed in the seventh and eighth century. In his forthcoming "De la 'villa' au village: Les prémices d'une mutation", in Jean-Marie Yante and Anne-Marie Bultot-Verleysen (eds), *Autour du "village": Etablissements humains, finages et communautés rurales entre Seine et Rhin* (Louvain-la-Neuve, forthcoming), Van Ossel makes the case for the late development of "true villages" in the seventh century, without discussing Saint-Ouen-du-Breuil. My earlier skepticism about the site's dating (Hennig, "Agrarkontinuität", p. 421) was ill-founded, for we now know that a coin hoard associated with the settlement must have been assembled between 345 and 350 AD and hidden some time thereafter. Since hoards are typically markers of destructive events, this find seems more

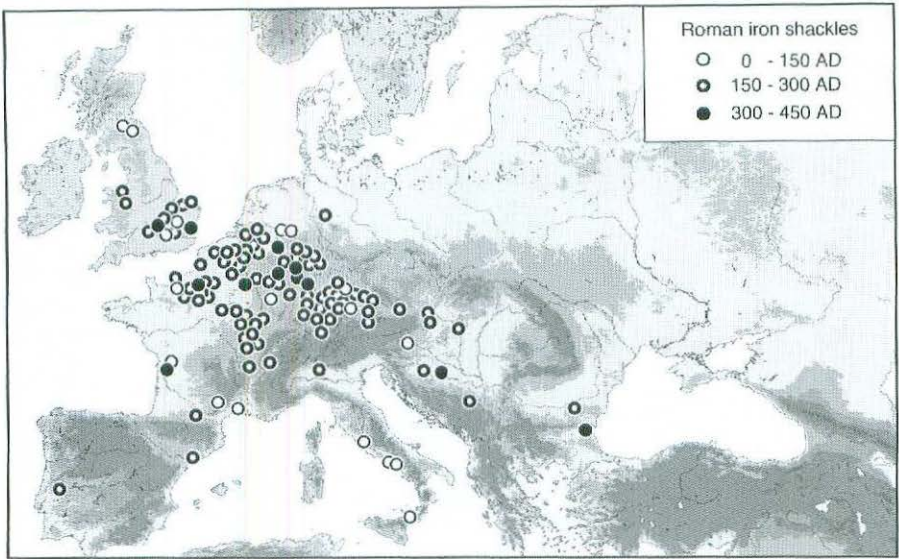


Figure 2.1 Find map of Roman iron shackles.

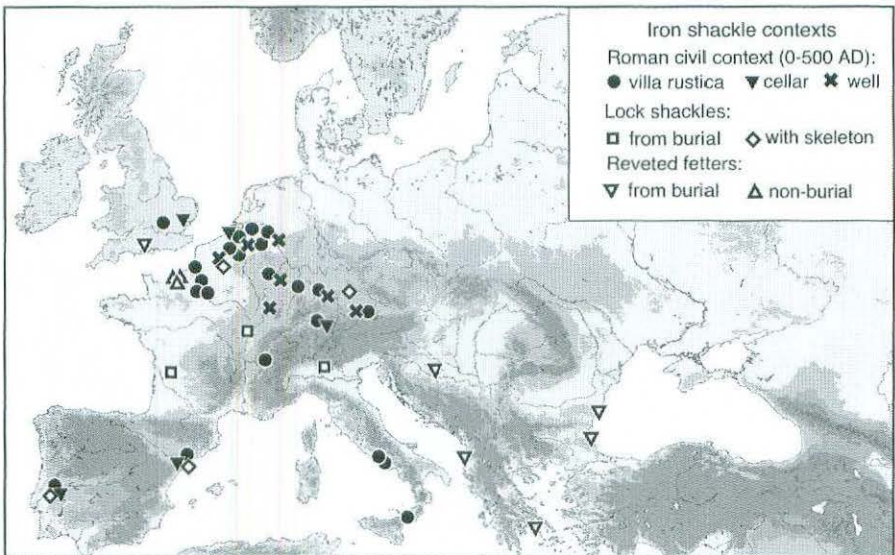


Figure 2.2 Roman iron shackle contexts.

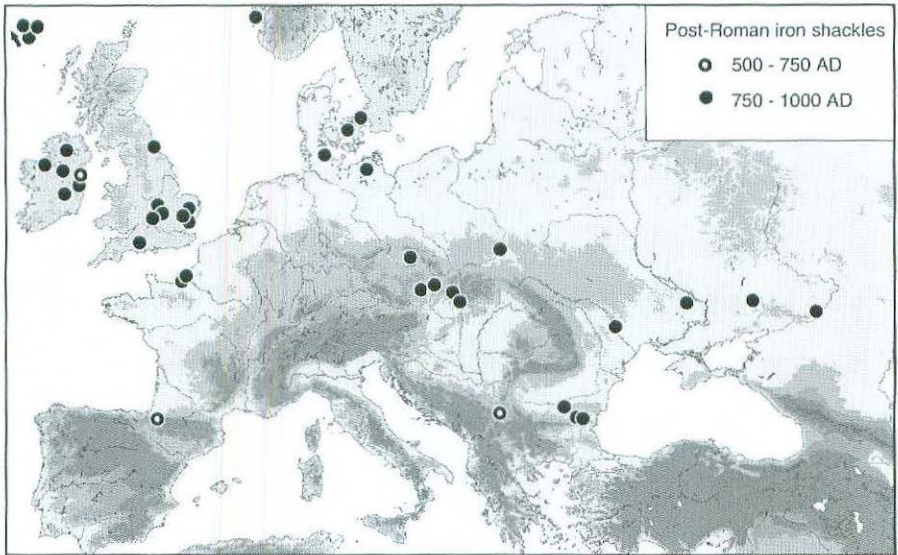


Figure 2.3 Post-Roman iron shackles.

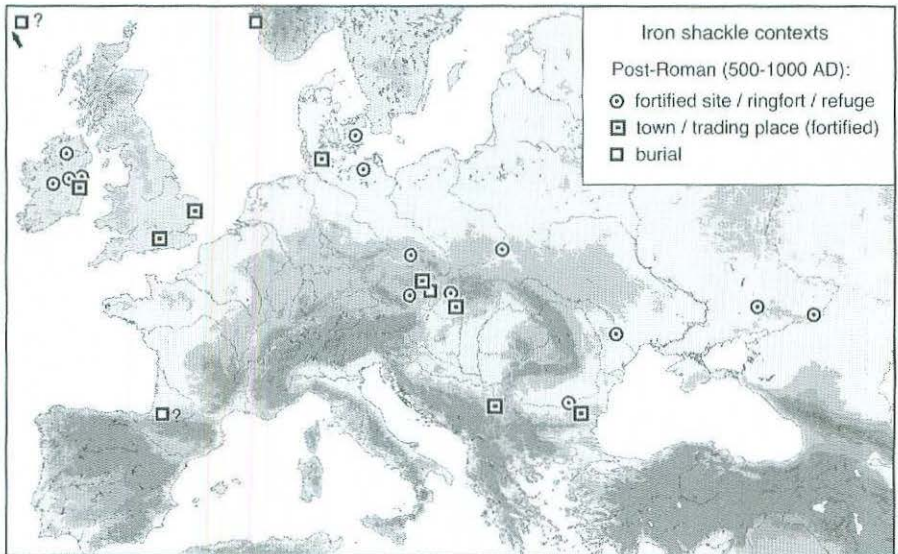


Figure 2.4 Post-Roman iron shackle contexts.

is, composed of separated farmsteads with different buildings serving different domestic and dwelling functions. From the third to early fifth centuries, such “row settlements” can be observed only outside the *limes*, the Roman frontier.¹⁷ Late Roman rural structures, on the other hand, whether they occupied a former villa or belonged to a hillfort settlement, look unimpressively poor and lack any visible division into farmstead units separated by enclosures or fences.¹⁸ What Germanic finds occur on late Roman villa or rural settlement sites, as well as tombs with Germanic grave-goods inside Roman Gaul or the Rhineland, could reflect a gradual integration of barbarian populations into the late antique rural system. Although they came from areas with developed village structures, these newcomers seemingly were prevented from bringing their village economy onto the late Roman estates. We may deduce that they became either quasi *coloni* or landlords.¹⁹ With the exception of Ouen-du-Breuil, no Germanic or Roman settlement with that true village layout is known from inside the *limes*, whereas they are abundant outside it. And such true villages beyond the *limes* were not inhabited exclusively by Germanic peoples.²⁰ Nevertheless, the only Roman territories which have provided convincing village layouts are those from which Roman troops and administration had been withdrawn, for instance the astonishingly early cases from Toxandria in the Low Countries, an early Frankish settlement area,²¹ or the *agri decumates* in southwestern Germany, from around 300. The archaeological evidence thus suggests that the new logic

likely to be related to an unpeaceful end of the village after 350 AD than to its foundation, as Karl Heinz Lenz assumes in a way which is difficult for me to follow: “Germanische Siedlungen des 3. bis 5. Jahrhunderts n. Chr. in Gallien”, *Berichte der Römisch-Germanischen Kommission*, 86 (2005): 349–445. I am most grateful to Paul Van Ossel (Paris) and Karl Heinz Lenz (Frankfurt am Main) for generously making their unpublished studies available and for the stimulating discussions that followed. Both authors’ interpretations assume that Rome would have had to give permission for settlements of this type to be built. Another explanation, however, would be that Roman land was illegally occupied. This seems to me more probable in the light of written sources and that coin hoard: contemporaries clearly attest a series of “illegal” settlement events by Germanic tribes that started shortly before the middle of the fourth century in nearly all parts of inner Gaul, reaching almost to the Atlantic coast; Zosimus, *Historia*, 3.3.1; Ammianus Marcellinus, *Res gestae*, 16.2.1–7; Julian, *Epistula ad Athenienses*, 277Df, 279Af. As Libanius says (*Oratio*, 18.34). Germans had seized farmlands and plowed and harvested in many parts of Gaul. Starting in 355, Caesar Julian’s military campaign put a bloody end to this early, illegal attempt to replace the late-Roman agricultural system. Roman troops destroyed or confiscated the Germanic grain harvest in Gaul (Ammianus, 16.11.11; Libanius, *Oratio*, 18.52). The situation at Ouen-du-Breuil seems to me to fit this historical context perfectly.

¹⁷ Helena Hamerow, *Early Medieval Settlements: The Archaeology of Rural Communities in Northwest Europe, 400–900* (Oxford, 2002), p. 55.

¹⁸ Paul Van Ossel, *Etablissements ruraux de l’Antiquité tardive dans le nord de la Gaule*, Gallia, Supplément, 51 (Paris 1992).

¹⁹ The case of Mienne-Marboué seems to indicate a landlord of Germanic origin: Michele Blanchard-Lemée, “La villa à mosaïques de Mienne-Marboué (Eure-et-Loire)”, *Gallia*, 39 (1981): 63–83.

²⁰ According to Libanius, *Oratio* 18.34, the Germans brought inhabitants of Gaul to the right bank of the Rhine to work their fields, so it is no wonder Ammianus Marcellinus, 17.1.7, saw there rural buildings that resembled those of Gaul.

²¹ See Henning, “Agrarkontinuität”, p. 425, fig. 7.

of family- and farmstead-based farming could not be fully realized within late antiquity's social, fiscal, and legal structures. It needed lands where the Roman writ no longer ran.²²

The archaeological evidence from Toxandria shows that such territories did not tumble back into prehistory once they left Roman administration. On the contrary, the village-system that now took root there displays unusual dynamism in applying advanced agricultural technology. That dynamism contrasts sharply with the rural landscapes Rome still controlled south of the new fortified *limes* running from Cologne to Bavai that now bounded Toxandria.²³ There, Belgian archaeologists have recently disproven the myth that the heavy wheeled plow had spread across late Roman Gallia Belgica. The iron plow components found on villas or rural sites devastated by Germanic invaders in the later third or fourth century are unimpressive: *all* well-dated plowshares belong to the simple ard or stick-plow known in these areas since the pre-Roman Iron Age.²⁴ As a new find from Aquitaine confirms, the situation extended across Gaul.²⁵

With a few exceptions from territories where the imperial administration was already weak or nearly non-existent (for instance rural hillforts of the Moselle area or Middle Danube sites devastated by the Huns), advanced agricultural equipment, including the heavy wheeled plow and the true long scythe, occurs predominantly along the approaches to the late antique *limes*.²⁶ The most impressive assembly of agricultural equipment comes from Osterburken, beyond the Rhine frontier, and has to be dated to the late fourth to fifth century.²⁷ This data contradicts the often-stressed technological backwardness of small agricultural units of peasant farmsteads, their autarchy and limited ambition to produce a surplus. In fact, the significant quantity of late Roman ceramic imports found beyond the *limes*²⁸ in such villages attests to exchange.

²² In the late third and fourth centuries, the Roman army regularly attacked Germanic groups which had tried to settle in Gaul with their families, where we would expect them to have founded villages. Such subjugated groups were "resettled" to distant regions, often chained and sold to the local landowners: XII *panegyrici latini* 4 (8).9.1 and 6 (7).4.2. Such contacts with villa owners were perhaps not unconnected with reactions such as those of 366 AD when Germanic barbarians attacked and destroyed villas in Gaul: Ammianus Marcellinus, 27.2.2.

²³ See Henning, "Agrarkontinuität", p. 424, fig. 6.

²⁴ Bérangère de Laveleye and Agnès Vokaer, "De Pline à Mageroy: Araire ou ploumoratum?", in Philippe Mignot and Georges Raepsaet (eds), *Le sol et l'aire dans l'Antiquité* (Brussels, 1998), pp. 23–33.

²⁵ Michel Feugère, "Outillage agricole et quincaillerie antique de Valentine", in Michel Feugère and Mitja Gustin (eds), *Iron, Blacksmiths and Tools* (Montagnac, 2000), pp. 169–78.

²⁶ See Henning, "Agrarkontinuität", and Joachim Henning, "Zum Problem der Entwicklung materieller Produktivkräfte bei den germanischen Staatsbildungen", *Klio*, 68 (1986): 128–38.

²⁷ Joachim Henning, "Zur Datierung von Werkzeug- und Agrargerätefinden im germanischen Landnahmegebiet zwischen Rhein und oberer Donau", *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz*, 32 (1985): 570–94. See also Henning, "Agrarkontinuität", p. 400, fig. 1.

²⁸ Bernd Kaschau, *Die Drehscheibenkeramik aus den Plangrabungen 1967–1972*, Der Runde Berg bei Urach, vol. 2 (Stuttgart, 1998). The same is true for "Germanic" villages west of the Rhine: Gonzalez, Ouzoulias and Van Ossel, "Saint-Ouen-du-Breuil", pp. 49–51; Guy de Boe, "Un village

This in turn indicates that “more eating or less working”²⁹ was not the only option when peasant households produced a surplus.

Without wishing to revive theories of climatic determinism for the fall of Rome we ought, nevertheless, to consider some recent results from dendroclimatology. Burghart Schmidt has developed a new method which interprets changing cycles of European-wide homogeneity of tree growth. It seems to indicate that in the long run Rome failed to react to a dramatic climatic change and its aftermath.³⁰ In the decades around the middle of the third century, a first significant unfavorable shift occurred towards colder and dryer conditions. When such a situation recurs several years in a row, it seriously affects the food supply. I would not argue that this climate change caused the overall transformation. But it may help explain why serious attempts to resolve the problem of boosting productive labor on Roman estates only occurred after conditions changed: in the last centuries of antiquity, some first steps toward an agrarian organization different from the classical villa system attempted to respond to changing environmental circumstances even under the old Roman legal conditions. Decreasing crop yields and worsening conditions for animal husbandry connected with such climate change must have aggravated the problem of rural productivity inside the empire; at the same time, they must also have caused problems in the unconquered lands beyond the *limes* and encouraged development there.

Attaching slave-like *coloni* to the arable land while continuing the ancient rhythms of agricultural work apparently failed to resolve the problems arising from more complicated ecological conditions and the increased human mobility they may have entailed. A solution that in the long run was to prove stable and superior to attempted adjustments inside the provinces came from outside; it nevertheless resulted from close contacts with the late Roman economy, including, especially, selective adaptation of elements of the Roman technology of production. Rural technological improvements, that is, changing the rural production cycles, a more intensive style of production of a sort typical for family-based farm units, and a spreading of agricultural risks over the whole year, combined with a broader social framework for human mobility to constitute the responses to these social and ecological changes.

The eighth-century awakening is more closely related to the fall of Rome than may appear. First we have to observe unequivocally that the rural technological improvements we have just described continued to be used by post-Roman peasants, even in those households that powerful aristocrats subjugated to the

germanique de la seconde moitié du IV^e siècle à Neerharen-Rekem”, in Marcel Otte and Jacques Willems (eds), *La civilisation mérovingienne dans le bassin mosan* (Liège, 1986), pp. 101–10.

²⁹ Wickham, *Land and Power*, p. 224.

³⁰ Burghart Schmidt, Wolfgang Gruhle, Andreas Zimmermann, and Thomas Fischer, “Mögliche Schwankungen von Getreideerträgen. Befunde zur Rheinischen Linearbandkeramik und Römischen Kaiserzeit”, *Archäologisches Korrespondenzblatt*, 35 (2005): 301–16, here p. 306, fig. 6; Burghart Schmidt and Wolfgang Gruhle, “Niederschlagsschwankungen in Westeuropa während der letzten 8000 Jahre”, *Archäologisches Korrespondenzblatt*, 33 (2003): 281–300, here p. 293, fig. 9.

bipartite estate which arose in Carolingian times. Although written sources of this period clearly testify to this, I prefer to emphasize the archaeological evidence.

There is, for example, no doubt that, like many other technological improvements, the heavy wheeled plow that turned over the sod was used in early post-Roman times.³¹ This equipment was well suited to an important role in the three-field-rotation system. In fact, finds of seeds in the immediate post-Roman fifth century signal a new spectrum of crops. That new crop complex, with its balance between winter and summer grains, fitted well into the cycles of the three-field system. It also made people more independent of the changing post-Roman climatic conditions, for the three-field system's separate winter and summer crops spread agricultural risk over the whole year. At the latest, the turn to that new type of crop cultivation is clearly visible in Merovingian times, if not already during the Migration period, centuries before the Frankish version of the manorial system would be established.³² Moreover, it has often been stressed that the three-field system is typical of agriculture based on co-operating farmsteads of village communities,³³ so the absence of older traces of this system in connection with Roman villas is not surprising. And the evidence

³¹ For technical details of the swivel plow and its appearance in the Roman West, see Henning, "Agrarkontinuität", pp. 405–17. For iron parts of a wheeled swivel plow from the Middle Danube area, see Dragoljub Bojović, "Ostava rimskog poljoprivrenog alata iz sela Borović kod Obrenovca", *Godišnjak grada Beograda*, 25 (1978): 185–96.

³² Joachim Henning, "Landwirtschaft der Franken", in Wiczorek et al. (eds), *Die Franken: Wegbereiter Europas*, pp. 774–85; Joachim Henning, "Did the 'Agricultural Revolution' Go East with Carolingian Conquest?" *Oxford Journal of Archaeology* (forthcoming).

³³ See Max Weber, *Die römische Agrargeschichte in ihrer Bedeutung für das Staats- und Privatrecht* (Stuttgart, 1891), re-edited by Horst Baier et al. as *Max Weber Gesamtausgabe*, Abteilung 1: *Schriften und Reden*, vol. 2 (Tübingen, 1986), p. 297, on how the three-field rotation system was unimaginable for Roman villas: "... weil die Dreifelderwirtschaft ... keine Wirtschaft eines Individuums, sondern einer Dorfgemeinschaft ist und mit dem Flurzwang untrennbar zusammenhängt"; for further references, see Wilhelm Schneider, *Arbeiten zur alamannischen Frühgeschichte*, vol. 14, *Arbeiten zur Agrargeschichte*, part 2 (Tübingen, 1987), s.v. "Dreifelderwirtschaft", pp. 42–92. The debate has been whether the demesne's fields were integrated into the cycles of exploitation of peasant fields ("Flurzwang"). This has been shown to be the case at Wissembourg and other estates. Even so, some have thought that big blocks of reserve fields existed separately from the village's arable land: Gertrud Schröder-Lembke, "Nebenformen der alten Dreifelderwirtschaft in Deutschland", in *Agricoltura e mondo rurale in Occidente nell'alto medioevo*, Settimana, 13 (Spoleto, 1966), pp. 285–306, here p. 288. Whether the three-field rotation system was first introduced on the demesne in the eighth century or on peasant land much earlier is "impossible to answer" from the written sources: Adriaan Verhulst, *The Carolingian Economy* (Cambridge, 2002), p. 62. Nevertheless, the older view of August Meitzen, *Siedelung und Auarwesen der Westgermanen und Ostgermanen, der Kelten, Römer, Finnen und Slawen* (3 vols, Berlin, 1895), vol. 2, p. 594, which assumed that the manor influenced the peasant communities, has found a certain echo in the historical literature. Paleobotany is definitively resolving the debate by documenting the rise, from the fourth or fifth century, of a new crop system consisting of winter and summer cereals: Karl-Heinz Knörzer, "Über den Wandel der angebauten Körnerfrüchte und ihrer Unkrautvegetation auf einer niederrheinischen Lößfläche", in Udelgard Körber-Grohne (ed.), *Festschrift Maria Hopf* (Cologne, 1979), pp. 147–63, here p. 156.

for this system among Germanic tribes begins only once they had intensively adapted late Roman agricultural equipment.

It is for now unclear whether the gap between the relatively good archaeological evidence for advanced agricultural iron implements from 500 to 700 AD³⁴ and that of the late ninth to tenth centuries³⁵ reflects a real decline in everyday use of such tools in the time of Charlemagne, but well-dated finds of the eighth and early ninth centuries are still lacking. This could turn out to be only a problem of survival of evidence. The development of settlement structures in the eighth century seems more alarming, however. Large-scale excavations of Merovingian settlements in Germany and France have uncovered layouts of surprisingly large and strictly organized villages, consisting of clearly separated farmsteads.³⁶ They are obviously the direct and prosperous successors of the village structures of the third to early fifth centuries known from northern Germany, the Netherlands and Denmark, and which shortly thereafter appeared in the former Roman territories, starting with Toxandria and southwestern Germany. This continuity of nearly half a millennium peaked in the seventh century when some farm owners among these village communities started to create their own separate cemeteries within their farmsteads. Their burials supply extraordinarily rich grave-goods such as have been found in Lauchheim (Baden-Württemberg).³⁷ We now understand that such graves, which typify the upper stratum of Merovingian cemeteries in general, need not always reflect a manorial aristocracy. The buried persons were sometimes just wealthy peasants, living in a peasant society characterized by internal socio-economic differentiation. Social status may have played a role, but the bigger space of one of the farmsteads at Lauchheim also indicates a substantial difference in landed property. The same observation can be made in the Merovingian village of Kirchheim, near Munich.

Examples like these leave no room for earlier romantic ideas of an egalitarian peasant society. This was a society that must have produced a surplus

³⁴ See Henning, "Agrarkontinuität", p. 426, fig. 8.

³⁵ Karl Hielscher, "Fragen zu den Arbeitsgeräten der Bauern im Mittelalter", *Zeitschrift für Agrargeschichte*, 17 (1969): 6–43.

³⁶ Vitry-en-Artois, Belgium: Etienne Louis, "A De-Romanized Landscape in Northern Gaul: The Scarpe Valley", in William Bowden, Luke Lavan, and Carlos Machado (eds), *Recent Research on the Late Antique Countryside* (Leiden, 2004), pp. 479–503, here p. 495, fig. 7; Genlis, France: Isabelle Catteddu, "L'habitat mérovingien de Genlis", in Claude Lorren and Patrick Périn (eds), *L'habitat rural du haut Moyen Age* (Rouen, 1995), pp. 185–92, here p. 186, pl. 1; Bussy-Saint-Georges, France: Natalie Buchez, "Un habitat du haut Moyen Age à Bussy-Saint-Georges", in *L'habitat rural*, pp. 109–12, here p. 111, with fig.; Kirchheim: Rainer Christlein, "Kirchheim bei München", *Das Archäologische Jahr in Bayern 1980* (1981): 162–3. Farmsteads separated by fences but situated side-by-side are clearly attested even in limited excavations: Cristina Gonçalves, "Drancy (Seine-Saint-Denis)", in François Gentili, Anne Lefèvre and Nadine Mahé, (eds), *L'habitat rural du haut Moyen Age*, Supplément au Bulletin archéologique du Vexin français, 1 (Guiry-en-Vexin, 2003), pp. 56–63, here p. 57, fig. 1.

³⁷ Ingo Stork, "Friedhof und Dorf, Herrenhof und Adelsgrab", in Karlheinz Fuchs et al. (eds), *Die Alamannen* (Ulm, 1997), pp. 290–310.

big enough to afford imports from around the Merovingian world, from the eastern Mediterranean, even from Africa and India.³⁸ It was a society whose craft production occurred in central places associated with evidence of trade and exchange. Thanks to more than twenty iron hoards from the early post-Roman period (fifth–seventh centuries) and to a very large number of Merovingian burials that are well equipped with iron items, we have ample information about the widespread, everyday use of iron in post-Roman western Europe. In sharp contrast, however, to the Roman and late Roman situation, where iron shackles for humans came to light from almost every third iron hoard and from many, many settlement contexts, shackles drop nearly to zero in the early post-Roman period (see Figure 2.5). The only three finds come from outside the Merovingian realm.³⁹ No doubt the slave trade continued in the post-Roman centuries and crossed the Continent, especially from the British isles to the south;⁴⁰ some aspects of the slave-like treatment of rural serfs may have survived as well. Nevertheless, judging from the shackle finds, the situation must have changed fundamentally.

Together with the disappearance of the villa and the swift rise to dominance of true villages in the Frankish heartlands, the surprising fall of western Europe's "iron shackle curve" from late-Roman to Merovingian times (Figure 2.5) seems to signal a complete turnaround in the social organization of the rural world. The problem of productive labor on late Roman estates was apparently resolved in a simple but consequential way. An empire, its socio-economic fabric, and especially its legal system had to be destroyed and replaced by another one that was based upon a peasant society that (at least in the rural sphere) did not necessarily need iron shackles to function. I would go so far as to say that the new logic aimed to avoid as much as possible such means of organizing efficient agrarian production. We will return to this shortly.

What about villages from c. 700 to 900? Archaeologically speaking, this period is again problematic, but not because of a lack of evidence. New excavations in France show that villages display a significant difference from earlier ones. Small numbers of sunken floor huts had formerly been used as secondary, non-

³⁸ Carl Pause, "Überregionaler Gütertausch und Wirtschaft bei den Thüringern der Merowingerzeit", *Zeitschrift für Archäologie des Mittelalters*, 29 (2001): 7–30; Carl Pause, "Merowingerzeitliche Millefioriglasperlen", *Rheinisches Landesmuseum Bonn*, 3 (1996): 63–5; Helmut Roth, "Zum Handel der Merowingerzeit aufgrund ausgewählter archäologischer Quellen", in *Der Handel des frühen Mittelalters*, Klaus Düwel, Herbert Jahnkuhn, Harald Siems and Dieter Timpe (eds), *Untersuchungen zu Handel und Verkehr der vor- und frühgeschichtlichen Zeit in Mittel- und Nordeuropa*, vol. 3, Abhandlungen der Akademie der Wissenschaften in Göttingen, Philosophisch-Historische Klasse, 3. Folge, 150 (Göttingen, 1985), pp. 162–91.

³⁹ Aldaieta, Spain (sixth century): Horst Wolfgang Böhme, "Der Friedhof von Aldaieta in Kantabrien", *Acta Praehistorica et Archaeologica*, 34 (2002): 135–50, here p. 148, fig. 9; Caričin grad (Iustiniana Prima): two shackle rings from the sixth-century level. I am grateful to Vujadin Ivanišević (Archaeological Institute, Belgrad) for making the unpublished pieces available; Lagore, Ireland (crannog): Thompson "Slave-Shackles", pp. 84–5, figs 29–30 (seventh century).

⁴⁰ David Pelteret, "Slave Raiding and Slave Trading in Early England", *Anglo-Saxon England*, 9 (1981): 99–114.

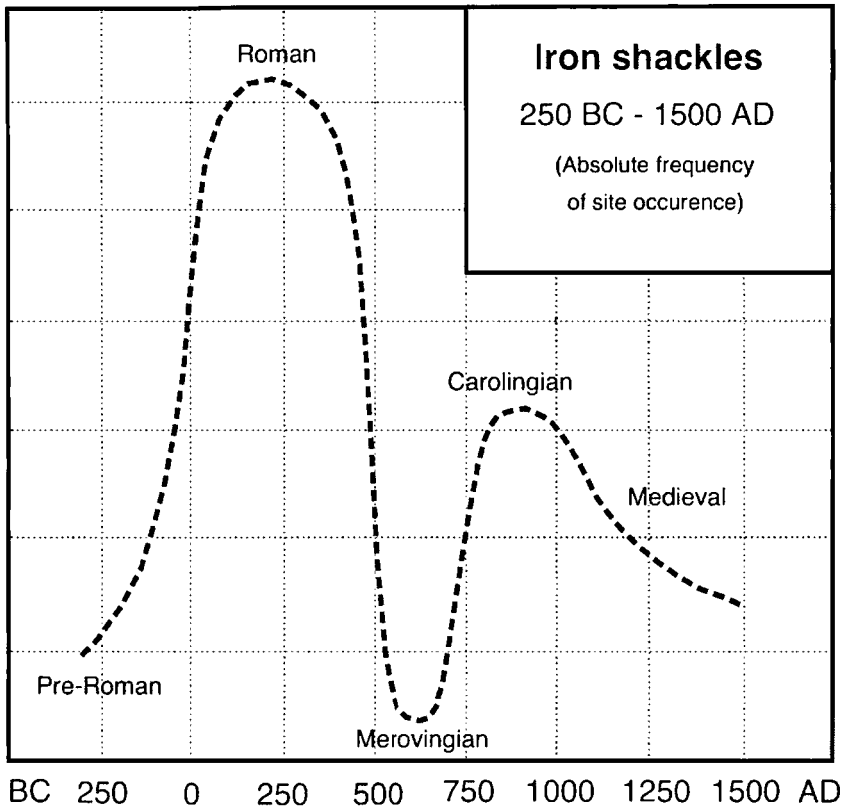


Figure 2.5 Frequency of iron shackle finds 250 BC–1500 AD.

residential domestic buildings. In the eighth century, their numbers increased significantly.⁴¹ Moreover, a dozen excavated rural settlements in the Frankish heartlands show that such simple huts began to receive stone ovens or heating facilities and so were adapted as dwellings, apparently indicating a growing number of ill-equipped inhabitants of rural sites.⁴² For French lands, according to Edith Peytremann, this is a new development unprecedented in the Germanic rural world of the third to the fifth centuries.⁴³ After peaking in the eighth century, in the following century the new arrangement declined rapidly west of the Rhine. But to the east, it blossomed again, briefly, in the forecourts of

⁴¹ See the impressive examples from France: Nadine Béague-Tahon and Murielle Georges-Leroy, "Deux habitats ruraux du haut Moyen Age en Champagne Crayeuse", in *L'habitat rural*, pp. 175–83, here p. 181, fig. 8, p. 182, fig. 9.

⁴² Drancy: Gonçalves, "Drancy", p. 60. Goudelancourt-les-Pierrepont, Mer, Saint Dizier, Poses, Thieux, Tremblay, Saint-Gibrien, Ensisheim, Éply: Edith Peytremann, *Archéologie de l'habitat rural dans le Nord de la France*, vol. 1 (Saint-Germain-en-Laye, 2003), p. 276.

⁴³ *Ibid.*

royal Ottonian rural estates or palaces.⁴⁴ Compared to the Merovingian period, traditional longhouses decreased in number while sunken floor huts increased, as can be seen west of the Rhine, for instance in the difference between the Merovingian and Carolingian phases at Speyer-Vogelsang.⁴⁵ In a word, eighth- and ninth-century peasants look rather poorer than their predecessors. Organized rural settlements on the earlier, true village model, seem to survive mainly outside the Carolingian heartland, for example in Saxony, Viking Denmark, and neighboring areas.⁴⁶ Could this help explain why it took the Carolingians half a century to conquer Saxony, even as they subdued the fortified centers of Italy in a few months? Why Carolingian rulers had so little success against invaders first from Denmark, then from other Scandinavian areas? From the ninth century the invaders even settled northwest of Paris, and that area rapidly developed into Normandy, the strongest principality of the old Frankish West. One wonders whether Viking success resulted from a dramatically weakened western European rural world, a weakness which may have arisen from serious stresses caused by the establishment and spread of the powerful Carolingian bipartite estate. Could Carl Hammer be right when he sees Bavaria falling back into a world of rural slavery when the Frankish manorial system arrived there under the Carolingians?⁴⁷

Much would speak for Michael McCormick's opinion that Charlemagne had little more than human beings to offer for trade with the Arabs.⁴⁸ Where did these enchained human wares come from? The occurrence of post-Roman iron shackles shows an interesting progression (Figure 2.5). After an all-time low under the Merovingians, the absolute number of shackle finds surges in Carolingian times (including in the Viking North), forming an impressive post-Roman peak unparalleled down to 1500 AD. This peak seems to support a significant place for the slave trade in propelling the Carolingian economy. Surprisingly, however, with the exception of two pieces found in the Seine estuary near Rouen, the geographical distribution indicates that shackles are absent from the inner territories of the Carolingian empire (see Figure 2.3). Nevertheless it would not be surprising if shackles emerged from the river finds still awaiting analysis in French museums. The written sources seem to

⁴⁴ Peter Donat, *Gebese: Klosterhof und königliche Reisetation des 10.–12. Jahrhunderts*, Weimarer Monographien zur Ur- und Frühgeschichte, 34 (Stuttgart, 1999); Paul Grimm, *Tilleda: Eine Königspfalz am Kyffhäuser 2*, Schriften zur Ur- und Frühgeschichte, 40 (Berlin, 1990).

⁴⁵ Helmut Bernhard, "Ausgrabungen in der frühmittelalterlichen Siedlung Speyer 'Vogelsang'", in Adriaan Van Doorselaer (ed.), *De merovingische beschaving in de Scheldevallei* (Kortrijk, 1981), pp. 223–38.

⁴⁶ Saxony: Rolf Bärenfänger, "Vier Gehöfte des 9. Jahrhunderts aus Hesel, Lkr. Luer", *Nachrichten aus Niedersachsens Urgeschichte*, 63 (1994): 39–72; Denmark: Anne Nissen Jaubert, "L'habitat rural au Danemark vers 200–1200", in *L'habitat rural*, pp. 213–22.

⁴⁷ Carl I. Hammer, *A Large-scale Slave Society of the Early Middle Ages: Slaves and their Families in Early Medieval Bavaria* (Aldershot, 2002).

⁴⁸ Michael McCormick, "New Light on the 'Dark Ages'", *Past and Present*, 177 (2002): 17–54; Michael McCormick, *The Origins of the European Economy: Communications and Commerce, A.D. 300–900* (Cambridge, 2001).

imply slave transport through the Frankish lands, for the Church criticized it in so far as Christians could be affected.⁴⁹ Iron shackles do occur outside the Frankish empire from Iceland to Ireland and England, through Scandinavia to the eastern Slavlands and Byzantium's doorstep in southeastern Europe. The concentration of Roman shackle finds exactly in the territories that would become the heartlands of the Frankish empire contrasts dramatically with their absence there in post-Roman times, even as abundant Carolingian-era shackle finds cluster in a broad corona around continental western Europe. I think this reflects a fundamental change in the pattern of slavery and slave trade in post-Roman Europe. The slave trade had long been oriented towards the western provinces – Italy, Gaul, Spain – where rural exploitation of slaves was the backbone of intensive agriculture from the period of Roman conquest until late antiquity.⁵⁰ But the logic of the post-Roman rural system developed in the opposite direction. There is no doubt, however, that in the same centuries when the Carolingian ruling elite intervened powerfully in the countryside to establish their estates, the European slave trade expanded anew. McCormick has shown that the Carolingians very probably were involved in that trade and capitalized on it, and that the Ottonians did the same.⁵¹ The absence of iron shackles in the Frankish heartlands shows however that the enslavement and selling abroad of the western European rural peasant population was exceptional. The slave extracting grounds were in fact the non- or semi-Christianized neighboring lands where Frankish armed forces, local chiefs or trade-loving Vikings were active in the slave-hunting business.⁵² It seems to me highly significant that Carolingian and Viking-age shackles in the Frankish periphery never occur in open, unfortified or predominantly rural settlements (see Figure 2.4). As a rule, they come from major fortified sites: ringforts (for example, Denmark's famous Trelleborg, whose name means "slave castle"),⁵³ Slavic ramparts (for example, Kniazha gora, "Princely hill" in the Ukraine), Irish crannogs (local aristocrats'

⁴⁹ Charles Verlinden, "Problèmes d'histoire économique franque 1", *Revue belge de philologie et d'histoire*, 12 (1933): 1090–95; Waltraut Bleiber, *Naturalwirtschaft und Ware-Geld-Beziehungen zwischen Somme und Loire während des 7. Jahrhunderts*, *Forschungen zur mittelalterlichen Geschichte*, 27 (Berlin, 1981), pp. 73–5.

⁵⁰ The situation in the eastern Roman Empire was different because the slave system, at least according to documentary sources, was more developed. However, we need to investigate the situation from written sources since findings of, for instance, shackles, in the east are very rare. For example, in Israel, no archaeological evidence of slavery has been found, although the Talmud mentions traders who arrived with 20,000 iron shackles in order to buy Jews: Samuel Krauss, *Talmudische Archäologie*, vol. 2 (Leipzig, 1911), p. 96.

⁵¹ Joachim Henning, "Neue Burgen im Osten", in Achim Hubel and Bernd Schneidmüller (eds), *Aufbruch ins zweite Jahrtausend* (Ostfildern, 2004), pp. 151–81, here p. 176.

⁵² See the reflections on the origin of Carolingian-era slaves in Joachim Henning, "Slavery or Freedom? The Causes of Early Medieval Europe's Economic Advancement", *EAMF*, 12 (2003): 269–77, here p. 272; Michael McCormick, "Complexity, Chronology and Context in the Early Medieval Economy", *EAMF*, 12 (2003): 307–23, here pp. 308–12.

⁵³ Leszek Paweł Słupecki, "Jömsvikingalög, Jömsvikings, Jomsborg/Wolin and Danish Circular Strongholds", in Przemysław Urbańczyk (ed.), *The Neighbours of Poland in the 10th century* (Warsaw, 2000), pp. 49–59, here pp. 54–5.

man-made island settlements in lakes) and especially an impressive series of fortified early trading centers, some of which have been called proto-towns or just plain towns: Dublin, Winchester, Haithabu, Staré Mesto (the biggest center of ninth-century Moravia), Nitra (residence of the prince of eastern Moravia) and Preslav (the capital of the Bulgarian empire). Written sources attest the slaving background of some of these centers, which mushroomed in the Carolingian era and which archaeologists often prize as signs of an upturn of the rural economy in their hinterlands. To some extent that might well be true, although it remains to be proved. The slave trade, however, and its archaeologically well-proven markers, must be taken into account when explaining the sudden rise, brief flourishing, and mysterious disappearance of many of these trading places in post-Carolingian times. It could turn out that their early medieval trajectory peaks in unison with our iron shackle curve.⁵⁴ Silver coins found around such trading places do not contradict this view.⁵⁵ According to written sources silver regularly accompanied that business and facilitated far-reaching economic connections, for example to the Arab world. Silver coins flowed into the Carolingian lands, and were minted there as well. We cannot be sure that they testify exclusively and generally to a strong economy relying on increasingly efficient rural production. It is worth repeating that technologically speaking, all the known important post-Roman agricultural improvements had already been invented centuries before the Carolingians. We might rather suspect that the application of Carolingian power structures to the western European countryside triggered developments that were, in the short term, unfavorable to the inner texture of at least some peasant settlements within bipartite estates. This will have compromised their efficiency. As far as we can tell, a reinforcement of “normal” villages seems to occur no later than the tenth century, for example at La Grande Paroisse in the Paris basin.⁵⁶ This is exactly the period when the lord’s reserve, the crucial element of bipartite

⁵⁴ I would tend to agree with Frans Verhaeghe, with Christopher Loveluck and Joanna Story, “Urban Developments in the Age of Charlemagne”, in Joanna Story (ed.), *Charlemagne: Empire and Society* (Manchester, 2005), pp. 259–87, that “the importance of emporia in the range of urban settlement in the Carolingian period has been overstressed” (p. 269).

⁵⁵ See Henning, “Neue Burgen”, pp. 173–81; Sebastian Brather, “Frühmittelalterliche Dirham-Schatzfunde in Europa”, in *Zeitschrift für Archäologie des Mittelalters*, 23/24 (1997): 73–153, here pp. 182–6; Sebastian Brather “Frühmittelalterliche Dirham-Schatz- und -Einzelfunde im südlichen Ostseeraum”, in Sebastian Brather, Christel Bückler, and Michael Hoepfer (eds), *Archäologie als Sozialgeschichte*, Studia Honoraria, 9 (Rahden 1999), pp. 179–97; and in England: Mark Blackburn, “‘Productive’ Sites and the Pattern of Coin Loss in England, 600–1180”, in Tim Pestell and Katharina Ulmschneider (eds), *Markets in Early Medieval Europe. Trading and “Productive” Sites, 650–850* (Macclesfield, 2003), pp. 20–36, here p. 22, fig. 3.1; Michael Metcalf, “Variations in the Composition of the Currency at Different Places in England”, in *Markets in Early Medieval Europe*, pp. 37–47.

⁵⁶ Michel Petit, “La Grande-Paroisse (Seine-et-Marne)”, in Michel Petit and Monique Depraetère (eds), *L’Île-de-France de Clovis à Hugues Capet* (Paris, 1993), pp. 199–200; Michel Petit, “La Grande-Paroisse”, in Jean Cuisenier and Rémy Guadagnin (eds), *Un village au temps de Charlemagne* (Paris, 1988), pp. 147–9.

manorial organization, which had flourished in Carolingian times, declines north of the Alps.

Finally, let us look at exchange in the eighth century. Lately scholars have stressed the upturn of long-distance trade to the North and the establishment of trading places or proto-towns with increasing craft activities, as well as growing agricultural production around them. Even though many proto-towns may have owed some of their success to the slave trade, the growth of new centers cannot be denied. But they cluster on the Frankish borderlands, on the Atlantic and North Sea coast, the Baltic coast with Reric and the Elbe-Saale-frontier with its trading places such as Magdeburg and Erfurt described in Charlemagne's capitulary of 805.⁵⁷ They are even more prominent outside the Frankish empire, at places such as Haithabu in Denmark, or Frisia, Sweden, England, and Ireland. The archaeological evidence for significant town development in the Frankish heartlands, the homeland of the much-admired Carolingian manor, however, is still missing. The old Roman urban centers are now delivering more and more archaeological evidence that specialized craft production flourished in Merovingian times.⁵⁸ Gregory of Tours' sixth-century Paris was a living city with workshops and markets. Paris's Musée Carnavalet is full of finds from that period, but offers nearly no items or structures from the eighth century. Frans Theuws has shown that, after lively Merovingian craft production in several Meuse valley towns, a hiatus ensued in the eighth century.⁵⁹ The same holds for Cologne. According to recent excavations the center was not abandoned and ruralized in post-Roman times, as scholars had previously assumed.⁶⁰ Instead, the Merovingian period saw flourishing craft production, including highly

⁵⁷ *MGH LL*, 2. *Capitularia regum Francorum*, ed. Alfred Boretius, vol. 1 (Hanover, 1883), no. 44, c. 7, p. 123.

⁵⁸ Cologne: Marcus Trier, "Köln im frühen Mittelalter", in Joachim Henning (ed.) *Europa im 10. Jahrhundert: Archäologie einer Aufbruchzeit* (Mainz, 2002), pp. 301–10; Namur: Jean Plumier, "Namuco Fit: Namur mérovingien", in *XX^e Journées internationales d'archéologie mérovingienne*, Jean and Sophie Plumier-Torfs and Maude Régnard (eds), *Bulletin de liaison*, 23 (1999): 29–32; for further Roman settlements in the Meuse valley that were Merovingian production centers see Jean and Sophie Plumier-Torfs, Maude Régnard and Wim Dijkman (eds), *Mosa Nostra: La Meuse mérovingienne de Verdun à Maastricht*. Carnets du patrimoine, 28 (Namur, 1999); Mainz: Egon Wamers, *Die frühmittelalterlichen Lesefunde aus der Löhrstrasse*, Mainzer archäologische Schriften, 1 (Mainz, 1994), pp. 162–75, with well-attested Merovingian craft production; written sources: Stéphane Lebecqz, "Les échanges dans la Gaule du nord au VI^e siècle", in Richard Hodges and William Bowden (eds), *The Sixth Century: Production, Distribution and Demand*, The Transformation of the Roman World, 3 (Leiden, 1989), pp. 185–202; for Merovingian craft production in Roman urban centers of Gaul (Paris, Geneva, Bonn, and so on), see Helmut Roth, *Kunst und Handwerk im frühen Mittelalter* (Stuttgart, 1986), pp. 51–4; for ongoing urban functions see: S.T. Loseby, "Gregory's Cities: Urban Functions in Sixth-century Gaul", in Ian Wood (ed.), *Franks and Alamanni in the Merovingian Period* (San Marino, CA, 1998), pp. 239–84.

⁵⁹ Frans Theuws, "Where is the Eighth Century in the Towns of the Meuse Valley?", in Joachim Henning (ed.), *Post-Roman Towns: Trade and Settlement in Europe and Byzantium*, vol. 1 (Berlin and New York, 2007), pp. 153–64.

⁶⁰ Heiko Steuer, *Die Franken in Köln* (Cologne, 1980); Heiko Steuer, "Stadtarchäologie in Köln", in Helmut Jäger (ed.), *Stadtkernforschung*, Veröffentlichungen des Instituts für vergleichende Städtegeschichte in Münster, series A: Darstellungen, 27 (Cologne, 1987), pp. 61–102.

specialized installations such as glass ovens.⁶¹ When production activities next picked up is still in dispute but it seems to be about the tenth century at the latest. According to Simon Loseby, Marseille was still a “great port” under the Merovingians, but declined in the eighth century under the Carolingians to a monastic site of local importance at most.⁶² It started to revive only in the tenth century. In the eighth century Venice may have been far from replacing that gateway to the eastern Mediterranean. It probably started its career as a port of slave trade to the south, first under the auspices of the Carolingians and then on its own account – probably the reason it survived after Carolingian power declined. The tenth-century revival of so many of the old Roman centers is now a familiar phenomenon, at least in continental Europe.⁶³

While specialized production declined in the old Roman centers in post-Merovingian times, it moved in part to places that were better controlled by the aristocracy, as is particularly well documented for monasteries, paramount administrative centers of the estate system. Although specialized craft production in monasteries was not absolutely new – the Merovingian monastery of Saint Denis had had its workshops⁶⁴ – archaeologically attested monastic workshops increase significantly in the eighth and ninth centuries. New discoveries of glass workshops from the abbeys of Lorsch, Fulda and Corvey in Germany, from San Lorenzo al Voltorno in Italy, and from Barking abbey (England),⁶⁵

⁶¹ Cologne’s Heumarkt area seems to show two main periods of production and trade. One is the layer underneath the market floor (dendrodated to 957 AD), which has yielded excellent Merovingian finds, whereas Carolingian and Ottonian finds came to light exclusively above the market paving. For details, see Helmut Roth and Marcus Trier, “Ausgewählte Funde des 4. bis 11. Jahrhunderts aus den Ausgrabungen auf dem Heumarkt”, *Kölner Jahrbuch*, 34 (2001): 759–91. Trier looks similar: Lukas Clemens, “Archäologische Beobachtungen zu frühmittelalterlichen Siedlungsstrukturen in Trier”, in Sabine Felgenhauer-Schmiedt, Alexandrine Eibner and Herbert Knittler (eds), *Zwischen Römersiedlung und mittelalterlicher Stad*, Beiträge zur Mittelalterarchäologie in Österreich, 17 (Vienna, 2001), pp. 43–66, here p. 45, fig. 2 (early Merovingian workshop activities: fibula mold), pp. 58–9 (written sources about Carolingian agricultural and vineyard activities in the town area), p. 60, fig. 18 (increasing activity in Ottonian times).

⁶² Simon T. Loseby, “Marseille and the Pirene thesis, I”, in *The Sixth Century*, pp. 203–29; Simon T. Loseby, “Marseille and the Pirene thesis, II”, in Inge Lyse Hansen and Chris Wickham (eds), *The Long Eighth Century. The Transformation of the Roman World*, 2 (Leiden, 2000), pp. 167–93.

⁶³ Frans Verhaeghe, “Continuity and Change: Links between Medieval Towns and the Roman Substratum in Belgium”, in Rudolf De Smet, Henri Melacerts and Cecilia Safrens (eds), *Studia Varia Bruxellensia* (Leuven, 1990), pp. 229–53.

⁶⁴ See the Merovingian molds for casting fibulas: Patrick Périn, “Les moules de fondeurs de Saint-Denis (Seine-Saint-Denis)”, in Petit and Depraetère (eds), *L’Île-de-France*, pp. 279–81.

⁶⁵ Glass production in the imperial abbeys: Markus Sanke, Karl Hans Wedepohl, and Andreas Kronz, “Karolingerzeitliches Glas aus dem Kloster Lorsch”, *Zeitschrift für Archäologie des Mittelalters*, 30 (2002): 37–75; Abbey of Fulda: Thomas Kind, Karl Hans Wedepohl and Andreas Kronz, “Karolingerzeitliches Glas und verschiedene Handwerksindizien aus dem Kloster Fulda”, *Zeitschrift für Archäologie des Mittelalters*, 31 (2003): 61–93; Hans-Georg Stephan, Karl Hans Wedepohl and Gerald Harmann, “Mittelalterliches Glas aus dem Reichskloster und der Stadtwüstung Corvey”, *Germania*, 75 (1997): 673–715; Judy Stevenson, “Ninth-century Glassware Production at San Vincenzo al Voltorno”, in Frans Verhaeghe (ed.), *Material Culture in Medieval Europe* (Zellik, 1997), pp. 125–36; Barking abbey: Julian Henderson, “Le verre de Dorestad?”

of pottery workshops from the Heiligenberg monasteries (Germany) and from the abbey of St George in Baralle (France)⁶⁶ as well as many other specialized craft works (comb production, bronze foundries, and so on) make clear that the Carolingian plan of Saint Gall's workshops was anything but wishful thinking. Monastic substitutes for "normal" towns seem to mark a Carolingian detour in European town development that was dearly paid. These curious "monastery-towns" remained but an episode. Along with the bipartite estate system, they soon declined. The true towns which replaced them often revived sites with older Roman and Merovingian town traditions.

If this all reflects the impact of the installation of the mighty Carolingian power structures of the bipartite estate system accompanied by an upturn of European slave trade, it looks rather like an accidental rebirth of Rome that was imposed on a formerly flourishing peasant society. So we would have to agree with Michael McCormick that Pirenne was both right and wrong. And this is my conclusion: Pirenne was probably right when he stressed that the eighth century brought a visible stagnation and sidetracked, if it did not set back, parts of Europe's economy. The roots of that setback must lie in a problematic reorganization of the rural world which distorted the productive logic of small-unit agriculture and blocked its potential efficiency. Adriaan Verhulst once pointed out that the *Capitulare de villis* was likely closely connected to the famines of 792–93 and 805–6 AD.⁶⁷ The Frankish king's orders were anything but a wise handbook of agricultural knowledge. On the contrary, as Alfons Dopsch long ago maintained, the capitulary shows the bankruptcy of the bipartite manorial system. If this is right, Pirenne is also wrong: it was not Muhammad who was responsible, but Charlemagne. My impression is that, in the economy of early medieval Europe, places or periods with relatively weak power structures were more innovative and efficient so long as they had access to the most advanced technical improvements of late antiquity.⁶⁸ This raises serious doubts about the currently dominant view, which suggests that strong or even centralized power structures were indispensable in boosting peasants' small production units to greater productivity and efficiency. History seems nevertheless to have offered

in Danièle Foy (ed.), *Le verre de l'antiquité tardive et du haut moyen âge* (Guiry-en-Vexin, 1996), pp. 51–5.

⁶⁶ For pottery production at the Heiligenberg monastery (Germany), see Peter Marzollf, "Die benediktinischen Bergklöster auf dem Heiligenberg bei Heidelberg", *Beiträge zur Mittelalterarchäologie in Österreich*, 12 (1996): 129–45; for Baralle (France), see Alain Jaques, "Un atelier de production de céramiques au haut moyen âge à Baralle", in *Gauseria*, 31 (1994): 89–100; Alain Jaques, "Un four de potier du haut moyen âge à Baralle", *Revue du Nord*, 58 (1976): 73–86.

⁶⁷ Adriaan E. Verhulst, "Karolingische Agrarpolitik: Das Capitulare de Villis und die Hungersnöte von 792/93 und 805/06", *Zeitschrift für Agrargeschichte*, 13 (1965): 175–89.

⁶⁸ For early reflections in that direction see: Joachim Henning, "Wirtschaftsarchäologie des Frühmittelalters und aktuelle Fragen der Geschichtswissenschaft", *Študijne zvesti Arheološkega inštituta Slovenske akademije vid.*, 25 (1988): 41–6, here p. 44. Michael McCormick, "Um 808: Was der frühmittelalterliche König mit der Wirtschaft zu tun hatte", in Bernhard Jussen (ed.), *Die Macht des Königs: Herrschaft in Europa vom Frühmittelalter bis in die Neuzeit* (Munich, 2005), pp. 55–71, makes the same point about merchants and relatively weak royal or state power structures.

its own answer: Rome disappeared, and so too did its Carolingian rebirth. Other centralized power structures have disappeared recently, but peasant structures, self-managing and self-determined economies have continued to exist. The Carolingian villa was probably responsible for a really very long – I would say too long – eighth century, if not at all for a, literally, *longue durée* of the early Middle Ages.