

A landscape biography of the 'Land of Drumlins': Vooremaa, East Estonia $Veldi,\ M.$

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Author: Veldi, M.

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10 Example of a comparative approach of Vooremaa in Estonia and Drenthe in the Netherlands

Cultural transformations and long-term landscape change: the role of religion

Jan Kolen, Krista Karro, Martti Veldi & Hannes Palang

Abstract

One of the projects of HERCULES (Work Package 2) focuses on long-term changes in Europe's cultural landscapes. Research in this project has delivered a protocol for studying landscape change from an interdisciplinary historical perspective, tools for storing and linking historical landscape data and dynamic models of long-term landscape change in two of HERCULES' case study regions: the river delta area of the Netherlands and Uppland in Sweden. However, the project explicitly dealt with the biases in current landscape research as well. Most studies in long-term landscape history overlook the social and cultural aspects and contexts of change. Therefore, as an experiment, the project also explored the possible impact of religious transformations on cultural landscape developments in the Netherlands (Drenthe) and Estiona (Vooremaa). The results of this study show that cultural transformations can substantially influence long-term landscape changes. Moreover, regions may show very different path-dependent trajectories of landscape change when viewed from this "alternative" historical perspective. Landscape and heritage researchers could explore this interaction more systematically, in this way broadening and enriching our understanding of both long-term landscape change and our environmental heritage.

Key words:

Landscape change, long-term, religion, HERCULES, Netherlands, Estonia

1. Introduction

Cultural transformations are rarely taken into account in the study of landscape change. Since the "rediscovery" of Braudel's (1972 [1949]) notion of the *longue duree* in landscape history and archaeology in the 1980s and 1990s, the long-term dimension of regional history has erroneously become equated with the geological (*geohistoire*) and economic development of landscapes, although Braudel himself stressed the importance of sustained worldviews and cultural values (*mentalites*) as well. The emphasis on economic land use and morphological change has remained unchanged over the past two decades, even now human geographers well recognize the importance of the ideational aspect of landscapes and topics like "ritual" and "cosmology" have entered the archaeological thinking about past societies.

As the research within HERCULES is devoted to long-term changes in Europe's cultural landscapes, particularly in Work Package 2 (Plieninger et al. 2015; Crumley et al. 2014; Kolen et al. 2015; De Kleijn et al. 2016), we here present the results of a comparative study of the relationships between landscape change and cultural transformations between c. 800 and 1900 AD in two of HERCULES' case study regions: The Netherlands (Drenthe) and Estonia (Vooremaa). Within this framework we focus on the role of religion as an example. The comparative study shows that religious transformations periodically induced long-term changes in the landscape, and that economic land use practices and social changes — even when dominant drivers of landscape change- may be better understood when taking their cultural and religious contexts into account. The results can be seen as an illustration of the integrated approach to landscape history adopted in Work Package 2 of HERCULES, which combines landscape biography (Kolen et al. (eds) 2015) with recent branches of historical and cultural ecology (Crumley 2012; 2015).

In the case of the Netherlands we focus on the region of Drenthe, situated to the northeast of the Dutch river delta, whereas we rely on recent studies of Vooremaa (Veldi in prep; Karro 2013, 2015) in the case of eastern Estonia. Although these regions are widely separated geographically and have different social and economic histories, they also share some dominant physical characteristics. In both regions, the cultural landscape is "composed" upon (but not simply determined by) a geological fundament that resulted from Pleistocene glacial processes, including the formation of drumlins, ice-pushed ridges and glacial basins. The presence of glacial drumlins has even given name to one of the study areas, Vooremaa, which literally means "land of the drumlins". During the Holocene, this fundament was filledin with countless wetlands of different type, including lakes, fens and marshes on a large scale.

Land use has differed between those regions over the past 1500 years, with a strong emphasis on various systems of mixed farming in Drenthe (Spek 2004) and combinations of farming, fishing, forestry and trading in eastern Estonia (Veldi in prep.). Yet, in both regions we are dealing with predominantly rural cultural landscapes that, at least for the period under study, were situated at the northern fringes of the core areas of religious development in medieval and early modern Europe (cf. De Jong et al. (eds) 2001).

2. The impact of "Christianization" on the rural landscapes of Northern Europe

The neglect of cultural transformations is especially striking for the study of the medieval and early modern landscapes of Western and Northern Europe, which are in fact pre-eminently suited for exploring the large-scale influence of religious dynamics during Christianisation (Ó Carragáin & Turner (eds) *in press*). Changes in the medieval landscape continue to be described in terms of land reclamations and agricultural reforms, the growing influence of the towns and the transformation of rural settlement forms. The impression has been created that Christianity's impact on the landscape was confined to the rise of churches and monasteries, some changes in landed property and the selective introduction of agricultural innovations from the already Christianised Frankish heartland (Kolen *in press*).

The early Middle Ages saw the emergence of Christian centres with a supraregional status on the periphery of the Christian world, north of the Alps (De Jong *et al.* (eds.) 2001), such as Trier, Paris (Saint Denis), Tours (Saint Martin) and Maastricht (Saint Servatius). According to Theuws (2004) these centres and their churches developed into focal points for 'total social events' in which new social relationships were established and old ones confirmed, political transactions were sealed, and religious and social elites controlled the spiritual sphere. Large-scale economic and social activities in these centres, such as annual markets devoted to the saint, often had a sacrosanct character as the place of action was essentially a cult place and the local saint was the key figure. Thus the special significance of the religious centres crystallised in both time and space around a saint – in a literal sense too, as his or her relics were inalienable possessions around which aristocratic families built prestigious basilicas (Theuws 2004, 13).

The question, however, is how Christian time and space (cf. Fabian 1983) unfolded in the ordinary landscapes of northern peasant societies outside these centres, such as in the northeastern Netherlands and eastern Estonia, where elite power displays were expressed to a lesser degree in monumental architecture or in urban ceremonial settings. In recent decades, historians like Le Goff (1977; 1982) and Gurevich (1988; 1995) have shown how in the

Middle Ages the social and religious lives of communities in the countryside were organised around the village church and the patron saint. It was the latter in particular that gave sense and meaning to the lives of ordinary mortals. The local saint was expected to fulfil God's work within the boundaries of the microcosm – in other words, the village community and the parish. However, despite the exemplary studies by Le Goff and Gurevich, there have been few investigations into the impact of Christianisation on the landscape of local rural communities in northern Europe. An exception is Roymans' study (1995) of how people dealt with pre-Christian burial monuments and graveyards in the medieval landscape of the southern Netherlands. This study shows how urnfields from the Bronze and Iron Age continued to be respected there for many centuries, despite obvious changes in their sacred significance. In the later Middle Ages many urnfields were reclaimed and converted into arable land, thus suggesting a break with the pre-Christian landscape and its religious topography (Roymans et al. 2009).

In the following sections we describe the impact of Christianisation on landscape change in the Drenthe region in the Netherlands between c. 800 and 1700 AD, and in Eastern Estonia between c. 1100 and 1900 AD. We then compare these processes in order to trace regional differences and similarities, and present some general conclusions for the study of long-term landscape change in relation to the history of religion.

3. The example of Drenthe, The Netherlands

The earliest archival and archaeological sources that inform us about local communities' encounters with Christianity in Drenthe are scarce and roughly date from the 8th and 9th century AD. They indicate that the introduction of the new religion soon left its mark on the burial ritual and cemeteries in the area and in the perception of landownership. An important document in this respect, dating from 820, is the *traditio theodgrimi diaconi*. This document reports a deed of gift from Theodgrim, a member of an old landowning family, who in that year donated part of his estate to Werden Abbey (Blok 1960). Gifts of this kind were not free from self-interest. Members of landowning elites used endowments of land to secure prestige among the clergy, monks in particular, and thereby boost the family's status among the lay community (see Bijsterveld [1999] for the southern Netherlands). By donating land to monasteries and churches, they could also secure their salvation in the afterlife. Although the information about this practice for medieval Drenthe remains limited to Theodgrim's declaration, we may conclude that land donations by the elite more generally played a role in the Christianization of the Drenthe landscape at an early stage.

In the funerary ritual and cemeteries, changes began to appear around the same time, not only in Drenthe but also elsewhere in the northern Netherlands (Knol, 1993). From the 8th century onwards, the rite of cremation gradually disappeared, graves were oriented West-East, and the practice of grave gifts became restricted to the incidental deposition of objects with Christian symbols. The changes can be seen most clearly in the large cemetery at Wijster, which was used from the Roman period well into the Middle Ages and extended along the edge of a peat bog (Van Es 1968). It is notable that we encounter the first Christian burials at long-used, pre-existing cemeteries, the so-called "row-cemeteries" whose location tied in with an older landscape pattern. Wetlands such as stream valleys, peat bogs and marshes already occupied a prominent place in the pre-Christian ritual landscape (Van der Sanden 1990; 1995; 1997; 2002; 2004; Van Vilsteren 1993; Kolen in press). In and along the river valleys, fens and peat bogs highly valued objects such as personal ornaments were deposited frequently and intentionally, as well as human and animal remains and hair, and not to forget entire human bodies (Van der Sanden 1990). The medieval row cemeteries with the first "Christian" graves were situated in similar landscape contexts (Van Es 1967; 1968; Waterbolk 1985).

The first churches in the region were most probably not seen as an entirely new phenomenon in the Drenthe landscape, but elaborated on an existing building tradition and architectural vocabulary. Wooden predecessors found beneath various brick churches in the villages of Norg, Rolde, Sleen and Emmen reveal that the earliest churches were quite similar to the traditional byre houses and barns in terms of their basic form and construction (Waterbolk 1985, 84-86; 2009, 99, 162; Te Kiefte 2011; cf. Norberg-Schulz 1996, 86-93). They consisted of a simple hall with sturdy wall posts. However, it is still not clear whether the building of churches reinforced a pre-existing pattern of regional centres, or whether a new hierarchy was imposed on the cultural landscape in this way (Kolen 2005,167-172). A case for continuity has been made on the basis of the six presumed proto-parishes in the region and the initial stages of their splitting up (Blok 1985). This process seems to have conformed to a long-existing tripartite division of Drenthe (from which the name is also said to be derived) and which in turn formed the foundation for the region's later division into six judicial districts, known as dingspelen (Blok 1985, 142). In more southerly regions – in areas within the borders of the former Roman Empire – continuity was usually the case (De Jong et al. (eds) 2001; Theuws 2001; Effros 2001). There, the Christian landscape was almost literally built upon the ruins of the military fortifications and Roman architecture.

The impact of religious transformations on the Drenthe landscape increased significantly

from the 12th century onwards, when the wooden churches were gradually replaced by stone-built successors. In the village of Anloo a tuff stone church was built already in the 11th century. This was still a simple hall church with a closed choir and with dimensions matching those of large houses (Stumpel 1987), but some fifty years later a square tower was added. Other new elements, such as a semi-circular choir, also began to appear. The church tower was not a random innovation. In the later Middle Ages, the church gave a special status to both Christianity and the village in a landscape which by now came to be dominated by horizons and flat lines as a result of reclamation and large-scale grazing. In this way, the church tower reinforced the visual relationship between earthly life and heaven as well. Whereas the building of the earliest stone-built churches weakened links with the pre-Christian landscape, it therefore reinforced relationships with the universal principles of Christian symbolism and dogma (cf. Norberg-Schulz 1975; 1996, 76).

From the second stage in the Christianization of the Drenthe landscape we also have a highquality source, the Narracio, which talks about the circatus (tour of visitation) that the bishop or his representative, the dean, conducted in Drenthe between 1178 and 1196 (Blok 1985, 154). The bishop's tour involved inspecting his estates and collecting taxes, as well as checking the church paths and churchyards, indicating that Christianity by then had put a firm stamp on the Drenthe cultural landscape, not only by means of religious architecture but also in infrastructural and economic terms. As a result, Christianity also began to infiltrate the everyday uses and experiences of the landscape by the village communities. An innovation in the Drenthe countryside that expressed this fact was the so-called *reeweg*. The "reewegen", a specifically Drenthe phenomenon (Coert 1992), were roads whose function was to transport the deceased from their home to their final resting place (ree probably means 'corpse'). They also facilitated daily churchgoing. Initially, these reewegen will not have transformed the existing infrastructure of pathways substantially. This was perhaps more generally true of spatial movements through the landscape as part of Christian rituals. Slicher van Bath, the historian, postulated already long ago that the Drenthe properties of Werden Abbey were probably linked by an arterial route that ran from Essen to Groningen (Slicher van Bath 1945). To the east was another route running through Drenthe and connecting the episcopal properties with one another. In fact, there is every reason to view these routes as the successors of much older routes which Kooi (1979) and Waterbolk (1985, 59-60) believe already linked the late prehistoric urnfields. On his tour of visitation through Drenthe the bishop is likely to have mainly made use of this ancient pattern of routes and pathways that crossed the sand ridges in the area. We can assume that the same was true of the Christian burial ritual and worship. In the

first few centuries of Christianisation, settlement and occupation were still too dynamic (Spek 2004), churches too thinly scattered and the network of parishes and church roads simply too wide-scaled to assume a sustained reorganisation of the infrastructure and its use for religious purposes.

It took until the 14th century AD for the Drenthe cultural landscape to have fully transformed in a religious sense, some six centuries after the first signs of Christianity appeared in the region (cf. Mostert 1993). By the thirteenth century, the process of parish division was in full swing throughout Drenthe. The final stages occurred in the fourteenth and fifteenth centuries, with the last parishes splitting between 1310 and 1422. At the same time the church infrastructure expanded geographically following new reclamations along the fringes of the traditionally inhabited area. These changes meant that the parish, the hub of the Christian world, increasingly coincided with the daily life world of the local rural community of Drenthe, the *buurschap* (Heringa 1985).

The sustainable fixation of Christianity in the landscape logically became reflected in the regional pattern of the church paths and *reewegen*, whose exploitation and maintenance were formalised from the thirteenth century. From then, maintenance obligations for the *reewegen*, cemeteries and churchyards in the area were laid down in the ecclesiastical jurisprudence or *seendrecht* (Coert 1992; Kolen 2005, 180-183), meaning that they were inspected by the bishop or the dean. The *reewegen* developed into a more dense and characteristic web-like pattern within the parishes, linking the farmsteads and outlying villages without a church to the centrally located church village (Fig. 1; Fig. 2). Thus the movement of the funeral ritual and of churchgoing conformed to the centric articulation of the village territory, and salient 'pagan' elements such as prehistoric megalithic graves and barrows (including gallow mounds) were usually avoided in this context (Kolen, 2005; 2009). The latter were often situated along the thoroughfares, which in Drenthe often lay at right angles to the church paths and *reewegen* (see Kolen, 2005, 194-195; Kolen 2009 for the parish of Anloo).

The earlier donations of land by elite families, such as in the earlier-mentioned case of Theodgrim, was later echoed in the *vicarie*, or chantry - an ecclesiastical foundation charged with securing the ultimate happiness of the founder and sometimes his (or her) relations by arranging for the reading of prayers and masses. Earthly means were necessary to achieve this spiritual end. Belonging to a chantry were estates that produced the necessary revenues. A well-known Drenthe example is the Catharina *vicarie* of the church of Gasselte, which demonstrates just how large these estates could be (Spek 2004, 338). Between 1487 and 1543 it comprised more than twenty fields, plus pastureland and meadows, as well as a chantry

house, several garden plots and a chantry house with an orchard in a neighbouring hamlet. In such cases, the farmland around the village was perceived more than just fertile arable land.

At the end of the Middle Ages the Drenthe landscape was densely structured by the system of local church roads and scattered with churches. By then, by means of their sheer physical appearance and the sound of the church bell, the churches also structured the daily movements, land use practices and landscape experiences of the local community, as numerous written documents attest (Kolen *in press*). Later Drenthe sources show that when church bells rang for the dead, they communicated special information to those who understood the message (Bazelmans 1993; Kolen 2006). Listeners could, for example, deduce the sex and approximate age of the deceased, as well as whether he or she came from the church village or from one of the other villages in the parish. The tolling of the bells (*kleppen*) also determined the movement of the funeral procession from the house of the deceased towards the church village (Bazelmans 1993, 24). At the very least, the sound of the church bell meant that there could be no misapprehension about where the centre of the Christian life world lay.

Christianity also created new layers of landscape narratives that filled in the world of physical landforms, spatial structures and sounds in changing ways (Kolen 2006). At least since the 15th century, landscape narratives in Drenthe increasingly generally linked megalithic graves, barrows and prehistoric fields to demons, the devil, or to vager notions of 'heathenish' and 'pagan'. These places were often located on the margins of the village territory, in the heathland or woods and at some distance from the village and the church. The Christianised landscape had a complex structure in this respect. According to Gurevich, the Christian and pagan dimensions of the landscape were not spatially exclusive, but differed from place to place in terms of intensity and interrelationships (Gurevich, 1995). The issue here is partly one of temporality. The outside world only became chaotic, unpleasant and threatening when night fell. Good Christians would do well to avoid these heathenish places after that time.

All these developments and phenomena showed that, since the 14th century, Christianity had reshaped the landscape in a fully recognizable way, although not all Drenthe inhabitants will have shared its dogmatic reading of space (cf. Fabian 1983; Karro 2015 for Estonia). Besides, by the end of the 16th century, the next religious transformation – the Reformationwas already underway.

4. The example of Vooremaa, eastern Estonia.

The Baltic regions were the last in Europe to be Christianized. In the case of eastern Estonia (then part of Livonia), the regional population was forced to adopt Christianity during the German conquest in 1208-1227, described in detail in the Livonian Chronicle of Henry (*Heinrici Cronicon Lyvoniae*). However, Christianity – in whatever form- reached parts of Estonia already before the conquest: in the second half of the 10th century in coastal northeastern Estonia (Viru), along the coast of Lake Peipsi during the 11th century, and in the 12th century on the northwest-coast of the island of Saaremaa (Mägi-Lõugas 1995; Karro 2010, 2013, 2015).

Like in Drenthe, Christianity influenced the burial landscape in eastern Estonia. The spread of probable Christian influence in burials can be noticed in early inhumation burials along the water route that passed the northern and eastern Estonian coasts (the Finnish Gulf and Lake Peipsi). These burials differed radically from the earlier tradition of cremation burial, but were not truly Christian yet. In villages along the west coast of Lake Peipsi, such as Raatvere and Lahepera (Karro 2010, 2013, 2015), local communities started to bury their dead in individual inhumation graves with an east-western orientation instead of the collective rite of cremation that was used in the region before. The long-term trajectories in the development of these burial landscapes differed significantly from those in Drenthe.

To start with, several early cemeteries with probable Christian influences were established close to much older burial monuments that were their opposites in many respects. These so-called *tarand*-type graves (Lang 2007) were stone-built, contained multiple depositions of cremation remains and expressed notions of collective identity and power of families. However, in cases of a close spatial relationship between tarand graves and the earliest "Christian" cemeteries, the burial landscape has not always been used continuously (Veldi in prep.). At Lahepera, the tarand grave was already constructed during the second or third century AD (Fig. 3). From the second half of the 11th century a group of furnished inhumation graves were started to the east of the monument. Furnished inhumations have been dated from 11th century to 16th century. There are unfurnished inhumations to the south of the tarand grave, which have not been dated, but can be traditionally Christian already and later than the 16th century. As only 25 inhumations were found altogether, it seems that not all members of village community were buried and that old power structures was just represented in a new way using a Christian "style" (Lavi 1977, 1978a, 1978b; Karro 2013). In this context the old tarand grave may have acted as a "container" of ancestral powers for the later medieval local communities (Karro 2013, 38; cf. Bender et al. 2007, 31), suggesting a spatial and symbolic connection with Late Iron society in the landscape. Such place-bound

"inventions of tradition" were not only practiced at Lahepera, but also at other places, such as at Kobratu.

Although these first encounters with Christianity affected the physical appearance and symbolic meanings of the burial landscape, there is no reason to assume that Christianization in eastern Estonia was primarily a land-based process. Contrary to Drenthe, we do not have archival documents that inform us about early land donations to monasteries or the Church by the local landowning elites. Instead, the fist signs of Christianity in Vooremaa seem to have been related geographically, socially and economically to a supra-regional trade route system - again of much older age. In this system Lake Peipsi and connected rivers, as well as the infrastructure of arterial land routes and hillforts as local power centres (Fig. 4), facilitated the exchange and spread of bulk goods, valuables and ideas (Karro 2010; Veldi 2009; in prep.). The nodes in these maritime and terrestrial networks might especially have been of strategic importance, as the location of central places, ritual (?) depositions and burial monuments shows. From the Livonian Chronicle of Henry, we learn for example that in the village next to the hillfort of Saadjäreve 300 people were baptised during the German conquest in 1220. This, again, suggests that besides power and trade hillforts were also local centres of religion and spirituality. The Lahepera burial site may well have been a part of a landing site by a former lake Peipsi gulf, which was part of this trade route system as well. It is furthermore likely that a hillfort situated about 5 km off the lake was used as a trading place at the end of the first millennium and the start of the second millennium AD (Aun 1969; Karro 2010).

According to Karro it is likely that the earliest Christian elements were imported to the Lake Pepsi region through these trade and exchange networks by entrepreneurs from other (already fully) Christianized areas in Europe (Karro 2013, 37). Mägi (2002) has suggested that in order to be reliable and successful partners in trade, traders from local communities had to adopt Christianity to some extend as well. This norm, which Mägi calls *prima signatio* - although it may not have been formalized at all, probably did affect certain aspects of the lifestyle of local communities, though not deeply changing their social structure or worldview (Karro 2013, 38). Adapting parts of the burial ritual might have been an expression of the new "style" that promoted access to the interregional trading network. If Mägi's and Karro's hypothesis is correct, then the process of Christianization in Vooremaa was embedded in the economic geography of the region but not land-based, which makes its spatial signature different from the Drenthe landscape pattern.

Apart from their spatial and symbolic relationship with much older collective burial

monuments, the long-term trajectories of medieval village cemeteries in Vooremaa also differed in other respects from those in Drenthe. In Drenthe, the row-cemeteries with the earliest Christian graves were left unused some time after the start of Christianization in the area. From then, local communities buried their dead in churchyards, although a more differentiated pattern of burial locations cannot be ruled out. Yet, in Vooremaa the village cemeteries were kept in use well into the 17th or 18th century (Valk 2001; Veldi in prep.). The village cemeteries were located up to one kilometer (but mostly not more than 100-200 m) from the village centres and were often situated along the main roads. In Vooremaa alone at least 74 of these local village cemeteries have been detected. However, not all villages had their own cemetery. In South Estonia, two to four villages may have collectively used a single graveyard (Valk 2001). The shared territories of these "burial communities" were spaced at distances of 3-5 km. Although the rural village cemeteries are seen as typical for the treatment of the dead in the east- and south-Estonian landscape, there were some interesting variations. For instance, they were partly used simultaneously with the churchyards near the parish churches. In sparsely inhabited hinterlands, specific sections of farmyards were used for burial as well. Additionally, the Baltic-German landowning elites had their own family graveyards, indicating that the burial landscape expressed hierarchical differentiation. Similar patterns of social diversity, by the way, also characterized the Drenthe landscape (Kolen in press).

During their long life histories the village cemeteries in Vooremaa were consistently characterized by inhumation and the practice of depositing grave gifts – which essentially was a non-Christian tradition. In this last respect the burial ritual showed some changes over time (Veldi in prep.). The deceased were generally buried with small grave gifts such as jewellery, tools and coins, but coins with small nominal value became especially common in the 16th and 17th century. Small chapels and stone crosses were also erected on the cemeteries, transforming them into well-recognizable landmarks.

The long life histories of the Estonian rural cemeteries finally ended before the middle of the 18th century, although there are examples of graveyards that continued to be used well into the 19th century (Valk 2001), or that "survived" in landscape narratives (Veldi in prep). Several researchers hold that, around that time, the burial ritual in eastern and southern Estonia was still not fully "Christianized". It took long, for example, for all local communities to adopt the Christian norm of exclusive burial in soil that was officially consecrated by the Church, or to bury the deceased without depositing grave gifts (Valk 2001; Karro 2013). These and other non-Christian practices have given way to the idea of the Estonian religious

and spiritual landscape as highly syncretic or hybrid. Nineteenth and twentieth-century "folklore" indeed offers a rich, dynamic and still actively used (and filled) reservoir of landscape narratives that echoe this idea. Compared to Drenthe, these stories seem to be less connected to pre-Christian places and landscape elements. Instead, several of the Vooremaa narratives explicitly refer to former Christian cemeteries (Veldi in prep). Local knowledge about these cemeteries is transmitted in field names, such as KalmeMägi ("grave hill"), KabeliMägi ("chapel hill") and SurnuMägi ("death hill"). Stories about the former burial places not only refer to ghosts, strange voices and hidden treasures (grave gifts), but also to crying or bleeding bones that ask for reburial.

Vivid stories are furthermore transmitted about all kinds of "natural" places with animated qualities and other powers. These include springs, trees, holy groves and stones that were and are sometimes still associated with healing, offering, praying and other religious and spiritual practices. A well-known example in Vooremaa is Laiuse Siniallikas ("Lauise Blue Spring"), which is situated close to the local parish church and graveyard (Veldi in prep). The narrative about the spring clearly shows Christian influence as it combines success in harvest with the church serman, hymnbook and three widows named Anne. The ritual cleansing of the spring was deemed essential during the sermon. It is interesting that, today, many landscape narratives are being revitalized (or invented) by specific groups within Estonian society. Some believe that they testify the longstandig syncretic nature of the Estonian religious landscape, whereas others stress their (supposed) historical and cultural value by interpreting them as the "first nature conservation areas in the world" (Kaasik 2016). In many cases, however, natural sacred sites seem to be quite recent in origin, being inspired by romantic nationalism or even by early ethnological studies (Jonuks et al 2014).

5. Diverging pathways

The examples of Drenthe in the Netherlands and Vooremaa in Estonia show that the process of Christianization in the rural areas of northern Europe, far removed from the main urban centres of religious transformation, was closely linked to regional spatial developments and landscape change. In the process, the cultural landscape itself played different roles, characterized by distinct path-dependent trajectories (cf. Zarina 2010). This was even the case in areas with similar physical and environmental signatures and comparable land use traditions.

In the region of Drenthe, the process of religious transformation left the regional cultural landscape largely "untouched" for centuries, with innovations being small-scale and

building upon the existing (pre-Christian) spatial order and land use pattern. Yet, from the 14th century onwards the "new" religion developed a strong and dynamic landscape component, with religious practices imprinting the landscape substantially and the reordered landscape – *vice versa*- acting as an environmental device for religious innovation, consolidation or expansion (Kolen *in press*). Stone-built churches with prominent bell-towers acted as vertical landmarks in the landscape with open fields and extensive heathlands. The use of church bells covered the land with a new soundscape that, together with the newly grown pattern of church roads and *reewegen*, increasingly structured the daily rhythms of work and the movements of the villagers (Kolen, in press; cf. Corbin, 1994; Smith, 1999; Thrift, 1988). The Church had furthermore developed into a prominent landowning institution that deeply invested the landscape with new religious and political powers. To conclude, after a slow adoption of Christianity in and by the Drenthe landscape, the reordered and "Christianized" landscape itself increasingly became a driver and accelerator of social and spatial change.

In eastern Estonia, e.g. in Lake Peipsi region, the impact of Christianization on the landscape differed significantly from the Drenthe picture. In this region, the Christianization process started three centuries later than in Drenthe (in the 11th century) and sustainably adapted to the existing division in rural village territories as well as large-scale geographical infrastructures. The region traditionally played a key role in trade systems that connected the Baltic coast with areas to the north and east of Lake Peipsi. Nodes in transportation routes over water and land were flanked by central places, hillforts and burial monuments, which emphasized the economic, strategic and ritual importance of the routes. Elites controlling these trading networks, and who were already Christianized or acquired *prima signatio*, probably attracted local trading partners who could benefit from a conversion to the Christian belief for obvious pragmatic and economic reasons. These entrepreneurial "early adopters" within the local community may have been buried in the earliest inhumation graves with some Christian features in the area, dating from the 11th century. Yet, both the location of cemeteries and the nature of burial practices remained similar over the centuries, indicating a long-term continuity in the use of the rural landscape and the religious features of it being adapted to the economical utilization of this landscape.

Essentially, in Drenthe, the process of Christianization was primarily land-based in that it affected the perception and tradition of landownership and the spatial ordering and experience of the landscape as a whole, including the rhythms of movement and work. In Vooremaa, on the other hand, a cautious adoption of Christian elements — mainly in the

sphere of burial practices- was implanted in a much older geographical infrastructure that facilitated the movement of people and exchange of goods, valuables and ideas. In terms of impact on the physical landscape, religious transformations were more dynamic and large-scale in Drenthe. In Vooremaa, this impact remained more limited and pinpointed, with patterns of long-term use and reuse in the same places, such as cemeteries and churches. Yet, in Vooremaa, the layer of landscape narratives was and still is extremely rich and dynamic, at least over the past century, when it was variously inspired by northern Romanticism, self-images of the Estonian nation state (Valk 2014), and neo-spiritual attitudes (Veldi in prep).

6. Conclusion

One of the projects of HERCULES, Work Package 2 (Kolen et al. 2015), focuses on long-term changes in Europe's cultural landscapes. From 2014 to 2016 this project has delivered a protocol for studying landscape change from an interdisciplinary historical perspective (Crumley et al. 2014), tools for storing and linking landscape data (SDI; De Kleijn et al. 2015) and dynamic models of long-term landscape change in two of HERCULES' case study regions: the river delta area of the Netherlands and Uppland in Sweden (De Kleijn et al. 2016). The models help analyse and visualise interactions between land use and occupation patterns on the one hand and geomorphological and ecological developments, such as coastal dynamics and de- and reforestation patterns, on the other hand (De Kleijn et al. 2016). However, in the project, the biases in current landscape research are explicitly dealt with as well. Most studies in long-term landscape history overlook the social and cultural aspects and contexts of change. Therefore, as an experiment, the project also explored the possible impact of religious transformations on cultural landscape developments in the Netherlands (Drenthe) and Estiona (Vooremaa).

The results of this study show that religious transformations can substantially influence landscape changes. This influence can involve the actual shaping or reshaping of the cultural landscape itself, even on a large scale and on the long-term, but also includes changes in landscape narratives and experiences. Moreover, regions may show very different path-dependent trajectories of landscape change when viewed from this "alternative" historical perspective. Similar studies of long-term landscape change for other North- and West-European regions may reveal again other patterns and trajectories in the interaction between religious transformations and the physical ordering, use and experience of landscapes (Ó Carragáin & Turner (eds) in press).

In this article we argued that the cultural landscape is not only an expression of

economic developments and morphological change, but also of cultural transformations of the societies concerned. In this context, the cultural landscape was and is often used actively and (sub) consciously for activating or accelerating those changes. Landscape researchers could explore this interaction more systematically, in this way broadening and enriching our understanding of both long-term landscape change and our environmental heritage.

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