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# THE CAROLINGIAN ECONOMY

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# I

## LANDSCAPE AND SETTLEMENT

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### WOODLAND

The Carolingian landscape was for a large part, on the average for more than 40 per cent and in some regions up to 80 per cent, a natural landscape, consisting mainly of woods. The map of European forests in the early Middle Ages, made up by Charles Higounet, is still the best guide to study their geographical distribution.[1] He has localised and identified nearly 150 individual forests, some of which can be studied more in detail. Most of them lay east of the Rhine and along it, and also in the adjoining eastern parts of France and Belgium, a situation that lasted to the end of the Middle Ages and persists still today. In around 1500, one-third of Germany and a quarter of France were still covered by woodland. The larger part of these forests was royal land, protected by the king as hunting reserves, which is the original meaning of 'forest' (Lat. *forestis, forestum*). Some of these forests consisted not only of woods but included also uncultivated land, pasture, heath, moor and even arable land. In central Europe the Thuringian forest, in the middle of which the abbey of Fulda was founded in 742, may have been inhabited around that centre before the arrival of the monks. Clearances, named *capturae*, took place all around from the beginning of the eighth century and continued well into the ninth, perhaps related to the military operations of Charlemagne against

[1] Charles Higounet, 'Les forêts de l'Europe occidentale du ve au xie siècle', in *Agricoltura e mondo rurale in Occidente nell'alto medioevo* (Spoleto, 1966: Settimane di studio del Centro italiano di studi sull'alto medioevo 13), pp. 343–98.

the neighbouring Saxons.[2] A chain of forests along the right bank
of the Rhine, west of Thuringia and farther south, stretched from
the Westerwald and the Taunus in the north to the Odenwald in the
south. The latter was all royal land until it was ceded away to the
abbeys and churches of Fulda, Amorbach, Worms and particularly
Lorsch, which started an attack on the forest in 772. Only two
estates with arable land were organised within the Odenwald, the
most important of which was Michelstadt. Charlemagne's biographer
Einhard, who had received it from the emperor some years before,
gave it to Lorsch in 819 with a hundred unfree peasants. Other evi-
dence of clearances or exploitation of the forest is lacking because the
geographical traces of internal colonisation, which Nitz dates in the
ninth century, should be placed in the tenth and eleventh centuries as
proposed by Chris Wickham.[3] Newly reclaimed land (called *bifangum*
and *proprisum*) was only mentioned at the edge of the Odenwald, at
Bensheim, between 765 and 850.

Left of the Rhine, massive forests on the Eifel plateau reached
Bonn and Aachen, to the west of which the Ardennes, as we know
them still today, were in Roman times and in the early Middle Ages
part of a far greater forest of that name. Near its centre, not far from
the abbey of Stavelot-Malmedy, the term *forestis* appears for the first
time in 648. Somewhat later several *forestes* are situated in the same
region, the north-east of the Ardennes and the least fertile part of
it, close to Aachen. This was the heartland of the Carolingians, a
vast royal domain with Roman roads between Cologne, Trier and
Reims across it and not unpopulated. No less than 25 exploitation
centres (*curtes, fisci*) were situated within it. New settlements from
the eighth century like the village of Villance near Bastogne, belong-
ing to the abbey of Prüm, threatened the use-rights of the *fiscus* of
Theux and of the abbey of Stavelot-Malmedy.[4] More to the west in

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[2] Chris Wickham, 'European Forests in the Early Middle Ages: Landscape and
Land Clearance', in Wickham, *Land and Power*, pp. 156–61; Dietrich Lohrmann,
'La croissance agricole en Allemagne au Haut Moyen Âge', in *La croissance agricole*
(= Flaran 10), pp. 109–13.

[3] Wickham, 'European Forests', pp. 179–83.

[4] René Noël, 'Pour une archéologie de la nature dans le nord de la "Francia"', in
*L'ambiente vegetale nell'alto medioevo* (Spoleto, 1990: Settimane di studio del Centro
italiano di studi sull'alto medioevo 37), pp. 763–820; René Noël, 'Moines et nature
sauvage: dans l'Ardenne du haut moyen âge', in Jean-Marie Duvosquel and Alain
Dierkens (eds.), *Villes et campagnes au Moyen Âge. Mélanges Georges Despy* (Liège,
1991), pp. 563–97; Wickham, 'European Forests', pp. 175–9.

present-day Belgium, from the Scheldt near Tournai to the river Dyle near Leuven, several woods were the remnants of the former fifth- and sixth-century *sylva Carbonaria*, which had not been protected as a *forestis*. The 'forêt de Soignes', still existing today south-east of Brussels, is one of them. On less sandy soils in northern Flanders a forest called *Koningsforeest* in the twelfth century, refers by its name to its royal status in Carolingian times and to the protection that saved it from destruction. The same cannot be said of the *Sceldeholt*, a large wood south of Ghent, between the rivers Leie and Scheldt down to Kortrijk, which already in the ninth century belonged to the abbey of St Peter's at Ghent. By lack of protection it degenerated into heathland on the sandy soils of its northern half in the tenth and eleventh centuries because of the use-rights of the villagers living on the banks of both rivers.[5]

In France north of the Loire the largest forests, like the Der (*saltus Dervensis*), lay in the north-east. Here the abbey of Montiérender had its tenants undertake clearances, as we learn at length from the abbey's polyptych dating from shortly before 845.[6] The Paris region had some woods on the plateaux, like the Yvelines forest south-west of the city and the Brie east of it, but the whole region, especially the valleys, was densely populated.[7] To the west of Paris the abbey of St Germain-des-Prés around 825–9 had several wooded estates in the Perche region.[8] In these western parts of France the woods were rather fragmented and in the Loire region less densely wooded birch forests grew on the plateaux of the Sologne and the Gâtinais. South of the Loire only the Massif Central (Auvergne) and the region immediately north of the Garonne were densely wooded, but partly with degraded forests. Here indeed begin the 'fragile' woods of the Mediterranean type characterised by very difficult natural regeneration.

In Italy there was less and less dense woodland, except in some regions like the northern fringes of the plain of the river Po, the Ligurian and Tuscan Appenines, the Abruzzes and the pine woods

[5] Adriaan Verhulst, *Histoire du paysage rural en Flandre* (Brussels, 1966), pp. 87–98.

[6] Droste, *Polyptichon von Montierender*, v° *exarti*.

[7] Omer Tulippe, *L'habitat rural en Seine-et-Oise. Essai de géographie du peuplement* (Paris, Liège, 1934); M. Roblin, *Le terroir de Paris aux époques gallo-romaine et franque*, second edition (Paris, 1971).

[8] Konrad Elmshäuser and Andreas Hedwig, *Studien zum Polyptychon von Saint-Germain-des-Prés* (Cologne, Weimar, Vienna, 1993), pp. 130–5, 405.

in Calabria. In the Sabina Chris Wickham studied more than twenty
*gualdi*, a particular type of fiscal land consisting not only of wood
(*gualdus* = Germ. *Wald*) but also of other uncultivated land, pasture
and even arable, cultivated by *coloni publici*, free men owing dues to the
duke of Spoleto but degraded to tenants of the abbey of Farfa after
many *gualdi* had been given or sold to the latter. These *gualdi* may
be compared to the *Bifänge* and *capturae* in Germany and the status
of their inhabitants to that of the *aprisionarii* who repopulated the
Languedoc and Catalonia in the ninth century after their desertion
as the consequence of Arab invasions.

Entities like the *gualdi* are an example of the mixed woodland–
arable economy that characterised large parts of Carolingian Europe,
where there was no opposition between nature and culture 'for wood-
land was widely exploited in all periods; nor should one oppose
woodland exploitation and arable cultivation, for both formed a nor-
mal part of peasant subsistence strategies and landlordly expropriation
alike'.[9]

### FIELDS AND VILLAGES

The configuration of woods in Carolingian Europe, as it has been
described, does not allow us simply to fill in the open spaces be-
tween them with regions where arable land is supposed to have been
dominant. There were, however, such regions in the eighth and ninth
centuries and it makes sense indeed to analyse the structure of their
settlements and fields, as far as they have been the object of de-
tailed study, although one must be careful with generalisations. The
Paris region, on the basis of the early-ninth-century polyptych of
St Germain-des-Prés, can be such a test case and also the Ghent re-
gion in Flanders by using the book of gifts (*Liber traditionum*) made
in the eighth and ninth centuries to the abbey of St Peter's in Ghent.
They were among the most densely populated regions of north-west
Europe, the distribution of rural settlements of which may be illus-
trated, to begin with, by the example of the Germanic speaking
regions of Belgium in the early Middle Ages.[10]

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[9] Wickham, 'European Forests', pp. 162–70, 198.
[10] Adriaan Verhulst, 'Settlement and Field Structures in Continental North-West
Europe from the Ninth to the Thirteenth Centuries', *Medieval Settlement Research
Group. Annual Report* 13 (1998), pp. 6–13.

From the fifth well into the ninth century this distribution was characterised by a majority of dispersed settlements, mainly consisting of mostly newly created hamlets and isolated farmsteads. The evidence for this are the numerous names ending in *-inga haim*, *-haim*, *-sali* and even *-thorp*, that occur in written documents of the eighth, ninth and tenth centuries. In later centuries, however, many (if not the majority of them) cannot be identified with the name of a village, a hamlet or even a farmstead. In the rare cases where we still find them in a document of the twelfth or thirteenth century, they are often mere field names. Of the four types cited, the names ending in *-sali* most clearly denote an isolated farmstead. This interpretation results from their meaning – a house in which the livestock are sheltered under the same roof as the family – from their location and function – they are very often situated in woodland and devoted to the breeding of cattle and sheep as is apparent in both cases from the word composed with *-sali* – and finally they are described in Latin texts as *mansioniles*, a term pointing to their status as a dependency of a manor, smaller and created at a later date. Linguistically, too, they are later than the names ending in *-inga haim*, as is also the case with the names ending in *-haim*. In Romanic-speaking regions the *-villare* settlements may be compared to the *-sali* farmsteads both on linguistic grounds – *villare* being a diminutive of *villa* – and on the basis of manorial texts suggesting their dependence on a *villa*. The evidence about the names ending in *-sali*, and possibly this holds good for the names ending in *-haim* too, gives support to the supposition that from the seventh to the ninth century the dispersion of rural settlement increased. This does not necessarily mean that during the same period hamlets did not grow into larger groupings of farmsteads to which the term 'village' might be applied, probably and still for a certain time without its juridical connotation, which is a phenomenon of the eleventh and twelfth centuries. Schwind[11] has shown the existence among the landed possessions of the abbey of Lorsch in the middle Rhine region during the ninth century of at least two fairly big groupings of thirty to thirty-five farmsteads that he does not hesitate to call villages in the geographical sense. They were indeed, as Schwind could prove from inventories and charters, nucleated villages, in which the farmsteads lay side by side. Consequently their

[11] Fred Schwind, 'Beobachtungen zur inneren Struktur des Dorfes in karolingischer Zeit', in Jankuhn, Schutzeichel and Schwind (eds.), *Dorf der Eisenzeit*, pp. 444–93.

lands must have been located outside the village, perhaps in an open-field layout as is still the case today. It is not clear to what extent the structuring of a manor by the abbey, which is apparent from the organisation into fiscal units (*hubae, mansi*) of the lands acquired by gifts, fostered this grouping. Neither do we know if this structuring led to the abandonment of isolated settlements. The field layout of the early Middle Ages and the formation of the open field can perhaps throw more light upon such problems.

Before studying these aspects of the early medieval cultural landscape, the settlements in the Paris region should be examined, especially those that in Carolingian times were the centre of manors of St Germain-des-Prés at a small distance south and south-east of Paris.[12] Contrasting with the above described settlements in Flanders, they were all of Gallo-Roman origin. Their Roman antecedents were settlement cells that were starting points for the organisation, mostly by the Merovingian king whose property they were, of manors which took the Gallo-Roman name of the settlement. They were located along watercourses not far from Roman roads and expanded, through clearances that ended some time before the creation of Irmino's polyptych (825–9), from the valleys up to the rich loamy plateaux where the main blocks of arable were situated. These plateaux had been covered with woods and heath as is suggested by many place-names. The clearances had probably been due to the initiative of the abbey after it had received the estate by royal gift, whilst the foundation of a church in the settlement centre had in some cases been done by the king. The oldest were dedicated to St Martin and St Peter and may have been founded by the Merovingian king, whereas the younger had St Germain as patron and were clearly founded by the abbey.

The church was the centre of the settlement as was proved by excavations in a few *villae* of the abbey of St Denis in the same Paris region.[13] In Villers-le-Sec three clusters of buildings, which have been interpreted as three *mansi*, lay around the cemetery and a small open place near the church, at the crosspoint of two roads. The *mansi* were separated by small roads or paths at distances of 80, 70 and 30 metres from each other. This is the prefiguration of a village

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[12] Elmshäuser and Hedwig, *Studien zum Polyptychon Saint-Germain-des-Prés*, pp. 35–6, 77–9.

[13] Jean Cuisenier and Rémy Guadagnin (eds.), *Un village au temps de Charlemagne* (Paris, 1988), pp. 118–21, 142–9.

structure, not yet very concentrated as will be the result of its evo-
lution in the tenth to eleventh centuries. The buildings of the *mansi*
consisted of a living house 12.5 metres long in which cattle were shel-
tered, and a few other buildings, amongst which were some 'sunken
huts' occupying very unequal plots, from 40 ares to 18 hectares.

The arable lands of these farms must very probably be sought out-
side the village proper but very little is known about them. We may,
however, be sure that the peasants' lands did not lie intermingled with
the arable lands of the lord's central court, the *mansus indominicatus* of
the manor, for we are well informed on the demesne by the polyp-
tych of abbot Irmino of St Germain-des-Prés (*c*. 825–9), although
not on the material aspects of the *mansus indominicatus* of St Denis in
Villers-le-Sec, which has not been excavated.

The arable land of the demesnes of St Germain-des-Prés in the
neighbourhood of Paris consisted of fields called *culturae*.[14] There
were large and smaller ones and each *villa* had between four and
twelve of them. The small *culturae* measured from 5 to 16 hectares,
whereas the larger ones extended over 66 to 88 hectares. They formed
different entities of demesne land, often enclosed by non-temporary
hedges and well marked off from the peasants' lands. Within them
temporary wooden fences were often placed by the services of the
tenants to protect the parts that were sown with grain, when part
of the *cultura* lay fallow and was used as pasture. It is plausible to con-
sider this as a prefiguration of the later fully developed three-course
field system rather than to interpret, as some historians have done,
the *culturae* in their totality as furlongs in such a system. This difficult
question will be explained in Chapter 4. From the geographical point
of view, which is mainly ours for the moment, it is sufficient to say
that these *culturae*, each in itself formed an 'open field' or rather what
has been called a 'micro-open field', without the whole region hav-
ing an open aspect and certainly without considering the Carolingian
field system as the 'open-field system' proper of later centuries.

A very different picture of the Carolingian agricultural landscape
emerges from the analysis of the gifts recorded in the *Liber Traditionum*
of St Peter's abbey in Ghent.[15] A large number of gifts from the ninth
century to this abbey are concentrated in the territory of the village of

[14] Elmshäuser and Hedwig, *Studien*, pp. 348–53.
[15] Adriaan Verhulst, 'Le paysage rural en Flandre intérieure: son évolution entre le
IXe et le XIIIe siècle', *Revue du Nord* 62 (1980), pp. 11–30, reprinted in Verhulst,
*Rural and Urban Aspects*, VIII.

Sint-Martens-Latem, situated on the banks of the river Leie some 10 kilometres south of Ghent. These gifts consist of modest to very small peasant holdings of between 2.5 and 5 hectares, the lands of which are scattered over four to five fields, each bearing a name composed with the suffix -*accra*: *Hostaraccara* (var. *Ostar*), *Euinaccar*, *Hanria accara*, *Brainna accara*, *Helsaccra*. Only the last of these field names can be identified with a later and still existing one (Elsakker), situated near two other *akker*-names of younger date, but all three significantly lying beside the main arable field of the village which in texts from the later Middle Ages is called *Latemkouter*, a name composed of the name of the village and the Flemish word *kouter*. I will come to the latter in a moment. Before that it is important to note that in the Ghent region the same configuration occurs regularly, although in texts from the later Middle Ages: names ending in -*akker* for small fields beside a big field called *kouter*, the latter bearing the name of the village or in several cases the name of a hamlet. While these still existing *kouter*-names cannot be found in our early medieval texts, the latter do preserve many more names composed with *accra* (*accarom, accarum, accrum, agrum*), all from the ninth century and all situated not too far (up to 25 kilometres) from Ghent. Like those from Sint-Martens-Latem cited above they are difficult to localise or to identify with a later field name. This time however, in contrast with the names ending in -*accra* cited above, the first element of most names is the name of a kin settlement: -*inga*; or of a larger settlement interpreting the element *inga*: -*inga haim*; for example *Ramaringahemia agrum*, *Culingahem accra*, *Eninga accra*. Consequently they may be interpreted as the name of the principal field of the settlement. Besides this field these settlements had other fields, some with a name ending in -*accra* composed with a point of the compass (*Westeraccra, Sudaccra*), the name of a person (*Euinaccar*) or otherwise (*Stenaccra*), some with a name pointing to the origin of the field as newly cleared land (*Heninga rodha* at *Eninga*, *Rodha* at *Culingahem*), some indicating uncleared land (*Ramaringahemia mariscum*).

Because the names of these settlements and their fields have nearly all disappeared in later centuries, it is very difficult to make an appeal to later sources and landscapes in order to interpret the early medieval evidence. More particularly we cannot say much about the developments between the ninth and the thirteenth century and hence explain the disappearance of most of these names. It is nevertheless striking that in the later Middle Ages, especially in the Ghent region

but also more generally in the south of east Flanders, in the valleys of the rivers Scheldt and Leie and not far from the language boundary, the majority of the villages, and even smaller hamlets on the territory of the same village, have a principal field bearing the name of the village or the hamlet followed by the suffix -*kouter*. As I have already said, most of the -*akker* names had disappeared by that time, except some that were not formed from a settlement name and which were situated at the edge of the main *kouter*. It therefore looks as if the ninth-century -*accra* names composed with a settlement name have been replaced between the ninth and the thirteenth century by -*kouter* names, but to explain this would mean going beyond the Carolingian period.

The evidence obtained so far from written sources concerning early medieval field structures has shown that *culturae*, *akkers* and *kouters* in north-west Europe generally consisted of large blocks of arable land, seldom subdivided into smaller plots. This observation is confirmed, either by written documents or by archaeological evidence for regions as far away as Auvergne or the Bas-Languedoc.[16] In the southern half of France a link has been observed between the early medieval blocks and protohistoric fields and more frequently with a Roman *centuriatio*.[17] A similar link has been suggested with the so-called 'Celtic' fields in north-west Europe[18] and even with *centuriatio*-like structures in north-eastern Belgium[19] and central and

[16] Gabriel Fournier, *Le peuplement rural en Basse Auvergne durant le haut moyen âge* (Paris, 1962), pp. 322–5; Monique Bourin, 'Délimitation des parcelles et perception de l'espace en Bas-Languedoc aux xe et xie siècles', in *Campagnes médiévales: l'homme et son espace. Etudes offertes à Robert Fossier* (Paris, 1995), p. 79.

[17] Gérard Chouquer, 'Parcellaires et longue durée', in Gérard Chouquer (ed.), *Les formes du paysage*, 3 vols. (Paris, 1996), vol. ii, *Archéologie des parcellaires*, pp. 213–18; Jean-Loup Abbé, 'Permanences et mutations des parcellaires médiévaux', *ibid.*, pp. 223–33.

[18] This opinion of the Dutch archaeologist H. T. Waterbolk, 'Patterns of the Peasant Landscape', *Proceedings of the Prehistoric Society* 61 (1995), pp. 1–36, concerning the continuity of landscape and settlement from prehistoric to historic times in the Dutch province of Drenthe, is no longer accepted: Theo Spek, 'Die bodenkundliche und landschaftliche Lage von Siedlungen, Äkkern und Gräberfeldern in Drenthe (nördliche Niederlande)', *Siedlungsforschung* 14 (1996), pp. 95–193, esp. 142–56 (with an English summary).

[19] Joseph R. Mertens, 'Sporen van Romeins kadaster in Limburg?', *Limburg* 37 (1958), pp. 1–7, reprinted in *Acta Archaeologica Lovaniensia* 25 (1986), xx; Ludo Melard, 'Millen. Van natuurlandschap tot cultuurlandschap', *Volkskunde* 87(1986), pp. 262–345, esp. pp. 282–90.

northern France,[20] which are, however, difficult to establish as such, let alone as precursors of early medieval field forms.

The blocks composing the *culturae* of northern France and southern Belgium belonged as a whole to one owner, the lord of the manor, as part of the so-called 'réserve' (demesne) in a classical bipartite estate. The same is not always sure for the ninth-century fields with a settlement name followed by the suffix *-accra* in the Ghent region and in south-east Flanders.[21] Only when in their totality they were integrated into a manorial structure was this the case, as some examples in and near Ghent demonstrate at a later time when the *-accra* names had already disappeared and been replaced by *-kouter* names. Elsewhere on large fields named after the settlement followed by the suffix *-accra*, peasant plots must have been lying intermingled with lands of the lord who represented the kin or family that had given its name ending in *-inga* to the settlement. The lands of the lord can in later centuries and on early modern cadastral plans be identified as large blocks of irregular form whereas the peasant plots generally formed small strips brought together in furlongs laid out in the same direction.

These patterns and more particularly the division of block parcels or furlongs into strips can seldom be observed from contemporary early medieval written evidence. The polyptych of abbot Irmino (825–9) however gives some information on the size of plots belonging to the *ancinga*, that is that part of the demesne divided up among the tenants and which they had to cultivate the whole year round for their lord. These plots were long narrow strips whose length was eight, ten to twenty-five times their width.[22] Some rare texts from the tenth and eleventh centuries, giving the length or width (or both) of plots or indications of their boundaries or of their neighbouring plots, have been studied in the Auvergne and Languedoc by French historians.[23] Their conclusions converge in so far as an evolution away

[20] A. Querrien, 'Parcellaires antiques et médiévaux du Berry', *Journal des Savants* (1994), pp. 235–366, esp. pp. 307–10; R. Agache, *La Somme pré-romaine et romaine* (Amiens, 1978: Mémoires de la Société des Antiquaires de Picardie, in-4° series, 24), pp. 454–6.

[21] Verhulst, 'Paysage rural en Flandre intérieure'.

[22] Elmshäuser and Hedwig, *Studien,* p. 356.

[23] Gabriel Fournier, *Le peuplement rural en Basse-Auvergne durant le haut moyen âge* (Paris, 1962); Bourin, 'Délimitation des parcelles'; A. Guerreau, 'L'évolution du parcellaire en Mâconnais (env.900–env.1060)', in L. Feller, P. Mane and F. Piponnier (eds.), *Le village médiéval et son environnement. Etudes offertes à Jean-Marie Pesez* (Paris, 1998), pp. 509–35.

from block fields to smaller and sometimes more irregular parcels can be observed in the tenth to eleventh centuries. Only on newly cleared land regular strips represent from the eleventh century onwards the dominant field structure of the later Middle Ages.

<div align="center">TOWNS</div>

Towns, although occupying a relatively small part of the soil and not very numerous in Carolingian times, are an element of the not very urbanised cultural landscape of that period and should therefore be considered here. Their geographical aspects, only briefly touched on in Chapter 7, will be dealt with here, with an emphasis on those towns of Roman origin that were still the majority in the Carolingian empire, with the exception of the regions east of the Rhine. The new towns, the so-called *emporia*, have been treated at length in their geographical aspects as part of the infrastructure of Carolingian trade in Chapter 7.

At the end of the third century, Roman towns had shrunk as new stone walls were built around them and suburbs, artisanal quarters and other peripheral elements were left outside the walls. Not only here but also inside the new walls a certain ruralisation took place. Open spaces became larger and more numerous. Public buildings decayed, became part of the defensive construct and were sometimes occupied by private persons, subdivided and used as private dwellings. This process went on until the seventh century when churches and newly founded abbeys were built on the ruins of Roman buildings and with stones from them, on the same spot or farther away in the suburban zone. The old Roman wall lost its significance, fell in ruins and the transition between town and countryside became vaguer. As another consequence of these changes the centre of the town often shifted away from its former place.[24]

At the end of the eighth century intense building activity around the cathedrals in many episcopal cities like Metz, Lyon, Vienne, Le Mans and others, was provoked by the new regulations about the life in common of the canons, prescribed in 754 by Chrodegang, bishop of Metz, and imposed throughout his kingdom by Charlemagne.

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[24] N. Christie and S. T. Loseby (eds.), *Towns in Transition: Urban Evolution in Late Antiquity and the Early Middle Ages* (Aldershot, 1996); Terry R. Slater (ed.), *Towns in Decline AD 100–1600* (Aldershot, 2000).

Ruralisation of the urban landscape clearly came to a halt but no new walls were built.[25]

The old Roman walls of some *civitates* like Tournai were restored in the second half of the ninth century against possible attacks by the Vikings. Often abbeys like St Denis, St Vaast in Arras, St Bavo in Ghent, which like many others (Lorsch, St Riquier, Fulda) had meanwhile been rebuilt in the new Carolingian style, were walled for the same reason.[26] Near them and included in their later fortification, monastic cities developed from the late eighth century onwards in Tours, St Riquier (*Centula*), Arras, Ghent and elsewhere.[27] Being at the service of the abbey they were not autonomous but nevertheless, at least geographically, had an urban character, with houses, work-shops and shops along streets. Some, like the monastic city called *portus* near St Bavo's abbey in Ghent (around 865), played an eco-nomic role in the outside world and were inhabited by merchants who, besides their activity at the service of the abbey, may have set up an independent trade for their own profit.

[25] Jean Hubert, 'La renaissance carolingienne et la topographie religieuse des cités épiscopales', in *I problemi della civiltà carolingia* (Spoleto, 1954: Settimane di studio del Centro italiano di studi sull'alto medioevo, 1), pp. 219–25; Werner Jacobsen, 'Die Renaissance der frühchristlichen Architektur in der Karolingerzeit', in Christoph Stiegemann and Matthias Wemhoff (eds.), *Kunst und Kultur der Karolingerzeit* (Mainz, 1999), pp. 623–43.

[26] Adriaan Verhulst, *The Rise of Cities in North-West Europe* (Cambridge, 1999), pp. 59–67.

[27] Fred Schwind, 'Zu karolingerzeitlichen Klöstern als Wirtschaftsorganismen und Stätten handwerklicher Produktion', in L. Fenske, W. Rösener and Th. Zotz (eds.), *Institutionen, Kultur und Gesellschaft im Mittelalter. Festschrift für Josef Fleckenstein* (Sigmaringen, 1984), pp. 101–23.