

FROM VÍNLAND TO JERUSALEM IN THE BEATUS GALAXY

The impact of maps on the European mentality
in the 11th century

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From c. 500 to 1000 AD the Atlantic Ocean was explored further and further to the west, all the way to Vínland. But why did the Norse expansion lose energy in the 11th century at the same time as European attention was directed to Jerusalem? The explanation given in this article is that the tipping point was a shift from a world view based on “horizontal seeing” through a network of places to a “vertical seeing” through maps.

Keywords: Viking Age, exploration, Vínland, pilgrimage, crusades, Jerusalem, world view, cosmology, early maps, cathedrals.

INTRODUCTION

One of the enigmas in world history is why the Norse expansion over the Atlantic Ocean to Vínland and America did not continue with large-scale colonization from Europe. When the Norse arrived in Vínland around the year 1000 it was the first time in history that people set foot on four different continents, Europe, Asia, Africa and America. For the Icelandic explorer Leif Eriksson and his followers Vínland was no easy conquest, but there was much to win. Nevertheless the Norse voyages to Vínland did not develop further and no other Europeans bothered for five hun-

dred years to go west. At the end of the same century Europe turned its eyes to the Holy Land and started an obsessive race to Jerusalem. A period of extraordinary change in culture broke out. How can we understand that change in the European approach to geography and culture?

The common theories among historians are that there are separate but reinforcing reasons why the Norse people went back and only returned now and then to collect timber and other resources; an Icelandic annal refers to *Vínland* as late as 1347 (Sigurdsson 2008). One cause could be that violent meetings with numerous native *Skrælings* were too much of a deterrent. Another suggested cause is that *Vínland* was so far away and the cold and successively too harsh climate with icebergs made the voyages too risky. Yet another explanation is that the settlements in Greenland were necessary for access to *Vínland*, and that the Norse had to give up their farms and European way of living in Greenland due to an inability to adopt to a worsened climate (Yates 2000:75–82; Ferguson 2009:297). Plague has also been suggested as a cause for withdrawal (Lynnerup 2000:293).

In this interdisciplinary paper I discuss the hypothesis that it was not because of colder climate or violent conflicts with the *Skrælings* that the Viking expansion to *Vínland* did not develop into full colonization. The primary factor, in my view, is that the Christianization of the Norse people coincided with a shift of spatial paradigms, a Christian change in world view and mentality. The major break in world views in the 11th century was *within* the Christian faith, not between Christianity and paganism.

THE CONCEPT OF WORLD VIEW

There are several concepts describing the phenomenon of the world as an image in a broad sense, such as world view, world picture, cosmology and so on. In a historical perspective, however, it is not easy to apply modern concepts to ancient cultures. World view or world picture may be associated with space, visual observations and landscape image (Brink 2004b:112). Even if different world views may seem to be based on empirical experience, they are indeed: “achieved via various zones of cultural elaboration” (Wamberg 2009:1–33). *Cosmology* refers to the spatial structure and organization of the universe, and is associated with narratives, religion, history and myth, whereas *cosmogony* is the narrative that tells how the universe came into existence. It must be pointed out that major religions, such as Christianity and Islam, do not have any systematic or even outspoken cosmology or cosmogony. It is

very much the same with Norse mythology; drawing maps of the universe based on the Eddic poems must fail, even if there have been many suggestions (Raudvere 2004:61–72).

In English the world view derives mainly from the German *Weltanschauung*, used since around the year 1800. The concept of cosmology also has a German origin, used since the early 18th century. The relevance for earlier periods in history is not easy to make clear even if it is obvious that celestial objects and astronomy in some sense have caught the attention of people for many thousand years. Klaus Bödl, with reference to Heidegger, asserts that it must even be questioned whether the concept (Weltbild) is applicable to pre-modern times; it must be possible to identify traditional elements for pre-modern man, not least within areas such as law and religion (Bödl 2005:87–89).

In the contextual or post-processual archaeology of recent decades it has been common to claim that there is an ideology or religion in almost every expression of material culture and that ideology is just as easy or as difficult to understand as artefacts (Hodder 1986). This has been criticized by Anders André (2004:38of.), who claims that it is possible to study ideology and religion from an archaeological viewpoint.

In this interdisciplinary article I want to use the concept of world view in a context based on psychology and art history such as that developed by Marshal McLuhan (1962, 1964) and David Hockney (2001). It is obvious that culture and religion make us perceive the world in a certain light, but it is also obvious that inventions and tools may have deep indirect effect on the human mind. For instance, as McLuhan points out, the introduction of identical printed books promoted a world view that enforced individualism. Furthermore, the invention of lenses and projected images with central perspective, as shown by Hockney, created a revolution in visual perception.

I think in a similar way that the early medieval mind was revolutionized by another invention, namely the drawn world map. Just as the introduction of book printing and projected images changed the mind, maps opened the human mind for new horizons. Just as McLuhan and Hockney argue, the invention developed in a context with certain mental needs and *afterwards* it became part of an ideology or religion that was never intended from the beginning.

There is an evolution of world images through time, and Jacob Wamberg (2009:11) distinguishes eight different world pictures from the Palaeolithic period until Postmodernity today. Wamberg points out one world picture from c. 400 AD until 1420 AD, but here I want to show that there was a major paradigm shift in the mid 11th century – with implications against Vinland and for Jerusalem.

THE EXPANSION TO ICELAND AND VÍNLAND

The early Norse colonized the Faroe Islands in *c.* 800 AD and Iceland beginning around AD 870. Possibly Irish monks had discovered these Atlantic islands a hundred years or so before, without leaving substantial traces except for some tales (Vilhjálmsson 1999:108f.). The Viking expansion to the west started in Norway after the violent turbulence when Harald Fairhair made a lot of opponents fugitives (*Landnámabók* 1972).

One of the new Icelanders, Erik the Red, was sentenced to exile and thus explored Greenland in 982. Finally, the son of Erik the Red, Leif Eriksson, explored Vínland *c.* AD 1000. Probably the oldest written source mentioning Vínland is Adam of Bremen's history, dating to *c.* 1070 AD: "yet another island of the many found in that ocean. It is called Vínland" (Adam of Bremen, book 4, ch. 38. 1959:219). The fact that the bishop of Greenland went on a visit to Vínland in 1121 is a suggestion that a Norse colony was established in America (Stenberger 1941:262). Travels to Vínland went on for at least three centuries, but only as a regional interest for Greenlanders and Icelanders (Sigurdsson 2008:567f.). This is fundamentally unlike the voyage of exploration by Columbus that immediately caused an all-European race for colonization.

The exact geography of Vínland has been much discussed in literature (Larsson 1999, 2000; Sigurdsson 2000). The only archaeological evidence of Norse people in America so far is the site L'Anse aux Meadows in Newfoundland, found and excavated by Helge Ingstad and Anne-Stine Ingstad (1985). More recent field surveys have been done, but without any certain find (Larsson 1999; Kristjánsson 2005).

THE PAGAN NORSE COSMOLOGY AND GEOGRAPHICAL WORLD VIEW

What world view did the pagan Norse explorers have? Unfortunately our knowledge is almost only via secondary Christian sources. The Norse geographical world is not certain since they did not use maps (McNaughton 2000). If we look to the Icelandic sagas they provide almost nothing depicting nature except when it is necessary for the story itself (Hallberg 1956:63). The source material, such as Icelandic sagas, seems to represent different world views. Even the great Snorri Sturluson is complicated to rely on since he interprets the pagan mythology and cosmology in a Christian perspective (Raudvere 2004:65). But probably there was no pure paganism in the Viking Age; it was almost certainly influenced by Christian thinking centuries before the general shift in religion (Andrén 2006:45).

Some authors, such as Margaret Clunies Ross and Stefan Brink, point out there has been a general consensus about the Norse perception of the world based on a binary model, going back to Aron Gurevich; his model divides the Norse mind into binary categories such as “known-unknown, home-away, inland-outland” (Brink 2004a:291f.). In this way of analysing the Norse and the Christian perspectives, as Kirsten Hastrup shows, the Norse gods are placed in a horizontal framework between Midgard and Utgard, whereas the Christian God is placed in Heaven above Earth and thus in a vertical framework (Hastrup 1985:147). As pointed out by Clunies Ross, the literature of the last two centuries is full of elaborate models of the Norse cosmology and world view, but the empirical foundation for these interpretations is in reality weak or non-existent (Clunies Ross 2011:53f.) It seems that Brink’s criticism of a binary approach is correct when it comes to Norse mythology; it is something that illiterate cultures don’t need: “In reality it is not possible to create a logical spatial system of those mythical spaces and places that Snorri describes” (Brink 2004a:295f.).

In pagan myth there is not much attention to the world of man (Raudvere 2006:74). Geography was primarily a practical issue. Place-names reveal a substantial variety in the worship of different gods, showing that Norse religion was by no means homogeneous: “stories that people told about the gods of the pagan north are just that – stories – and not unmediated expressions of religious belief” (Abram 2012:80). The question of the extent to which one can expect consistency and comprehensiveness from an originally oral mythological corpus that was not necessarily intended to be systematic or explicit must be taken into consideration when trying to reconstruct an overarching cosmology for Norse myth (Clunies Ross 2011:53).

SPATIAL PERCEPTION FROM THE EVIDENCE OF THE SAGAS

Even if it is difficult to detect a specific world view, it is of course easier to understand the mentality of the Norse people concerning geography and voyages, not least in the Icelandic sagas. For instance, how did people view sea voyages and distances? Today we might think that a voyage over the Atlantic in a small open ship should have made a big impact on the contemporaneous minds. But in the Icelandic sagas this kind of dramatic storytelling about travels is unusual. But there are some examples, as told in *Gisli Sursson’s Saga* about a trip from Iceland to Norway: “Gisli and Vestein had been at sea for more than fifty days

and nights when they eventually ran ashore at Hordaland. It was early winter, in the dead of night, and a great blizzard was blowing. Their ship was wrecked, but the crew escaped drowning and the goods were salvaged” (*The Sagas of Icelanders* 2000:508). And, laconically, that was all about that.

An even worse voyage is described in the *Laxdæla Saga*; there are several vivid accounts of Thorkel’s risks at sea: “They sailed on until they reached Bjarney – with people watching their crossings from both shores – but when they had reached the island, a gust of wind filled the sail and capsized the boat. Thorkel was drowned there along with all the men who were with him” (*The Sagas of Icelanders* 2000:417f.).

In the longest and stylistically greatest saga, *Njál’s Saga* it is amazing to hear of the self-control of Njál’s sons, Grim and Helgi, leaving Iceland without knowing where the ship landed: “So then Njál’s sons asked Bard if he could tell at all to what land they were likely to be nearest. ‘Many lands there are,’ said he, ‘which we might hit with the weather we have had – the Orkneys, or Scotland, or Ireland.’” (*Njál’s Saga*, ch. 82). In *Egil Skallagrimsson’s Saga* there are many descriptions of voyages criss-crossing the Atlantic, and usually geography and distances are nothing to which any notice is paid at all. Travelling in itself does not seem to be very admirable in the saga: “Egil sailed out to sea when he was ready, and of his voyage there is nothing to tell before he came to Norway” (*Egil’s Saga*, ch. 56).

It is interesting to see that voyages into completely unknown waters likewise did not provoke any great fear or admiration among the saga tellers. *The Saga of Erik the Red* tells about Erik when he discovered Greenland, but the saga makes no big drama of the expedition: “Erik sailed seaward from Snaefellsnes and approached land [in Greenland] under the glacier Hvítserk (White Shift). From there he sailed southwards, seeking suitable land for settlement” (*The Sagas of Icelanders* 2000:654–655). There is not much more drama when Leif Eriksson explored Vinland. According to *The Saga of Erik the Red* Leif was given a mission by the Norwegian king Olaf Tryggvason to convert Greenland to Christianity: “Once he had made ready, Leif set sail. After being tossed about at sea for a long time he chanced upon land where he had not expected any to be found” (*The Sagas of Icelanders* 2000:661).

The Norse voyagers used the senses of their body at sea, seeing skies, winds and waters, smelling scents, tasting waters etc. and the skills for navigation without compass or other instruments had reached the limits: “People in the modern world have grown so dependent on all kinds of instruments that they tend to exaggerate the role of such objects when thinking about the past” (Vilhjálmsson 1999:117).

THE CHRISTIAN COSMOLOGY AND WORLD VIEW

One of the major roots of the Christian faith derives from the ancient Greeks and Plato. Everything in the world had its rightful place in a hierarchy that extended from the cosmic body above, the *macrocosm*, to the human body below, the *microcosm*. And the city was also understood to be a part of this hierarchy. The world stretched from Earth and the world of matter, through the celestial spheres with the seven orbits of the Moon, Sun, Mercury, Venus, Mars, Jupiter and Saturn, up to the world of the soul, the mind, and finally to the One God. It is interesting to see, as Keith Lilley remarks, that the number of surviving manuscripts of the *Timaeus* increased rapidly from AD 1050 with a peak around

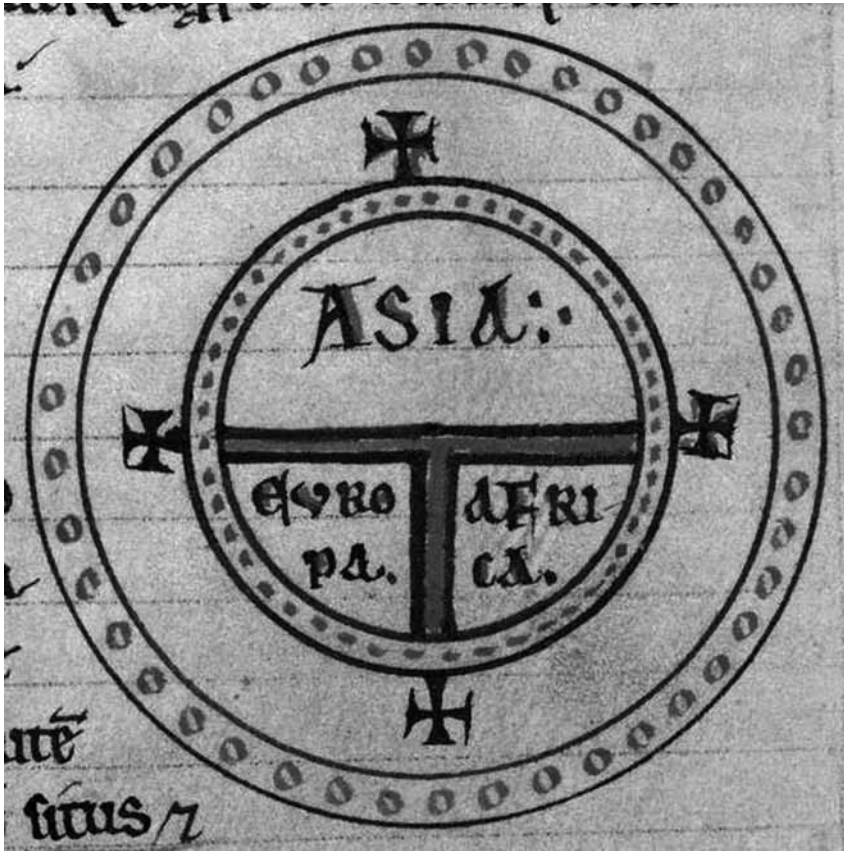


Figure 1. Saint Isidore's world view, design according to a simplified T map from the 12th century. Jerusalem is almost always in the centre of the map, whereas the three continents are always surrounded by the world ocean. (St Isidore style map, The British Library. Wikimedia Commons).

1150; “Plato’s *Timaeus* is the foundation of this medieval cosmology and microcosmism” (Lilley 2009:7–12, 28f). Nature itself, however, had no independent value as a source of knowledge in the Christian medieval mind (Haaning 1993:50).

The very beginning of the Bible tells about the world, surrounded by the world ocean: “And God said, Let there be a firmament in the midst of the waters, and let it divide the waters from the waters” (Genesis, The Creation). It should be noticed that Snorri Sturluson has the same world view. The Bible continues with the colonization of the Earth in general terms: “And the sons of Noah, that went forth of the ark, were Shem, and Ham, and Japheth: and Ham is the father of Canaan. These are the three sons of Noah: and of them was the whole earth overspread.” (Genesis, Noah’s Drunkenness).

In this context Saint Isidore of Seville, in the early 7th century, is a fundamental thinker for the next thousand years to come. In his encyclopaedia *Etymologies* he is the first Christian to bring order to knowledge about the World. Isidore is the first to bring the Bible and geographical knowledge more closely together (figure 1), and he is perhaps the first to classify major continents into Europe, Asia and Africa. He says about Earth: “It is divided into three parts, one of which is called Asia, the second Europe, the third Africa.” (*Etymologies of Isidore of Seville*, Book XIV, The earth and its parts, 2006:285). It was not until Charlemagne around the year 800 that the concept Europe was more widespread.

EARLY CARTOGRAPHY AND THE T-O MAP ACCORDING TO ISIDORE AND BEATUS

Neither the Greeks nor the Romans used actual road maps, but Roman private and official travellers used itineraries, that is, list of villages, towns, cities, and mail stations of the Roman Empire, with the distances between them. The *Tabula Peutingeriana* is the only known surviving copy of an itinerary map of the Roman road service, going back to a fourth-century original (Harvey 2006:XVII). But world maps based on modern perspectives did not appear until around 1500 (Scafi 2006:193).

A predecessor of the empirically measured map is a world map that is called the “T and O map” or “T-O map”, also *Beatus map* (figure 2). In total there are about 1,100 preserved medieval maps; most of them are very simple. The T-O concept of map is attributed to commentaries to the Book of Revelation by the Spanish monk *Beatus of Liébana*, compiled in 776 in what today is the Monastery of Santo Toribio de Liébana (Williams 1994:13f.). It now exists in fifteen later copies; the most recent

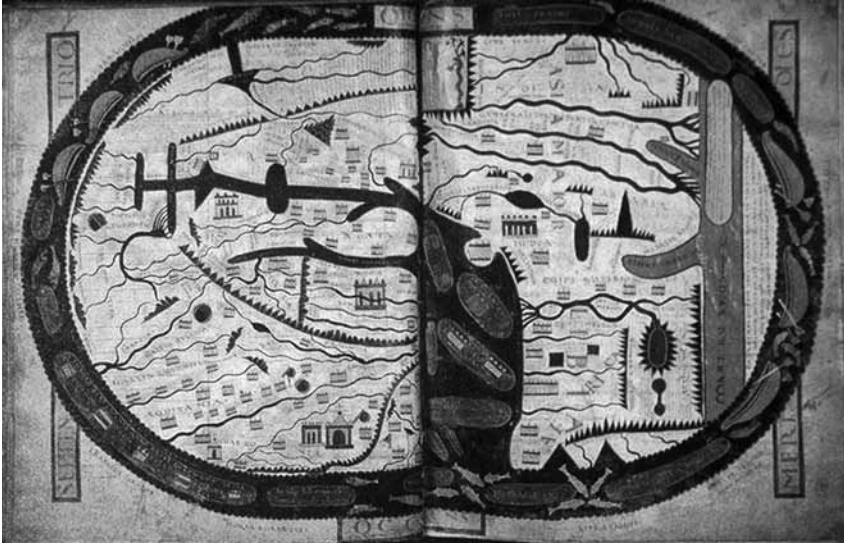


Figure 2. *Beatus' Apocalypse of Saint-Sever*. Secondary copy painted c. 1050. In the middle the Mediterranean Sea, to the right the Red Sea, on top a rectangle with the Paradise on Earth, all surrounded by the World Sea. (Manuscript from the Abbey of Saint Sever, Bibliothèque Nationale, Paris. Wikimedia Commons).

known copy is the Fra Mauro map from c. 1459 (Barber 2006:1f.). The idea of the map is based on the Old Testament and the Encyclopaedia of Saint Isidore of Seville as described above. It may look like a flat-earth map, but actually it is intended to represent a spherical earth.

In the T-O maps the earth is divided into three continents, one for each of Noah's sons, and possibly a mythical fourth continent, the Antipodes, cut off from Mankind by the ocean and thus unreachable (Barber 2006:3). These continents are divided by water, so that the stem of the T means the Mediterranean Sea. The right arm of the T represents the river Nile, whereas the left arm represent the Black Sea and the river Don. Thus the top of the O is directed to the East. In some cases there is a dot on top of the O that symbolized the Earthly Paradise (Ringbom 1958:289; Delumeau 2000:56). In the very centre of the world is Jerusalem, at least on the maps from the period of the Crusades and onwards (Brincken 2006:362f.). Around the three continents is the World Ocean, with some islands such as the British Isles down to the left. As far away as possible in the left margin we may find islands such as Scandinavia (sic) and Iceland. According to the T-O map there simply is no mental space for any islands or continents further out, such as a presumed Vínland, except only the unknown and unreachable Antipodes (Scafi 2006:128f.).

If we look at the large T-O maps with a high complexity of details; the most famous of these maps are the Hereford Map and the Ebstorf Map, both probably from the 13th century (Harvey 2006). It must be pointed out that these maps were not intended to be geographical, but cosmological (Edson 2005:11). The most interesting thing about the maps is that they give a hint of how people perceived the macrocosm and microcosm, the geographical world as a whole, the general context with directions and location of kingdoms, cities, water and mountains. Observations of real places and mythological people and beasts are mixed in a way that seems contradictory by modern standards, but then data and authoritative tradition co-existed and interacted by the standards of medieval times (Gow 2006:406). According to that general context, why should anybody sail out into the Atlantic Ocean when the Bible as well as Isidore and the sharpest minds in Europe assured them that nothing but some useless islands were to be found?

JERUSALEM AS THE SPIRITUAL CENTRE OF THE WORLD

The idea that Jerusalem is the *Axis Mundi*, the heart and centre of the world, is a central motif in the *Beatus* maps (figure 3). The only spot on the maps of perhaps similar holiness was the Earthly Paradise in the very Far East. It is a source-critical problem of hidden statistics that we do not know how widely spread the *Beatus* maps were. But it is obvious from many written sources that Jerusalem had a special place in the medieval religious mind and in armed pilgrimage (Asbridge 2004:38). In the Christian world view it is literally fundamental that the world in Heaven and the world on Earth are brought into harmony, as Jesus says in the New Testament: “Our Father which art in heaven, Hallowed be thy name. Thy kingdom come. Thy will be done in earth, as it is in heaven” (Jesus’ Teaching on Prayer).

For Christians in the first centuries Jerusalem was perceived as a condemned city that killed Jesus. The only Jerusalem that counted was in the New Testament, in the Book of Revelation, where the New Jerusalem is described. The interest in Jerusalem on Earth starts in reality when the Empress Helena, Saint Helena (AD 248–328), mother of Constantine I, initiated a search for relics such as Christ’s True Cross. The search for holy places continued in practice with Constantine I, at the end of the Council of Nicaea in AD 325, when he ordered Bishop Macarius to search for the sites of the Resurrection and the Passion, and the True Cross (Armstrong 1997:197). With the rise of Islam Jerusalem

was conquered in AD 638, but the Muslims showed full respect for the Christians and their holy places, which in many cases also were holy to Islam (Runciman 1971:35).

Through time Jerusalem was considered to be the vestibule to Heaven (Read 2005:90). In the Christian eschatology many believed that Jesus



Figure 3. The macrocosm of the world in a bird's eye view, or even God's view, in the small *Psalter World Map*, dated to c. 1260 and only 9.5 cm high. The circle in the centre is Jerusalem, the circle on top with Adam and Eve is the Paradise on Earth. (British Library. Wikimedia Commons).

would return to Earth and Jerusalem in the year 1000, and thousands of pilgrims went there, waiting and wondering. When nothing happened new calculations suggested 1033, one millennium since the death of Jesus, and so on after that year (Armstrong 1997:284).

Byzantium had lost most of its possessions in the Middle East to the rising Turkmen sultanate, and in 1095 the Emperor Alexius I asked Pope Urban II for military help. The pope gave a famous speech the same year that unfortunately does not exist in the original; of different transcriptions one is supposed to have been made about 25 years later by Robert the Monk:

Enter upon the road to the Holy Sepulchre; wrest that land from the wicked race, and subject it to yourselves. That land which as the Scripture says “floweth with milk and honey”, was given by God into the possession of the children of Israel. Jerusalem is the navel of the world; the land is fruitful above others, like another paradise of delights. This the Redeemer of the human race has made illustrious by His advent, has beautified by residence, has consecrated by suffering, has redeemed by death, has glorified by burial. This royal city, therefore, situated at the centre of the world, is now held captive by His enemies, and is in subjection to those who do not know God, to the worship of the heathens (Urban II, speech 1095).

If we bring together the T-O map and the Christian world view such as we read in, for instance, Urban II, we find different patterns or relationships. First we may assume a scale of value, so that the centre with Jerusalem is more important than the periphery, although there is an exception with the Earthly Paradise in the Far East (near Japan on today’s maps). Travels to the East were highly interesting, mainly because of the mythical Christian reign of Prester John, but few except the Polos tried to go behind Moslem lands (Gumilev 2009:20f.).

The relationship between Heaven and Earth is more dependent on the centre of the world than the periphery. That is, if the centre of the Earth, the very place where Jesus died and where he is expected to return, is in the hands of the heathen Muslims there will be an almost unpredictable imbalance in the Cosmos – which must not happen. Another conclusion is that what can be found in the World Ocean can never be very important in any sense, economic or religious.

It must also be stressed that the 10th–11th centuries, and the centuries to come, was a period when astrology and geography was strictly connected to the life and politics in both the Christian and the Islamic world (Page 2002:7f.). For the first Christians there was a common distrust of astrology, but Saint Isidore argued with great success for astrology as an integral part of Christian faith (Harrison 1999:263). For the

educated people of 11th-century Europe the conclusion was to re-conquer Jerusalem with the centre of the World.

There is no written evidence that the crusade was preached in the leading Nordic country Denmark, but the message of Urban II reached all corners of the Christian realm, including Scandinavia (Möller Jensen 2004:221). In general it can be stressed that the early Christianity and the literate culture of Scandinavia was deeply influenced by that of the rest of Europe (Bagge 2004:368). Jerusalem was already known as a holy city in Viking Age Scandinavia, but crusades never became a big issue as in the European continent. The written Nordic evidence of Jerusalem in the 11th century is not very common. In Sweden there are only three rune inscriptions telling about Jerusalem: one in Gotland (G 216) and two in Uppland (U 136 and U 605) (Jansson *et al.* 1978:235).

THE TIPPING POINT TO A NEW WORLD VIEW

The very basis for a change of world views in the Viking Age is of course the conversion from paganism to Christianity. But it was not only a change in faith, but also in other concepts such as cosmology and world view. In Iceland this change started in the year AD 1000. The process of Christianization is not the main issue here, but one important thing to note is that the new religion started in the upper class of society: “Christianization is thus, in its primary phase, now regarded as having been a matter for kings and chieftains.” This process also led to a gradual change in mentality of the Scandinavians, from an agriculture-centred world view to an individual-centred, intellectual faith (Brink 2004a:164).

We do not know whether there were any contemporary Beatus maps in the Nordic countries. But it is clear that the image of Isidore’s world with three continents and a surrounding ocean was more or less well known at an early stage. One of the first people to visit Scandinavia with the new Christian world view seems to have been Adam of Bremen, who visited Sweyn II Estridsson, king of Denmark, in the mid-11th century. In his *Gesta Hammaburgensis ecclesiae pontificum*, Deeds of Bishops of the Hamburg Church, he gives a description that is based on the world view of Isidore and Beatus: “Beyond that island he said, no habitable land is found in that ocean, but every place beyond it is full of impenetrable ice and intense darkness. Of this fact Martianus makes mention as follows: ‘Beyond Thule’, he says, ‘the sea is congealed after one day’s navigation’. The very well-informed prince of the Norwegians, Harold, lately attempted this sea. After he explored the expanse of the Northern



Ocean in his ships, there lay before their eyes at length the darksome bounds of a failing world, and by retracing his steps he barely escaped in safety the vast pit of the abyss” (Adam of Bremen, book 4, ch. 38, 1959:219f.).

An even more explicit Isidore- and possibly Beatus-based world view is given by Snorri in his description of the old mythology, although he himself lived in the 13th century: “The world was divided into three parts: from the south, extending into the west and bordering on the Mediterranean Sea, – all this part was called Africa, the southern quarter of which is hot, so that it is parched with the sun. The second part, from west to north and bordering on the ocean, is called Európa or Eneá; its northern part is so cold that no grass grows upon it, and no man dwells there. From the north and all down over the eastern part, even to the south, is called Asia” (*The Prose Edda* of Snorri Sturluson, ch. 6).

The new world view, where Jerusalem is perceived as the centre of the world, can be identified in Snorri’s *Heimskringla*, where the Norwegian king Sigurd the Crusader (Jórsalafar) goes to the Holy land in the summer of 1110. King Sigurd met Baldwin, king of Palestine: “King Baldwin received him particularly well, and rode with him all the way to the river Jordan, and then back to the city of Jerusalem” (*Heimskringla*, ch. 10).

The concept of *tipping point* has been very popular in the last decade, not least since the book *Tipping Point* by Malcolm Gladwell, first published in 2000. The premise is that when a new but powerful idea is spread, nothing happens by start, but after some time mentality changes and the idea becomes accepted. Very rapidly the new idea takes over, and a new paradigm or way of seeing a thing is established (Gladwell 2001). The abandonment of the Vínland voyages may be seen in the context of a tipping point – but not from a pagan to a Christian world view, but rather to a new world view that happened to be Christian. The mental obstacle westwards occurred when the Beatus T-O map and the new world view led to a new mentality.



Figure 4. Horizontal seeing combined with storytelling, in the Bayeux tapestry, probably made in the 1070s. This scene is a minor part of the nearly 70-metre long tapestry, showing a transect between Bayeux, through the English channel, to Westminster in London. (Musée de la Tapisserie de Bayeux. Wikimedia Commons).

THE MEANING OF HORIZONTAL AND VERTICAL SEEING

The pagan Vikings probably perceived the geographical world in a way similar to the Roman itineraries, that is, a horizontal view where people knew the relations between given places and kingdoms. For example *Njál's Saga* says that when you travel from Iceland south-east you come to the Orkneys, then Scotland, and then Ireland; the geographical world view then is a web.

In the horizontal itinerary geography it is easy to add new sites further out like links in a chain, such as Vínland, without distorting all the rest (figure 4). But when we are looking at a drawn map the perspective changes from horizontal to perpendicular, and a new dimension is added, namely the area between all known places. The itinerary world admits expansion outwards, but the map world is holistic and allows only space for more details within the frames.

Horizontal seeing may be characterized as:

- Based on a network of places and agglomerations
- Depth of field with both close and distant objects
- No consideration of spacing between places
- The starting point of perception is one specific place at a time
- Connection between places is primary
- Open periphery
- Can grow with more remote places in any direction
- Closely related sequences as with storytelling and hearing
- A built-in time flow is indicated by a sense of sequences between places and events

Correspondingly, *vertical seeing* may be characterized as:

- Based on areas
- No depth of field, as everything is at an equal distance from above
- The spacing between places is always apparent, even if it is *terra incognita*
- Perception has no starting point since the whole world is immediately apparent
- Connection between adjacent surfaces is primary
- Closed periphery
- Can only grow within the areas by splitting
- Closely related to immediate perception by the eyes
- Timelessness is indicated by the immediately contemporaneous appearance

TIPPING INTO VERTICAL SEEING AND THE BEATUS GALAXY

That human consciousness is highly affected by the effects of media has been pointed out by Marshal McLuhan in his study *The Gutenberg Galaxy*, from 1962. McLuhan analyses the emergence of what he calls the Gutenberg Man and the change in consciousness that seems to be caused by the advent of printed books with movable, identical types. He claims that different media characterize four different phases in history, namely the oral tribe culture, the manuscript culture, the Gutenberg galaxy, and finally the electronic age (McLuhan 1962, 1964).

I think it may be relevant to apply McLuhan's perspectives to the introduction of maps in Europe. A change to the vertically seeing "Beatus Galaxy" should thus be regarded as a part of the change from oral culture to manuscript culture. The itinerary tables, with horizontal seeing, work perfectly well within an oral tradition, such as the Icelandic sagas before they were written after several generations of storytelling. The introduction of maps in the Beatus style changed the perception, and thus the mentality, since the message could not be understood through oral tradition and listening. The only way to understand a map is through the eyes, and that leads to a predominance of a visual approach to the cosmos, which in the medieval mind was dual with macrocosm and microcosm (Lilley 2009). It is the same with printed books, as McLuhan argues, that give predominance to the eyes and abstract seeing of what cannot be seen. Just as the uniform types in printed books make us see the world in a uniform way, the maps make us think that we mentally see the world in the vertical perspective of God; the human mind is sud-

denly elevated from the microcosm to an image of the macrocosm, perhaps a feeling of borrowing God's eye.

For the naked eye the world is made in three dimensions, but an image is of necessity flat in two dimensions. As has been pointed out by Rudolf Arnheim (1974:245), it causes considerable perceptual and psychological problems when an image with two dimensions is intended to give an impression of three dimensions. Today we are used to innumerable images, but a thousand years ago landscape pictures or images of the world were completely unknown to most minds.

Leif Eriksson probably had an itinerary-horizontal world view, with no limitations. But the T-O map world view did not encourage, whether spiritually or visually by looking at maps, any major discoveries such as a new continent in the western ocean. This seems to imply a change in mentality as well; when the horizontal view of the world turns into a vertical view it is like a change from a human eye to the eye of God. Such a change would of course occur gradually and without awareness for each individual. Nevertheless a new mentality is likely to have been most exciting in a period of apocalyptic expectations of the return of Christ (Rubenstein 2012:69f.).

In this context it is interesting to remember the Irish monks who obviously made some distant sea voyages as early as the 6th century. There are numerous place-names reminding us of *papar* (monks) in the Faroes, Shetland and Orkney (Morris 2004:181). A somewhat provocative theory may be that the monks from Ireland became part of the vertical seeing early on through maps at the same time as Beatus in Spain, and consequently abandoned further trips far into the Atlantic long before the Norse. Perhaps there are several ways of linking the end of the Norse expansion to Vínland and the new Christian world view as expressed in Beatus maps. It seems that the most obvious indication is that the great Norse expansion during two hundred years, starting with the Faroe Islands, lost the energy to continue into full-scale colonization in Vínland at the same time as Christianity and the Beatus maps came to Scandinavia.

ARTISTIC EXPRESSIONS OF VERTICAL SEEING

All over Europe the new vertical world view developed into different artistic expressions. The tendency to promote the vertical axis is usually combined with an aversion to horizontal perspectives on the landscape. This is obvious in many Gothic illuminated manuscripts, where landscape scenes are characterized by a distaste for horizons which are instead replaced by strange curtains as background (figure 5).



Figure 5. Vertical seeing is often promoted in paintings from the Gothic era so much that all horizontal perspectives in the landscape are strictly avoided with background curtains. The *Livre de chasse* was written for Count Gaston Phoebus in Southern France between 1387 and 1388. (Bibliothèque Nationale, Paris. Wikimedia Commons).

The harmony between Heaven and Earth was promoted in the churches by images of Heaven in the shape of stained glass windows (Kemp 1997:3f.). The Gothic cathedral sought to convey the vision of the heavenly city of Jerusalem: “We feel that we have already reached the city of Jerusalem, the city of the world to come” (Prache 1993:6, quoting Emile Mâle).

The idea that churches should be flooded by divine light was not least an argument widely spread by the innovative and influential Abbé Suger in the early 12th century in the Basilica of Saint Denis near Paris. The Saint Denis Basilica was one of the first to develop the Gothic style, characterized by large stained-glass windows, although richly coloured windows not were unknown earlier in the 12th century (Grant 1998:263). Overcome by the splendour of the light glimmering, “Suger feels himself transported, in an analogical way, from this world to the Heavenly Jerusalem, the material leading him on to an understanding of the im-

material” (Grant 1998:270). It is also known that Suger was one of the influential supporters of the crusades, and one of the organizers of the third crusade.

CONCLUSION

The great Norse explorers sailed west over the Atlantic without any geographical knowledge, and seemingly without any prejudicial worry. Leif and many others were Christians, but they still lived in the old world view. The voyages to Vínland appear to have continued for at least three centuries or so, but not for colonization, just to collect resources. The important thing, however, is that those brave Icelanders didn't get any followers from the rest of Europe.

The rulers of Europe, and also those of Iceland, such as the Norwegian king Sigurd the Crusader, turned their eyes to the Holy Land and Jerusalem for reconciliation, not to any unknown islands in the ocean. If one wants to make sweeping statements one might say the Beatus T-O map postponed the European conquest of America by half a millennium.

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