

Economic History and Landscape History:

Cultural Landscapes, Subsistence and the Market in Pre-industrial Europe

Society and landscapes in the wetlands of NW Europe.

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Dries Tys (Brussels), Historical landscape research and regional institutional history in the transition debate. A case study in coastal Flanders.¹

Cultural landscapes and economy, an attempt to bridge them in maritime Flanders?

In traditional historical geography, landscapes were studied mainly from the perspective of rural history and seen as the result of formation processes dominated by agro-systems in a certain physical and environmental context. This early kind of landscape history was inspired by Marc Bloch of the *Annales*-school, an approach which was rooted in the tradition of positivism and empirism. The main characteristics of this historical geography were:

- that it tried to make a descriptive reconstruction of general landscape-morphology,
- that this reconstruction was mainly based on historical records such as charters, and
- that it explained landscape-morphology and its evolution from a rational, functional-economic perspective.

This structural approach led to many important historical-geographical studies, each with its own merits. Particularly the pioneer work of the well-known Belgian historian Adriaan Verhulst on the general development of the medieval landscape of the Belgian coast has been of great importance (1959, 1966, 1995a, 1998). As such Verhulst laid the foundations for scientific landscape history in Belgium and Flanders. Nevertheless, just as in the cases of New Archaeology or Geography, reaction came and argued that landscapes also had an important subjective connotation. Individual reading, sensing and use of space were as important in the creation of interactive material landscapes. In these respect landscapes can also be seen as social constructs, as was argued by post-modern and critical researchers in anthropology, archaeology, geography and art history.

The word “landscape” itself is an indication of the subjective and cultural appreciation of the spatial characteristics surrounding us, coming from a genre of painting in which particular rural “landscape”-images were indebted with an aesthetic appreciation, linked to civil culture of the 16th and 17th century. This aesthetic landscape concept of this period had an enormous influence on our modern concept of “traditional” and beautiful landscapes, so called “heritage” landscapes. Economical history seems far away from these “heritage”-landscapes, notwithstanding the fact that “heritage”-care itself is becoming more and more an economic force, with a certain impact on landscape-dynamics, or should we say landscape-construction, depending on a shared view of traditional heritage and regional identities. In Flanders, this is connected with federalist developments and the construction of a national Flemish identity².

Although this aesthetic landscape-concept is in itself a modern one, landscapes as social constructs have of course existed throughout history and prehistory, as is shown by indeed the ornamental design of waterscapes around castles in late medieval times, the Neolithic monumental landmarks in south west England and many other examples. Landscapes have

¹ Please, do NOT cite. This is a paper in progress, to be reviewed and completed after the conference.

² The Flemish Heritage Institute (VIOE) started with a “national” research agenda on landscapes (as well as archaeology).

developed in a continuous and dialectical process of human materialisation and transformation of its spatial context. In this process, human sense of place and perception of spatial context played an important role. The way in which physical and cultural characteristics of the landscape were manifested in space as a set of codes and signals and were read, sensed and perceived, according to the social and cultural context, values and motivations of the “reader”, influenced men’s decisions about their spatial context. And through this he developed a particular spatial behaviour, thus, for instance which borders and edges were established and recognised, where people settled, which paths men followed, and so on. As this process went on, a complex horizontal stratigraphy of old and new landscape-elements developed, testifying not only to the different ‘stages’ of landscape-formation, but also to the social, economic, cultural and environmental context in which the landscape developed.

As such, landscapes as outcomes of different social practices, are always cultural (Tilley 1994 and 2006:7). In this respect “cultural” is not to be seen as opposed to utilitarian, or economical. On the contrary, both are intrinsically linked, in the sense that landscapes can be approached as a kind of material culture being at the same time the outcome of and the medium for social practice and agency³. In other words, landscapes provide a contextual sense of place and conditions spatial behaviour and understanding⁴. As Tilley writes: “*Landscapes are contested, worked and reworked by people, according to particular individual, social and political circumstances.*” (2006: 7). The importance of this statement is that we have to look at who is behind the landscape, and at social, political and/or ideological practices and concepts of power, in order to understand landscape developments.

In the feudal era, the construction of power and the development of ideological concepts power is related almost automatically with the acquisition and (institutional) organisation of territorial property and patrimony, as well as with the construction of landmarks in the religious sphere (Bisson 1995b and Davies & Fouracre 1995b, a.o.). In this period, private patrimony and public fisc are inseparable: private possessions are public patrimony and vice versa. However, the actual way in which land was used to generate power depended on regional differences in ideologies and political strategies. Specifically, the degree in which ideological systems were moulded more or less after the Carolingian model played an important role in this. For instance, how the lords dealt in their region with free property of the *rustici* or peasants, whether feudal divisions could take place or not, the degree of centralisation and the institutions developed to support the princely position and power, the development of surplus extraction mechanisms, and so forth. Also economic historians like Peter Hoppenbrouwers, Jan-Luiten Van Zanden, Erik Thoen and Bas Van Bavel stress the importance of the knowledge of regional institutional backgrounds in order to understand the way in which Brenner’s social property relations developed and thus get a correct view of the reproduction strategies of lords and peasants in the medieval period and thus on the different regional “pathways” in the transition debate (Thoen 2001, Van Bavel 2001, Hoppenbrouwers & Van Zanden 2001b and c).

In this contribution I want to argue that regional ideological and therefore institutional practices according to a deliberate strategy and concept of power are central to our understanding of landscape development. I apply this question on a medieval landscape, the 10th to 12th century landscape of coastal Flanders. This is the region where the counts of Flanders started to build their powerful political position in high medieval Europe: the *pagus Flandrensis* from the late 9th century. In this feudal era, the development of princely (and

³ The last volume of The Journal of Material Culture (volume 11, number 1/2, march/july 2006, special issue editor C. Tilley) is dedicated entirely to Landscape, Heritage and Identity.

⁴ Miller 1996: 404: “*without any conscious thought or consideration as to the way things might otherwise be*”.

feudal) power is intrinsically linked with kinship, ideology and patrimony. In the same period, maritime Flanders develops from a salt-marsh area at the edge of the sandy fringe, densely inhabited in the late Roman and Merovingian times (including a *caputisci* and a late Roman castellum that became royal and later comital possession in the middle ages), to a polder area next to important commercial towns as Bruges, Veurne and Ieper. I will argue how the comital ideological concept and the way in which property was developed had an important influence on the material and social formation of the landscape of this area and created an environmental and spatial dialog of power. This understanding of the landscape will also provide new data and arguments in the role of coastal Flanders in the transition debate, by which we touch upon the central theme of this session: the fringe between landscape history and economic history and the relation between cultural landscape construction and the formation of the Market in pre-industrial Europe.

These questions are dealt with from an inter-disciplinary perspective and approach of the medieval landscape, its morphology and the property structures in the landscape, combining analyses of medieval and early modern cadastral (*terrier*) sources, field and dyke systems, place names, settlements structures, environmental policies, etc of a specific case study area called 'Kamerlings Ambacht', on the westbank of the estuary of the river Yzer in the actual Belgian coastal plain (Tys 2003). Kamerlings Ambacht was a feudal administrative district of the county of Flanders which went back to centralising administrative reforms of the county during the first half of the 11th century. It had in the medieval period during a certain time an own board of alderman, but survived mainly because it provided the framework for the micro-regional waterboard or "watering", which existed up to the early 19th century. It's centre was the village of Leffinge, which was also the centre of the original mother parish, which lay together with the mother parish Testerep at the base of the circumscription of the district. Leffinge had also a belfry in the church. Kamerlings Ambacht had a surface of 7348 hectares and included 10 villages, including the major centre Leffinge (as the oldest village) and the well known late medieval fishing village of Walraversyde (as the youngest).

The retrogressive reconstruction started from the early 19th century land registry plans of the different parishes. These plans showed a state of the landscape in which patterns much older than the 19th century were preserved. The reconstruction was done through a wide range of sources and different maps, geomorphological data, paintings, archaeological survey work, remote sensing, field morphology and above all, historical sources with data on as well the material landscape features (dikes and waterworks, farms, ...), as on property structures, as on spatial and ecological policy and behaviour, which could be confronted with the reconstructed landscape features themselves (Chouquer 2000). The oldest source goes back to 988 and mentions the church of Leffinge. The information unit I used was the individual parcel, which was also the digital polygon unit used in the accompanying GIS.

Landscape developments before 900

Up until the late 1990s, prevailing explanations of occupation in coastal areas have favoured the idea of their inhabitability, as well as their exploitation for seasonal activities during the first millennium AD. Such explanations were based on models of cyclical marine transgression (sea-level rise) and regression, when coastal plains and lowland estuaries became permanently inundated by water; or became wetland ecological habitats, whether saltmarsh, silt fen or lowland moors for peat accumulation, during periods of sea-level rise (Behre *et al.* 1982). Within the transgression and regression models, the period between AD 300 and 800 has been characterised as an era of marine transgression (the Dunkirk II transgression), and exploitation and occupation of the North Sea coastal plains, low lying

estuarine zones and coastal dune belts has been suggested as seasonal and limited in nature, due to inhospitable conditions.

The suggested absence of the potential for permanent settlement in most coastal areas during the defined Dunkirk II transgression has been based on an apparent correlation between archaeo-botanical evidence from Lower Saxony and other areas around the North Sea coast, with certain charter references to grants of coastal pasture to leading monasteries, from the seventh to tenth centuries AD (Verhulst 1959, 1995a and b, 1998). Such ideas became an accepted orthodoxy on both the Continental and British sides of the Channel and North Sea, with historical references of land grants to major ecclesiastical institutions often being viewed as immediate precursors to wetland drainage and land reclamation, especially in Flanders and Zeeland. For example, the historian Jordan still considered a handful of charters concerning donations of coastal estates to Cistercian abbeys as the main argument to support the idea of embankment of the coastal plain under their auspices, during the thirteenth century (Jordan 2002).

The historical sources have also tended to be used in an inconsistent way by archaeologists, in relation to early medieval activity in coastal zones, often following assumptions made on the basis of sporadic and limited textual sources. For example, the first references to settlements or individuals associated with settlements in the Flanders coastal plain date from the end of the eighth century. They were land grants to the abbey of St. Peters, Ghent, comprising seasonal grazing, and an estate associated with at least one settlement in the coastal plain, near Oostburg (Gottschalk 1955: 16). Verhulst saw these grants as an indication of the end of the Dunkirk II transgression, and an onset of land reclamation, primarily sponsored by major monasteries from the Scheldt valley (Verhulst 1959, 1966). The general absence of textual evidence relating to activities in the coastal plain prior to the late eighth century was then used as evidence of an absence of permanent activity and settlement in this area, i.e. textual visibility governed all interpretation of early medieval activity in the Flemish, northern French and Zeeland coastal claylands.

Yet, in Frisia (from the Rhine delta eastwards to Friesland), the oldest textual references to settlement and activities in the coastal tract also date from the eighth century, but the archaeological research on *terp* settlements has long demonstrated the permanent habitation of this region, in the early medieval period, several centuries before activity became visible in the historical records (De Langen 1992). In Flanders and northern France, however, the archaeological record was forced into the textually dated chronological framework (Verhaeghe 1977). Recent detailed and systematic geomorphological research in Flanders, based on sediments and their radiocarbon dating, by Cecile Baeteman and her team from the Belgian Geological survey and the Free University of Brussels (VUB), has shown that in the early medieval period the Flemish coastal plain was a stable and not significantly inundated area of saltmarsh, interspersed with tidal channels which were actively silting up and evolving into channel ridges (Baeteman 1999; Baeteman *et al.* 2002). These findings render the Dunkirk II transgression model redundant as a significant barrier to permanent human activity and settlement in this coastal plain. Even if, however, the results are specific to coastal Flanders, they highlight diversity in the potential for human activity in low-lying coastal regions during the early medieval period, rendering allegiance to generalising models dangerous.

In the light of the re-assessment of the geomorphological evidence in coastal Flanders, and the demonstrable danger of following the textual sources as indicators of settlement, my phd research has suggested the existence during the 7th to the 11th century of a settlement hierarchy of *Flachsiedlungen* farmsteads on the contemporary ground surfaces of silted-up tidal channel ridges, focussed on nucleated settlements of multiple households, located on *wierden* or *terp* mounds such as Leffinge and Bredene (Tys 2003: 588-598; 2005; Loveluck &

Tys in press). The nucleated settlements like Leffinge became the central foci for their micro-regions of approximately fifteen square kilometres, at the administrative, religious and economic levels, from at least the tenth century; and there are indications of their central role from at least the Carolingian period. This has parallels with the suggested role of “trade terps” in Frisia, suggested by Halbertsma (1963) and others.

Analysis of the textual sources for property relations in the Flanders coastal plain, from the tenth to fifteenth centuries, also shows that the populations of these terp-focussed settlement hierarchies were free proprietors (Tys 2003: 266-273; in press). That is to say, they may have owed some dues to respective regional lords, whether Counts or Kings, but with the exception of these possible obligations there is no evidence that they came under any other significant socio-political control, in the period covered by this paper. As mentioned above, a similar situation can be suggested for the Westergo and Oostergo regions of Friesland (Heidinga 1997: 31-32) and Oost Friesland in Germany, where free farmers (*Bauernkaufleute*) lived in the higher coastal salt marshes, involving themselves in wool production and trade from their *Langenwurten* settlement mounds.

Therefore, in the area containing the known early medieval coastal trading settlements, at Wissant, Veurne, Bruges, Antwerp and Walcheren/Domburg, and the unlocated *Iserae Portus*, there appear to have been permanent surrounding settlement patterns, with at present unconsidered relationships to them. The populations of the coastal landscape, largely located on tidal channels up until the tenth/eleventh century (Verhaeghe 1977) possessed a maritime focus within a landscape which is unlikely to have fulfilled all their subsistence needs. The primary activities for the nutritional support of their households would have focussed on sheep husbandry and fishing (Verhulst 2002). The population, like others involved in specialist production of limited products, must also have been involved in a significant degree of exchange for the provision of the cereal component of their diet, and commodities such as wood. The likely major commodities for exchange would have been wool or finished wool garments (the so-called *pallia fresonica*), fish and salt (Ervynck *et al*, Tys 2004, 2005).

In short, in the coastal plain of western Flanders (the Kamerlings Ambacht) there is evidence for unbroken activity relating to settlement, probable specialist husbandry and commodity production, and cross-Channel and coastal exchange from the sixth century onwards. Furthermore, there is no archaeological evidence at present to assume that activity in the coastal plain was seasonal. Indeed, the emerging settlement evidence suggests the opposite – a permanently occupied settlement hierarchy. A permanently occupied and productive landscape in the coastal marshes of Flanders, and eastwards to the Scheldt-Meuse-Rhine delta region, and beyond, also helps explain a long-standing textual and archaeological paradox: namely, the large ring-forts constructed in the late ninth century, from Bergues in northern France, over Veurne in West Flanders to Oost Souburg, Domburg and Burgh, in the Scheldt delta (Henderikx 1995: 76-81). These large ring forts have been interpreted as *vluchtburgen* or ‘refuge forts’ during periods of Viking raiding, in their late ninth- to tenth-century stages (Henderikx 1995: 71). Yet, historians and most archaeologists have, until now, viewed the Flanders and Zeeland coastal plain as seasonally occupied, which begs the question ‘Why build large and ostentatious ring forts in a coastal region occupied only by a sparse population of fishermen, shepherds and salt-workers in the summer?’ The answer to the paradox of the past is now apparent in the indications of a vibrant, permanently occupied settlement hierarchy which was worth protecting and controlling closely.

The formation of comital power and the supposed importance of comital property

The ring forts like Veurne and Bergues are intrinsically linked to the rise in power of the counts of Flanders, who seem to have been the responsables for the construction of them and who created in and next to these forts centres of comital power, like residences and collegiate churches (Meijns 2000).

The county of Flanders as it developed from the end of the 9th century was to a large extent the creation of powerful figures like Baldwin II (879-918) and Arnulfus I (918-968) (Koch 1978, Bates 1995). They took advantage of the weakness of royal authority in West-Francia at the end of the 9th century and most of the 10th century, to practice public authority and royal rights in a group of northern *pagi*, centred around the maritime *pagus Flandrensis* (mentioned first time in 745). Baldwin II clearly made use of the vacuum of public power during the last large scale campaign of the Vikings in Flanders between 880 and 883/5. When he appears in the sources in 888 as one of the most powerful *magnates* of West Francia, he exercised as good as certain a diverse range of usurped royal privileges like the patronage of churches, the mint, tolls and the power to raise an army of free men. The power he exercised was based on an enormous private patrimony of large scale territorial estates which were former royal fiefs, ecclesiastical goods and especially new estates taken by the royal right to appropriate waste grounds. In this way, they were able to take amongst others large surfaces of uninhabited salt marshes in the coastal plain. The incredible wealth, loads of gold and enormous means that these estates provided, are generally considered as the fundaments of the power development of Baldwin and his successors, up till Baldwin IX, who was chosen by the other western European *magnates* to become emperor of Byzantium. The enormous wealth provided by these private estates was used in a classic feudal manner, i.e. to bear the costs of wars, expand the county, bind vassals, expose power, but also to create an innovative and relatively performing centralist administrative apparatus, only equalled by that of the English kingdom (Lyon & Verhulst 1967).

There is less agreement on the actual material and spatial features of these estates, a question that is linked with the question of the importance of the estates for the development of the coastal landscape and with the question of the economical role these territories played in the economic development. According to Verhulst, the involvement of the counts was not that intense, and restricted to the donation of waste lands and embankment rights to ecclesiastical institutions (Verhulst 1959, 1990). According to E. Thoen, followed by R. Brenner, the counts were almost compelled to transfer these possessions to rich (ecclesiastical) institutions, in turn for rents, because the counts would not have had the capacity to invest in the water household and because the counts would not have been able to develop classic surplus extraction methods in the coastal area, because of the supposed absence of peasants in the area (Thoen 2001, Brenner 2001). As such, the counts would never have developed proper estates in the salt marshes and comital property would only have had an indirect influence on the coastal landscape, in the sense that this policy stimulated the rise of large, specialised and market-oriented farms in the coastal plain during the 12th and 13th century, owned and leased out by ecclesiastical institutions and later also urban patricians. Only they had according to Thoen the capacity to invest in water household matters and environmental issues. For Brenner, the counts “had no choice but ... to lease them out to market dependant tenants with the capacity to invest” (2001: 321). According to him, the counts had no possibility to organise feudal surplus extraction strategies, because of the apparent absence in the coastal plain of peasants. The landscape seen by these economic historians was a salt marsh landscape evolving into an open landscape of isolated dispersed settlement of large market oriented farms, while the count restricted himself to a number of comital castles and strongholds, in which he founded a number of collegiate churches as his most important spatial signal of power (Meijns 2000).

Let us turn therefore to the landscape features of these comital estates themselves.

The estates of the counts of Flanders on the westbank of the river Yzer and their significance for the landscape

The interdisciplinary, retrogressive reconstruction of the medieval landscape of the case study area, resulted in the reconstruction of several comital estates of the so called *Magna Brevia*, *Brevia Camere* and *Spicarium* of Bruges (Verhulst & Gysseling 1962)⁵. These were entries in the general account of comital territorial incomes, that collected money rents (*Breviae*) or rents in kind (cereals in case of the *Spicarium*). The money rents originated from the end of the 11th century on, when either the comital estates and /or their produce were leased out to *berquarii*. The descriptions of the rents in sources from the comital administration (especially the treasury) and the spatial context of the lands that had to pay them, show that in the actual research area these incomes could be brought back to specialised sheep domains, which seem to have been exploited directly by comital officials before the end of the 11th century. The *Spicarium* estates were situated more landinward, around the late-roman castellum of Oudenburg, where the Pleistocene soil was almost untouched by any tidal influence. It is therefore not impossible that the *Spicarium*, thus cereal estates go back to usurpated Carolingian royal fisc lands. Further research on the landscape of these estates will give us more insights in these and other matters⁶.

The sheep estates on the westbank of the Yzer of the *Magna Brevia* and *Brevia Camera* of Bruges had a capacity of no less 10.000 sheep and were situated more exactly in the area of salt marshes between the larger tidal channels of the coastal plain and the higher and older salty meadows further inland, where sedimentation had probably already come to an end between mid 6th and mid 8th century. This older inland area seems to have been inhabited by free farmers with alodial property, living a.o. on collective dwelling mounds, and this well before the end of the 9th century (see before). The counts organised their property in the lower salt marshes as so called *terrae ad oves*, or sheep estates. The actual sheep domains were not only organised as administrative units or *ministeria* under responsibility of a *preco*, but they formed also distinctive estates in the landscape, as is shown by several oval enclosures which are to be found in the centres of these domains. Their presence in the landscape was so remarkable, that several centuries later, in the 16th century, people still distinguished the “*cromme diken*” of bent dikes. Similar enclosures are known in Wessex, Niedersachsen and Holland, as well concerning their morphology, settlement context as their surface (Rippon 2002, Schmid 1988 and Besteman & Guiran 1986). These oval enclosures were probably nucleated embankings, erected probably before the end of the 10th century to create protected hay land areas for the sheep as a kind of infield (Rippon 2001, 2002).

Also comparable with the situation in Somerset, is that not long after the construction of the ring dikes of the oval enclosures, the decision was taken to construct large scale defensive dike systems, in the case of Flanders along the larger tidal channels that had not silted up yet, making the oval embankments redundant (RIPPON 2002). The names of these dikes we encounter, are the *Kaaidijk* and *Hoge Dijk*. Due to lack of archaeological research we know nothing of their initial dimensions, although landscape evidence and iconographical evidence suggests that they resembled the dimensions of the oldest known sea dikes in Flanders, with a general width of approximately 6 m. and a height of approximately 3 meters (GOTTSCALK 1955, 116-119). These dikes enclosed large surfaces of several square kilometres, which areas were called in the historical sources the *old lands*. Similar situations are encountered in most

⁵ See Tys 2004: 39-46 for the heuristics of the historical-topographical reconstruction of these estates.

⁶ Postdoctoral research program of author, funded by Fund for Scientific Research – Flanders.

of the northwest European coastal plains that were reclaimed in the medieval period (GOTTSCHALK 1955, HALLEWAS 1984, MEIER 1997, RIPPON 2001 and many others). These defensive dikes were present in the landscape before the last decades of the 11th century (TYS 2003). The result of this large scale and systematically lay out of defensive dikes between the former lower salt marshes and the last open tidal channels, was the creation of a reclaimed surface of 5685, 64 hectares that were entirely comital possession. This also means that the counts made a deliberate choice for the intensification of his sheep estates through technological innovations, involving a certain disturbance of the existing environmental balance between land and sea, which forced the people in maritime Flanders to reach a complex new balance with tidal forces through expensive technological solutions and the set up of a waterhousehold organisation with important economical, ecological and social consequences for the centuries thereafter (Tys 1999, 2005; Soens 2001).

This act of embanking had several other consequences and implications. One of them is that comital power and organisation must have had the ability to organise manpower on a large scale and that the counts must have had the financial capacity to carry out these expensive works. These aspects were needed to have the capacity to apply the necessary hydrological technological knowledge concerning flood control and drainage on this large scale. The embanking meant that the natural drainage of the former tidal environment, that was based upon the ready made system of gravitational drainage of the salt marsh creeks, had to be modified and improved by a large-scale artificial drainage network of new drainage ditches. The drainage of the embanked area also needed the construction and application of technical constructions like sluices and outlets.

An environmental consequence of the embanking was that it caused rising storm surge levels in the tidal sea water channels, since the water had less space to spread out (VOS & VAN HEERINGEN 1997). Higher storm surge levels thus implied greater pressure on the dikes, and an increase of the risk of dikes bursting. Historical sources indeed describe an increase of disastrous floodings in the 11th and 12th centuries, with a lot of casualties (VERHULST 1959). In order to solve this problem, but also to increase the comital spatial potential even further, the decision was taken to embank the last remaining tidal channels by means of expensive and complex hydraulic technologies, in particular the construction of large dams, sluices and drainage channels (TYS 2001). Also, the natural sedimentation of the last open tidal channels was coming to an end in the course of the 12th century. Several historical sources mention that ‘new grounds’ or *novae terrae* had grown next to the old lands as a consequence of the accumulation of alluvium in the tidal channels, as for instance in the case of the sheep farms of the abbey of Saint-Peters of Gent on the isle of Testerep in 1133: “...in Testerep praefacta ecclesia Sancti Petri berquarias super litus maris possedit, quibus per maris alluvionem nova quaedam terra conglutinate est et concreta.” (TYS 1997).⁷ In this general ecological context, the decision was made around the mid of the 12th century to block the mouths of the partially silted up channels by the construction of large stone dams, like the *novum dam* on the mouth of the Testerep channel and the *Steendam* and *Streeckxdamme* on the mouth of the ‘southern channel’ or *Suthana*, which were the last remaining tidal channels in the research area.⁸ Similar dams were constructed in the same period on the mouth of the Zwin, in Damme, and on the mouth of the *Gersta*, between Bergues and the sea (the *Hooghen Steendam*). As these new lands and polders developed as a result of a planned and well organised politic of systematically land claim, the field structure of these new lands was much more rational and regular compared to the older irregular field structure of the old lands, that was based upon the old network of salt marsh creeks.

⁷ DE HEMPTINNE & VERHULST 1988, nr. 25. These sheep farms were former comital estates (TYS 1997).

⁸ The *novum dam* was first mentioned in a charter of 1167 (DE HEMPTINNE & VERHULST 1988, nr. 275).

The drainage function and hydraulical role of the former tidal channels had to be replaced by artificial drainage canals in the second half of the 12th century to lead the inland waters safely to the sea. To prevent the coastal area to be inundated by rain floods in these canals, a new type of dike was invented, namely the *silinghe* or *zijdelinghe*. These dikes were built along side the new drainage canals, to protect the lands next to these canals from flooding. These 'side dikes', as they can be translated, appear in the historical sources from the end of the 12th century on. The old and new drainage canals led vast amounts of drainage waters from the inland through the polders to the sea. This implied the construction of larger sluices, leading the drainage water of large areas through the dams into the estuary of the river Yzer, and into sea. As such, these sluices were the crown on the embanking, flood control and complex organisation of the water household in the Flemish coastal plain.⁹

This hydraulic policy of the counts was clearly part of a larger spatial program, including the foundation of new 12th century ports, markets and toll collecting centres under direct comital control at the mouth of the main watercourses in the coastal plain, which were as well the main axes of the trade with the inland centres like Bruges and Ieper as the main axes of the drainage of the coastal area (VERHULST 1967). The new ports (Nieuwpoort, Damme, Duinkerke, Gravelines, Biervliet) were thus centres of comital control of water, hydraulic technology and trade. Through this the counts succeeded in creating a centrally organised, intensive, specialised and technical high standing hydraulic landscape, where the environment was used to secure and increase power and control over economy and society.

It thus seems that the counts have made use of the inherent ecological possibilities of the coastal plain to organise specialised sheep domains (pastoral specialisation), that delivered large quantities of wool to the comital storehouses in the different 10th and 11th century comital *castra* like Bruges, but also in the ring forts of Veurne and Bergues as well as in the late roman castellum Oudenburg (part of the royal fisc in the early medieval period and subsequent comital property from the 10th c.). It is most likely that the wool and other products that were raised in the comital estates, like peat, salt, fish (herring and eels), meat and cereals, were traded in the castral marketplaces and/or used by artisans that lived in or near these comital centres, which must have had an impulse on urban developments in and around these centres¹⁰. The important trade towns of Flanders, Bruges, Ghent, Ieper and initially also Veurne did therefore not originate in a vacuum. It even seems that the counts played initially a direct and market oriented role in these towns themselves. At least, the landscape of estates and early Flemish towns, in relation to the available historical sources (estate accounts and others) go strongly in this direction. It is in this respect it is notable that in the immediate presence of other larger estates in the coastal plain we find small towns with a clear and distinctive comital presence (comital property and rents on the town-parcels and/or presence of a castle seated by an important vassal and/or construction of collegiate churches, etc.) like Oudenburg, Lo, Gistel and others.

However, it was probably not the count's purpose to develop an economic position on its own, but instead to use the generated means to purchase a powerful feudal position, by investing them in the organisation of a centralised public authority, in military campaigns and territorial conquests in the neighbouring counties, in socio-political networking through gifts out of the territorial properties and in the materialisation of his status in collegiate churches, dynastic landmarks (burial places) and comital castles. In their feudal policy, the distribution

⁹ Their successors are still in function: the coastal plain is still drained through the medieval drainage system and organisation, without pumps.

¹⁰ In this respect it is remarkable that the fish markets in Bruges, Ghent and also Antwerp are situated immediately next to the feudal *castra* of the 10th and 11th c. (Verhulst 1999: 78 and 100; Tys 2006: 23).

of domain property to vassals and others remained however limited. Only small surfaces near the centres of the estates were enfeoffed to comital knights and military servants, possibly as a kind of garrisonment. These knights were not allowed to develop seigniorial manors on their fiefs and remained under direct control of the count's administration. Nevertheless, the count's knights were the local representatives and executors of comital power and prestige. This position gave them a certain influence on the landscape and its organisation. They were responsible for the development of manors and new, small villages in the comital estates, often named after the knights like for instance *Arleboudscapelle*.¹¹ These knights were also involved in the control of the waterworks, hydraulic systems and possibly also the general water household that came into existence by the defensive embanking of the area. This is suggested by two facts. The main family of estate knights in the area, the knights of Slype, held also in fief the toll that was raised at the point where the canal between Ieper and Bruges, crossed the defensive dike between the comital estates and the tidal channels. Furthermore, the most important of these knights like the *van Slyphes* also held a position as *scabini* of the coastal area (Kasselrij Brugge), which held probably from the 12th century on, juridical power in water household matters. It seems that the count tried to control through his vassals the economical, strategic and also social importance of the water control systems.

The new lands that became available after the reclamation of the tidal channels during the 12th century were transformed in fiefs more systematically than the old estate lands behind the defensive dikes, but also here without any seigniorial rights in order to prevent feudal atomisation. The counts did clearly choose not to disperse their coastal property to satisfy a feudal network. During the 12th century, also more lands were assigned to ecclesiastical institutions like the Cistercians and the Templar Knights. In these 12th century new lands, a new group of coastal villages appeared on or next to the, relatively modest, ecclesiastical farms and donations in the comital new lands, almost like a kind of "villes neuves" in a former unchristian environment. All together gifts to ecclesiastical institutions remained relatively limited. Mainly those institutions that favoured and supported the comital ideology, as for instance the Benedictine abbeys of Saint-Peter's near Ghent and the abbey of Saint-Bertin's in Saint-Omer in the 10th and 11th century or the Cistercians and the Templar knights in the 12th century, received relatively limited, nevertheless economical viable, donations (often a farm of 100 sheep) out of the coastal estates. Because of the fact that these transactions are traceable in the archives of these institutions, ecclesiastical property in the coastal plain is traditionally overexposed in the historical sources, which lead several scholars to the wrong idea that the coastal plain was reclaimed by churches and abbeys.

The count's policy to suppress possible feudal developments in the coastal area also probably had a positive influence on the surviving of the allodial property of the free peasants in the inland areas that were inhabited well before the end of the 9th century. These free peasants seem to have been protected by the presence of comital power nearby against possible feudal dynamics. The landscape of the free peasants was dominated by the central village Leffinge, with its large, communal Romanesque church, and the remarkable presence of civil semi-religious brotherhoods (*Calandergilde*), militia's and a concentration of inn's indicating trade and communication. The peasant holdings were of moderate surface (5 to 10 ha.) and were probably aimed at subsistence strategies, supported by common haylands and common uses of the environment (Tys 2003). There were almost no larger holdings, and probably until the 13th century no fiefs in this area. Thus, we have in the district of *Kamerlings Ambacht* two

¹¹ *Erlealdi Capella*, 1141 (DE HEMPTINNE, VERHULST 1988, nr. 58). Similar new, 11th- and 12th c. estate villages in which we suppose the hand of comital estate knights are *Snelghers Kerke* (or *Snaaskerke*), *Eggewaertskapelle*, *Ramskapelle*, *Volcravenskinderkerke* (Oostkerke), *Reinilini Capella* (Oudekapelle), *Simonis Capella* (Koksijde), *Eustacii Capella* (Zoutenaai), etc.

separate landscape-languages in an area of not even 8000 ha. From the 13th century on, the peasant subsistence estates, landscape and lifestyle became threatened under influence of the commercial developments in Flanders and increasing surplus extraction a.o. through the organisation of the water household (see Soens 2001), leading to impoverishment and conflicts like the coastal rebellion of 1328 (Thoen 2004).

In summary, the property of wilderness was used to develop a powerbase that allowed the counts to construct a regal position that was inspired by a centralistic, regal power concept. In this neo-Carolingian policy, the commercial oriented management of directly exploited properties generated means that were invested in the construction of a centralised public authority that kept control over subordinate feudal powers. The choice for this concept of power led to a particular material development of the landscape of the coastal plain, as is shown by for instance the early presence of water household-infrastructure and the absence of seigniorial castles. The water household infrastructure like dikes, dams and sluices were the significant micro-regional comital landmarks, directing and redirecting spatial behaviour and attitudes towards the environment. Through this infrastructure, a landscape and environmental balance were created subjugating the region to comital and other powers, including the free peasant society east of the comital estates. Also the influence of this comital policy on the development of trade and marketplaces in the comital centres of power, and thus on urban developments in the 10th to 12th century is not to be underestimated. Another choice for a different concept in the same ecological conditions (for instance to leave the salt marshes to the free farmers, or either to follow a more 'classical' feudal policy) would have led to a different landscape. In this respect, the position of the count as a central agent of power was clearly of great significance for medieval landscape dynamics in maritime Flanders.

It would be interesting to compare this spatial practices and politics with those of other feudal lords in NW Europe. This has to be worked out in the near future. However, when we look at Holland and Gelderland, the differences between the practices and policies of comital power over there compared to Flanders are clear. Also in the alluvial area in western Gelderland, as in south Holland, the counts owned 'waste' saltmarshes and tidal environments through the regalian right on waste grounds, and this from at least the 11th century on (Van Bavel 1999: 455-457). The regional powers did however not choose for the development of own estates, but to lease these waste lands immediately out to free lease holders, following a.o. the *cope*-system. (Van der Linden 1956, Henderickx 1987, 1997). In this system the lands were divided rationally in equal strips, leased out for a symbolic sum, leading to an entirely different social property relation situation and landscape when compared to Flanders!

It appears that in the 10th and 11th centuries, the Counts of Holland and Gelderland had less "space" to develop a significant regal position at the cost of their landlords, the emperors of the Holy German Empire (see also Hoppenbrauwens 1997). In this context the comital political and ideological strategies had to develop another path and inspiration than to imitate the Carolingian regal concept, as their Flemish counterparts did. Instead they developed a non-feudal, nearly modern, public territorial concept, leaving space and landscape to their subject, notwithstanding the fact that it was a highly standardised and typical strip landscape without much marks of hierarchy or distinctive landmarks inside (Van Bavel 1999).

Other examples show that coastal environments could also be left to local societies and remained unembanked until at the earliest the early modern period, as in the Fenlands, Schleswig Hollstein and in the Somme estuary (Darby 1983, Allen 1997, Rippon 2001). But, as said, this needs to be worked out in more detail.

To end, we have to turn to the significance of the material landscape and its value as a source for economic history in general and the transition debate in particular. It is clear that the landscape, as the result of spatial policy is an important source for the transition debate. It is not sufficient to turn to generalising historical-geographical views and interpretations of the landscape to construct economical theories and interpretations. Instead, it is necessary to read the landscape itself as an autonomous material source of information, a social construct with great value for economic history. The study of the landscape of maritime Flanders shows for instance that the commercial developments in the Flemish coastal society of the high and late middle ages were not because of the supposed absence of peasants, neither were they hampered because of the presence of a powerful feudal lord. On the contrary, this lord turned to a distinctive spatial policy which was market oriented and friendly towards peasants in order to fulfil his princely aspirations and ambitions. The counts favoured the development of a specialised, intensive agriculture, characterised through active investment and innovation in environmental technology.

The landscape shows in other words how complex the different reproduction strategies and their spatial translations can be. Market development went hand in hand with feudal ambitions and the comital policy, precluding the highly commercial developments of maritime Flanders between the 12th and 16th century. Regional political developments played their part in the formation of a proto-capitalist “landscape” (Thoen 2004). The spatial context of maritime Flanders was transformed into an hydraulic landscape and society, as the result of the princely concept of power of the counts of Flanders.

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