Maps, Travel and Exploration in the Middle Ages: Some Reflections about Anachronism

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Articles

MAPS, TRAVEL AND EXPLORATION IN THE MIDDLE AGES: SOME REFLECTIONS ABOUT ANACHRONISM*

Patrick Gautier Dalché

ABSTRACT: How were maps conceived in the Middle Ages? Using the words "map", "travel" and "exploration", historians must be wary of anachronism. Medieval maps, like ours maps, are always materialized thought-objects and are thus interpretations of the world, inevitably variable and subject to criticism; in this respect, "modernity" has neither invented nor changed anything. The article addresses some anachronisms about the role of *mappae mundi* in mental journeys, their function in maritime travels and their role during the great "discoveries"; it claims that no other pre-modern civilization, except perhaps the Chinese, was ever so imbued with cartographic culture.

In a scene from Richard Fleischer's movie *The Vikings* (1958), an Englishman from Northumbria, who had escaped to Scandinavia, shows the local chiefs several maps of Britain to help them prepare their attack. Of course, this is heavily anachronistic. Norsemen never used maps or compasses. They went on expeditions relying on their exceptional ability to remember their practical knowledge of seafaring, based on dead reckoning, observation of the heavenly bodies and seabirds, whales and ice floes.[1]

But what about us? Are we free of anachronism when we discuss maps and their purpose in the Middle Ages? The very words in the title of this article are themselves snares that can distort our understanding of the use and value of medieval maps. Thus, for many historians of cartography, it is obvious that the *mappae mundi* made in monasteries could not serve what we would call a "practical" purpose and were of no use for orientation in real space. And yet, is not our judgment determined by our own use of the road map, which is so highly symbolic? When we talk about "travel", what do we mean by this?[2] If we need a

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[1] G. J. Marcus gives the best account of the Vikings' navigational practice in *The Conquest of the North Atlantic*, Woodbridge 1980, pp. 106-116; I deliberately refrain from talking about the so-called "sunstone" and the supposed effects of the polarized light.

[2] In medieval French, *voyage* at first meant "path", "road", then "pilgrimage" and "crusade" and frequently holds military connotations; see F. Godefroy, *Dictionnaire de l'ancienne langue française et de tous ses dialectes du IXe au XVe siècle*, 10 vols, Paris 1881-1902.

road map, for example, to go by car from Paris to Leeds, can we naively transpose into the Middle Ages an intellectual and social experience that is carried out with the technology of present-day communications? The one anachronism that is the most difficult to avoid regards the word "exploration". For several centuries now, we have lived immersed in an intellectual world where the exploration of unknown terrestrial or cosmic spaces is a socially and intellectually well-defined practice. It is a mistake to use the term "exploration" for the periods preceding the great Hispanic discoveries. Travellers such as William of Rubrouck, John of Plano Carpini, Marco Polo or Odoric of Pordenone did not intend to explore or unveil unknown regions; they were not "explorers".[3] In fact, there were no "unknown lands" for them, because, having read the ancient authors, they already *knew* Asia, according to their own criteria of legitimate and useful knowledge.

The modern categories of "map", "travel" and "exploration" are too simple to be our guides, at least as they are used now. Using them uncritically, the historian restricts himself to noting the "defects" of medieval maps and the appearance of "discoveries" and "progress" in the history of cartography. Conversely, I will look at objects, notions and situations which, at first sight, seem unrelated to the theme of this article, but, as I hope to show, turn out to be integrally linked. I will first address the role of the *mappae mundi* in mental journeys. These expeditions in the mind are actually closely related to "real" travel experience, and among the "mental maps" are those of the Holy Land, which are related to pilgrimages. I will then discuss the function of maps in maritime travels: this will bring us to large commercial cities, as well as to the courts and bureaus where the Crusades were prepared. Finally, I will examine the purpose of the maps used for the great "discoveries" during the fifteenth century. By following this plan, I hope to clarify some points concerning how maps were conceived during the Middle Ages.

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In most popular books, the adjectives "symbolic" or "traditional" are still currently associated with *mappae mundi*, which are presented as the only kind of cartography used in the Middle Ages.[4] This type of cartography was invented in

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[3] Many books use the term, for example, M. Mollat and M. de la Roncière, *Sea Charts of the Early Explorers, 13th to 17th century*, London 1984; or J.-P. Roux, *Les explorateurs au Moyen Âge*, Paris 1985.

[4] For example: "Medieval Christian geography had been limited to schematic maps, known as mappae mundi, which were religious symbols of the Christian understanding of the Creation. They placed Jerusalem at their centre, with little or no attempt to understand or represent the wider world […] [Ptolemy's *Geography*] undermined the medieval Christian belief in sacred religious space. The grid of latitude and longitude that Ptolemy threw across the known world was secular and geometrical." (J. Brotton, *The Renaissance*

Late Antiquity;[5] the earliest indirect testimonies date from the seventh century. In his *Vita Columbani* (*c.* 643), Jonas of Bobbio tells us that St Columbanus wanted to travel to the land of the Slavs in order to convert them to Christianity. He then had a vision in which an angel appeared and showed him "the fabric of the universe, like one is used to draw with a pen on a page". It was a T-O map (a circle divided into three portions by a "T"). The angel wanted to convince him that the entire world was open to his missionary efforts.[6] "Symbolic" or not, this image was conceived as having a "practical" purpose, which we, in our technologically driven age, do not immediately understand.

In accordance with received opinion, these adjectives mean that such maps have no direct relationship with real terrestrial space as we know it. A surprising judgment! When creating a symbol, is it not necessary to presume a reality that can be expressed precisely through this symbol? The work of a theologian such as Hugh of St Victor is a good example of the distortions that arise when maps are viewed through modern eyes. Hugh used a schematic *mappa mundi* as one of the elements in the construction of an image of Noah's ark, which symbolizes the history of salvation from the fall of man until the end of time.[7] He also wrote a description of a *mappa mundi* in which one finds no reference to the symbolic meanings of places, as expressed in biblical literal exegesis. His map of the world reflected an exact spatial reality compatible with the technical and intellectual means available to him for its construction and analysis.[8] Thus,

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Bazaar: From the Silk Road to Michelangelo, Oxford 2002, pp. 154-155). Virtually every word in this statement is open to debate.

[5] P. Gautier Dalché, "L'héritage antique de la cartographie médiévale. Les problèmes et les acquis", in Richard Talbert and R. W. Unger (eds), *Cartography in Antiquity and the Middle Ages: Fresh Perspectives, New Methods*, Leiden 2008, pp. 29-66.

[6] B. Krusch (ed.) in *MGH Scriptores Rerum Merovingicarum*, Vol. IV, Hannover and Leipzig 1905, p. 105. This previously unnoticed text was analysed 21 years ago (P. Gautier Dalché, "De la glose à la contemplation. Place et fonction de la carte dans les manuscrits du haut Moyen Âge", *Testo e immagine nell'alto medioevo*, Settimane di studio del CISAM, 41/2, Spoleto 1994, pp. 697-698), and again in 2009 (*id.*, "Pour une histoire des rapports entre contemplation et cartographie au Moyen Âge", *Les méditations cosmographiques à la Renaissance*, Cahiers V. L. Saulnier 26, Paris 2009, pp. 19-40). It is rather surprising that T. O'Loughlin, in a recent note, arrived at the same conclusions, apparently unaware of these earlier discussions ("Map Awareness in the Mid-seventh Century: Jonas' *Vita Columbani*", *Imago Mundi* 62 [2010], pp. 83-85).

[7] P. Sicard, *Diagrammes médiévaux et exégèse visuelle. Le Libellus de formatione arche de Hugues de Saint-Victor*, Bibliotheca Victorina IV, Turnhout 1993; Patrice Sicard (ed.), *Hugonis de Sancto Victore. De archa Noe, Libellus de formatione arche*, Turnhout 2001 [CCCM, CLXXVI A]; P. Gautier Dalché, *La "Descriptio mappe mundi" de Hugues de Saint-Victor. Texte inédit avec introduction et commentaire*, Paris 1988.

[8] P. Gautier Dalché, "'Réalité' et 'symbole' dans la géographie de Hugues de Saint-Victor",

the opposition between "tradition" and "reality" has no theoretical legitimacy; it is based exclusively on the assumption that only *our* maps, our "modern" maps, reflect "reality" faithfully. This nineteenth-century prejudice has been criticized repeatedly,[9] but maintains a powerful unconscious efficacy due to schooling and, more importantly, to an ingrained, almost magical belief in the absolute value of modern technology.

These *mappae mundi* served, first and foremost, as a support for the specifically monastic activity of contemplation, which was understood as a process of coming closer to God. Gregory the Great described this experience in a famous episode in St Benedict's life. In the middle of the night, sitting up and praying at a window high in a tower, Benedict sees a supernatural light, and the entire world appears before his eyes as if gathered together under one sunbeam. Gregory explained this extraordinary phenomenon as a modification of the saint's spiritual abilities: bathed in the light of God, the spirit grows and, radiating beyond itself, finds itself *extra mundum*. He who is contemplating perceives the world as being very small, even though it seemed enormous before this experience; it is at this moment that he *sees* the true reality of lower things: this is still a *mappa mundi*.[10] A mid-fourteenth-century Florentine painting, *The Vision of St Benecict*, by Giovanni del Biondo (Art Gallery of Ontario, Toronto), once part of an altarpiece, clearly expresses the relationship between Benedict's vision and the genre of *mappae mundi* (fig. 1).[11]

The genre of *mappae mundi* is directly connected with this event, which, in different forms, became a commonplace in medieval hagiography. For example,

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[9] M. Monmonier, *How to Lie with Maps*, Chicago 1996.

[10] Gregorius Magnus, *Dialogi*, 2, 35, ed. A. de Vogüé, Sources chrétiennes 260, Paris 1979, pp. 236-238: "Cum vir Domini Benedictus […] ad fenestram stans et omnipotenstem Dominum deprecans, subito intempesta noctis hora respiciens, vidit fusam lucem desuper cunctas noctis tenebras exfugasse, tantoque splendore clarescere, ut diem vinceret lux illa, quae inter tenebras radiasset. Mira autem res valde *in hac speculatione* secuta est, quia, sicut post ipse narravit, omnis etiam mundus, velut sub uno solis radio collectus, ante oculos eius adductus est." [my emphasis] See the seminal article by P. Courcelle, "La vision cosmique de saint Benoît", *Revue des études augustiniennes* 13 (1967), pp. 100-103; T. Delforge, "Songe de Scicpion et vision de saint Benoît", *Revue bénédictine* 69 (1959), pp. 331-354; A. Traina, "'Laiuola che ci fa tanto feroci'. Per la storia di un topos", *Forma futuri. Studi in onore del cardinale Michele Pellegrino*, Turin 1975, pp. 232-250; R. M. Jones, "Posidonius and the Flight of the Mind", *Classical Philology* 21 (1926), pp. 97-113; Gautier Dalché, "De la glose à la contemplation", pp. 693-764; *id.*, "Pour une histoire des rapports entre contemplation et cartographie au Moyen Âge", pp. 19-40.

[11] See Art Gallery of Ontario, *Selected Works*, Toronto 1990, p. 68; I thank Marcia Kupfer for indicating this painting to me.

Fig. 1. Giovanni del Biondo, *The Vision of St Benedict,* mid-fourteenth century, tempera and gold leaf on panel, 35.8 x 39.3 cm, Art Gallery of Ontario, Toronto.

in the eleventh century at Monte Cassino, the young monk Alberic is led by the apostle Peter on a celestial journey that takes him to hell, to paradise and to the first heaven. From this observatory, the apostle has him contemplate the "51 provinces" on earth as he names each one and provides a moralizing commentary on the terrestrial landscape.[12] The geographical picture sketched by Orosius as an introduction to his *Historiae adversus paganos* is a literary and Christianized transposition of the Platonic and Stoic ideas of the celestial flight of the philosopher, one that is shared by Gregory the Great. The geographical picture of the *orbis terrarum* is viewed from an elevated observatory ("e specula").[13] Since

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[12] *Bibliotheca Casinensis,*Vol. 5, Monte Cassino 1894, pp. 204-206: "Harum autem provinciarum et situs ostendit, et nomina indicavit, multa etiam oratoria sanctorum et venerabilia loca per easdem terras michi demonstravit…".

[13] Orosius, *Historiae adversus paganos,* I, 2, §§14-16, ed. K. Zangemeister, CSEL 5, Vienna 1882, p. 8: "Dicturus igitur ab orbe condito usque ad Vrbem conditam, dehinc usque ad Caesaris principatum nativitatem Christi ex quo sub potestate Vrbis orbis mansit imperium, vel etiam usque ad dies nostros […] Conflictationes generis humani et veluti per diversas partes ardentem malis mundum face cupiditatis incensum *e specula* ostenturus necessarium reor, ut primum ipsum terrarum orbem quem inhabitat humanum genus, sicut est a maioribus trifariam distributus deinde regionibus provinciisque determinatus, expediam…" [my emphasis].

Late Antiquity it was rendered in cartographic form and strongly influenced the geographic content of the *mappae mundi.*

Looking at the map, at its vignettes and captions, the monks could consider at length the stages in the history of salvation and the places related to these stages, remembering the events that took place at each location. They could speculate about the ecumenical space already covered by the apostolic mission and about the limits it had to attain. Also, they could learn moral lessons from the historical events pointed out on the map. Thus, the contemplative investigation of the map was a voyage through both time and space.

The symbolic character of the *mappae mundi* does not exclude their "practical" use. Through their topographical juxtaposition of regions, corresponding to textual descriptions inherited from Antiquity, the *mappae mundi* helped situate the points of departure and arrival for a journey and to think out its stages. An extract from a *mappa mundi* of Europe, in a manuscript of Gerald of Wales' *Topographia Hibernica*, shows this very well (fig. 2).[14] This detail was selected in
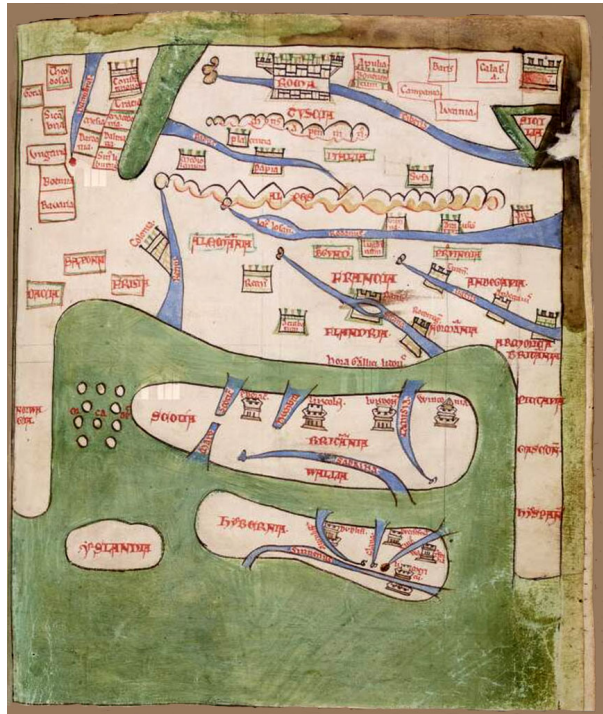

Fig. 2. *Mappa mundi* of Europe, from Gerald of Wales' *Topographia Hibernica*, Dublin, National Library of Ireland, MS 700, f. 48r.

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[14] T. O'Loughlin, "An Early Thirteenth-century Map in Dublin: A Window into the World of Giraldus Cambrensis", *Imago Mundi* 51 (1999), pp. 24-39.

order to visualize the route taken by British prelates going to Rome, *ad limina apostolorum*, to receive the *pallium*. The map is not a roadmap in the modern sense of the word. However, it has a practical use, for it sums up an important collective experience and allows those preparing for the trip *ad limina* to have an overview of their journey and of the significant places they will recognize along the way.

Mappae mundi also illustrated the farthest reaches of the inhabited world, in other words those unknown regions whose exact nature had aroused intense reflection since Antiquity. Accordingly, far from being "conservative" or "traditional" obstacles to the development of positive knowledge, they were a strong enticement to investigate the world empirically.[15] From the twelfth century on, maps accumulated topographical data from the Crusades and from travels to Asia and Africa. The diffusion of travel narratives in the thirteenth and fourteenth centuries accentuated the trend.

Maps of the Holy Land seem in our eyes to have more practical value; but ultimately they were determined by spiritual motivations. One can find them in various contexts: chronicles, theological works, descriptions of biblical sites, pilgrims' tales. In each case, the maps are directly related to peregrination.[16] Some of the oldest ones, beginning in the twelfth century, illustrate through images and captions the stopovers in the pilgrim's travels, such as the port of Acre and the *mons gaudii*, whence, for the first time, the pilgrim saw the Holy City in its entirety (fig. 3). On some schematic maps, lines indicate the paths to take to different sanctuaries (fig. 4). In effect, these maps are travel summaries. After the pilgrim returned home, the map preserved the memory of the journey, thus prolonging its benefits. But maps were also of use in the preparation for the journey, from a spiritual as well as functional point of view. They can thus be considered as practical supports for the divine journey.

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[15] As rightly noted by H. Kugler, "Die Ebstorfer Weltkarte. Ein europäisches Weltbild im deutschen Mittelalter", *Zeitschrift für das deutsches Altertum* 116 (1987), pp. 28-29.

[16] See P. Harvey, "The Biblical Content of Medieval Maps of the Holy Land", *Geschichtsdeutung auf alten Karten. Archäologie und Geschichte*, Wolfenbütteler Forschungen 101, Wolfenbüttel 2003, pp. 57-63; P. Gautier Dalché, "Cartes de Terre sainte, cartes de pèlerins", *Tra Roma e Gerusalemme nel Medio Evo. Paesaggi umani ed ambientali del pellegrinaggio meridionale*, ed. Massimo Oldoni, Salerno 2005, pp. 573-612; I. Baumgärtner, "Reiseberichte und Karten. Wechselseitige Einflüsse im späten Mittelalter?", in G. Ecker (ed.), *In Spuren reisen. Vor-Bilder und Vor-Schriften in der Reiseliteratur*, Reiseliteratur und Kulturanthropologie 6, Berlin 2006, p. 91; *id.*, "Erzählungen kartieren. Jerusalem in mittelalterlichen Kartenräumen", in S. Glauch, S. Köbele and U. Störmer-Caysa (eds), *Projektion – Reflexion – Ferne. Räumliche Vorstellungen und Denkfiguren im Mittelalter*, Berlin and Boston 2011, pp. 193-223.
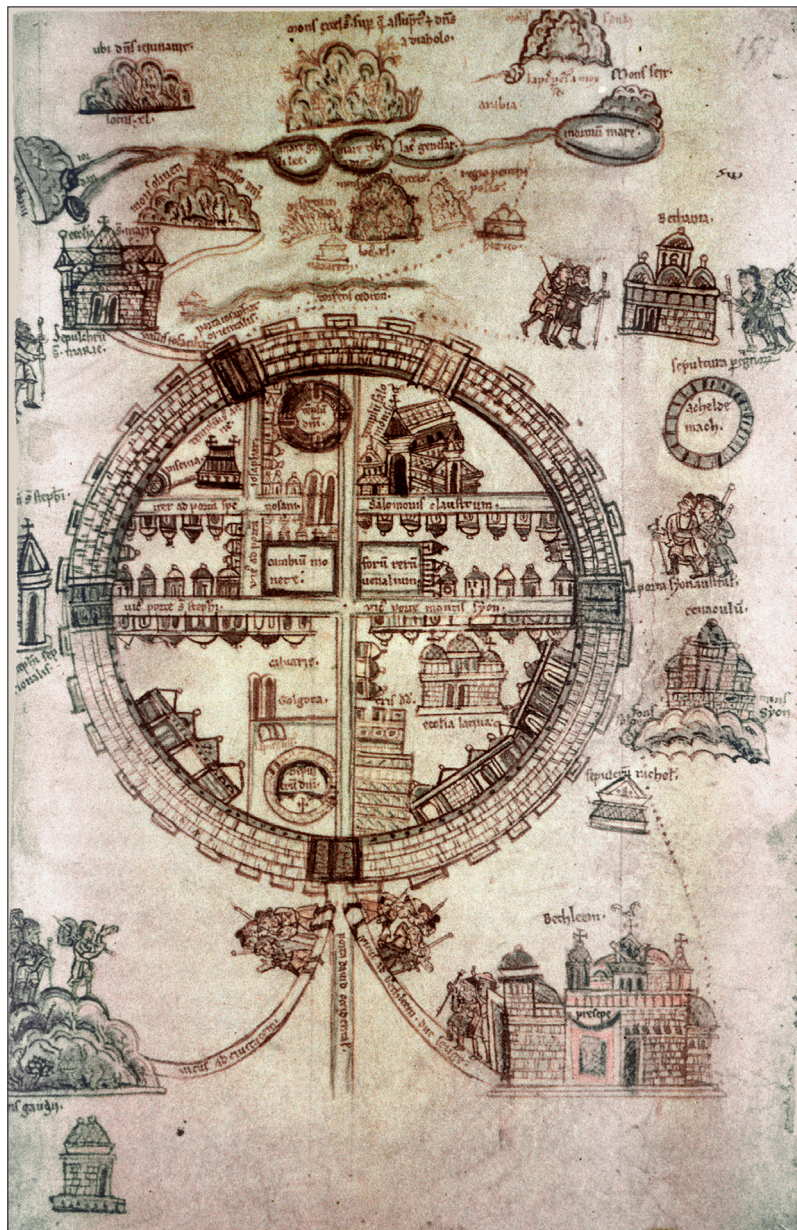
Fig. 3. Map of Jerusalem, Brussels, Bibliothèque royale de Belgique, MS 9823-9834, f. 157r.
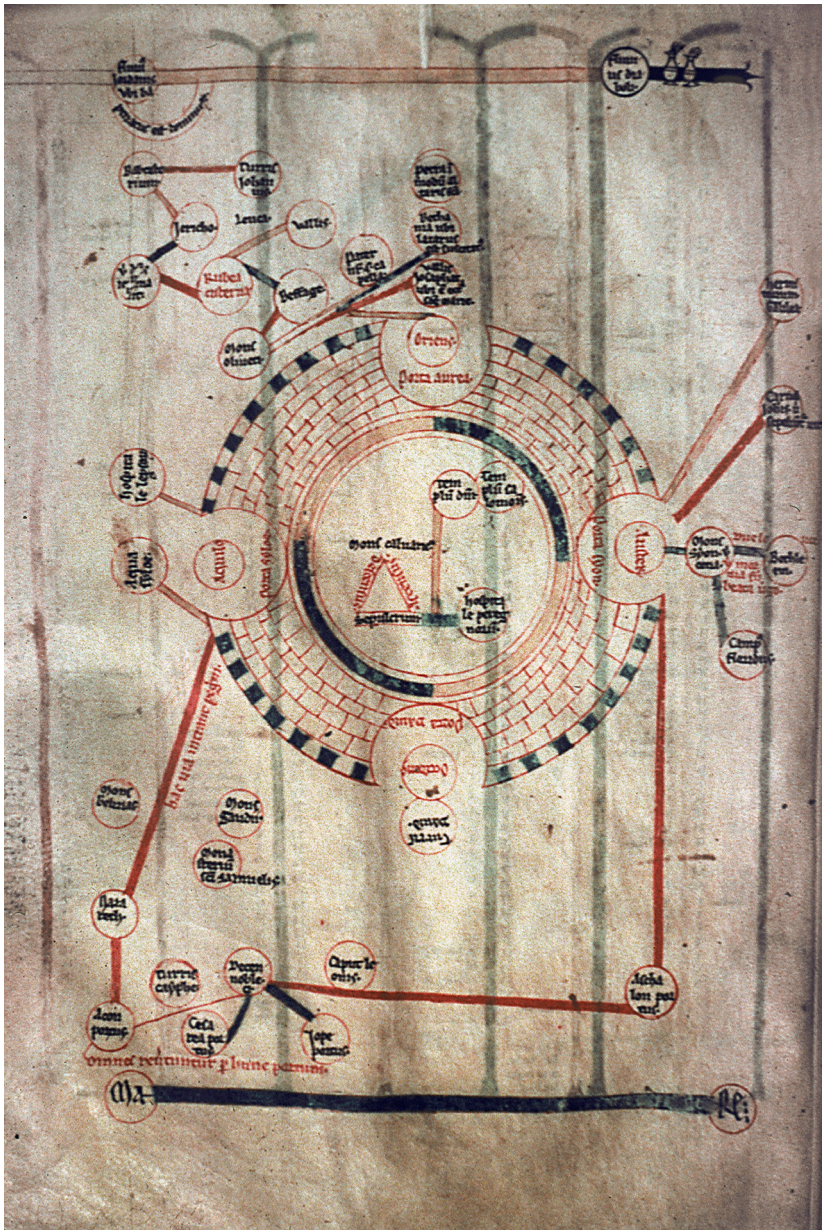
Fig. 4. Schematic map of Jerusalem indicating the paths to the pilgrimage sites, Brussels, Bibliothèque royale de Belgique, MS IV.162, f. 8v.
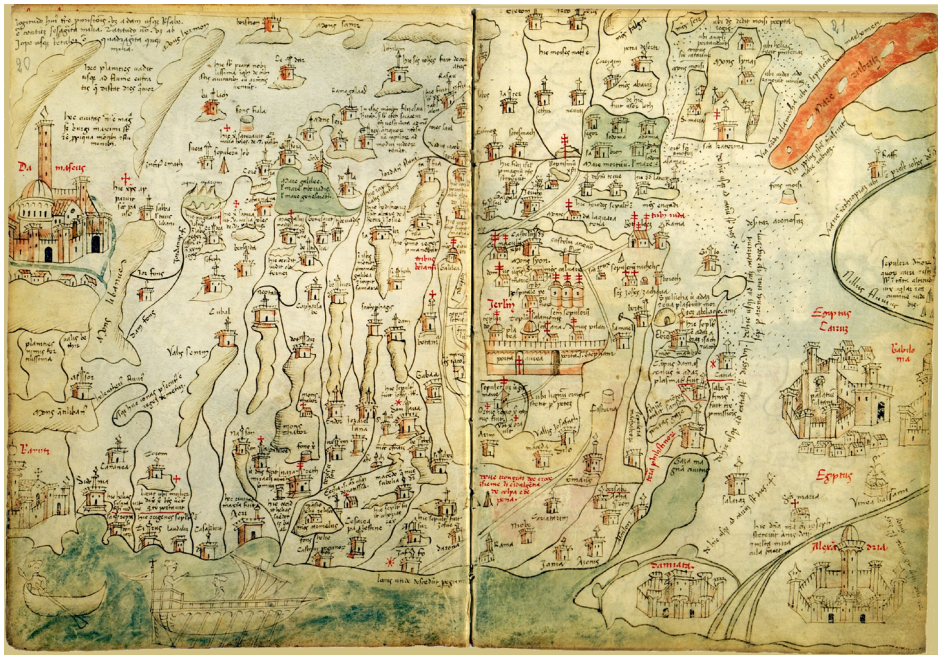
Fig. 5. Fifteenth-century map of the Holy Land,
Biblioteca Universitaria di Bologna, MS 2485, ff. 20v-21r.

Figures 5 and 6 illustrate two examples of maps whose contents were shaped by actual travel. On the first one, from the fifteenth century, various landmarks locate the Holy Land in a wider spatial context, which extends to Arabia and Mecca – where Mohammed's tomb is incorrectly located – and to Prester John's Ethiopia. Distances are indicated for the pilgrimage from Mount Sinai to Cairo. Important buildings are marked with one cross and those that grant indulgences are marked with two crosses (fig. 5). The second map is from the fourteenth century and presents on the left a list of sites with indications of distances in miles or leagues (fig. 6). This list corresponds to a chapter of William Wey's pilgrimage narrative, where there is an obsessive concern with topographic precision, which the map helps to satisfy.[17]

This very precise cartography of the Holy Land stems from spiritual preoccupations, because the value of devotions and prayers is based upon the pilgrim's certainty that he is in the very place where the vestige of the sacred

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[17] P. Arad, "Pilgrimage, Cartography and Devotion: William Wey's Map of the Holy Land", *Viator* 43/1 (2012), pp. 301-322.
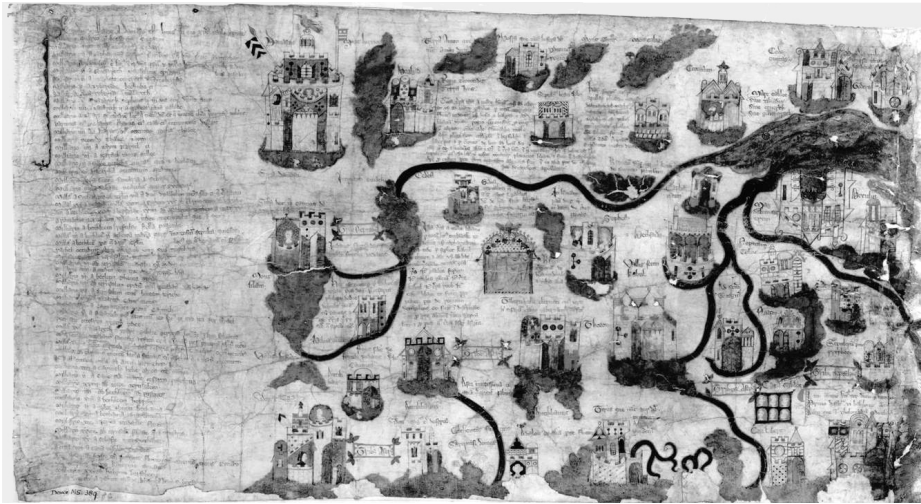
Fig. 6. Fourteenth-century map of the Holy Land with a list of pilgrimage sites,
Oxford, Bodleian Library, MS Douce 389.

is preserved. Indeed, the map participated in the processes of verification and certification related to the development of *collective* practices of devotion during the fourteenth and fifteenth centuries. More than collective prayers and group visits, meditation on the map involved a personal investment, and the visit to each religious building was thus prolonged by remembrance.

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The second theme concerns the relationship between travel and the marine charts that appeared during the twelfth and thirteenth centuries. Once again, one must be wary of anachronism. These maps are not the first depicted manifestation of "reality"; nor are they products of a technique based on mathematics.[18] Furthermore, their purpose is more complex than the simple determination of sites and routes to follow.

We have ample documentary proof of the presence of marine charts among the possessions of many people between the thirteenth and fifteenth centuries. In 1453, on a vessel belonging to Giovanni Giustiniani that was escaping from Constantinople during the Turkish invasion, the pilot's *capsa* (or chest)

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[18] *Contra* E. G. R. Taylor, *The Haven-finding Art: A History of Navigation from Odysseus to Captain Cook*, New York 1957, p. 104; *id.*, *Mathematics and the Navigator in the Thirteenth Century*, The Duke of Edinburgh's Lecture, London: The Royal Geographical Society, 1959.

contained two maps and a compass.[19] Three questions arise: were there maps on *every* ship? who had a map? and how was it used? We would tend to think that once invented, this tool ought to have served in all maritime travels. But this is not the case. We must first rule out the Atlantic and the northern seas where the meteorological and topographical conditions made small-scale maps of little use on a daily basis. With regard to the Baltic Sea, Fra Mauro said in his famous *mappa mundi* of *c.* 1450: "Per questo mar non se navega cum carta nì bossolo ma cum scandaio…" [This sea is not navigated with a map and compass but with a sounding-lead…].[20] References to marine charts in the northern seas are very rare and appear in a variety of sources.[21] For quite different reasons, it is unlikely that the marine chart would have found general use in the Mediterranean. In this narrow sea, where land is never out of sight for a long time, the most important commercial routes, whether coastal or on the high seas, were well known to the expert pilots who were hired at set points at the beginning of each section of a journey. Consequently, except for military fleets and the ships of the great commercial companies, the marine chart was scarcely used, and this situation, which already existed in Antiquity, lasted far beyond the Middle Ages and well into the so-called modern era.[22] It is a systemic anachronism, indeed a fallacy, to project the modern use of a map and

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[19] A. Roccatagliata, "Da Bisanzio a Chio nel 1453", *Miscellanea di studi italiani e mediterranei per Nino Lamboglia*, Genoa 1978, pp. 392-393.

[20] P. Falchetta (ed.), *Fra Mauro's World Map*, Terrarum Orbis 6, Turnhout 2006, no. *2676, p. 669.

[21] Brother Richard Exeter (*d* 1396/7) bequeathed some books to the monastery at Westminster, among them a "mappa Anglie", a "mappa Scocie" and a "mappa maris" (R. Sharpe *et al.*, *English Benedictine Libraries: The Shorter Catalogues*, Corpus of British Medieval Library Catalogues 4, London 1996, p. 629, nos 11-13). The *Hansisches Urkundenbuch*, in a list of damages inflicted on Prussian and Livonian ships by Dutchmen and Zealanders from 1438 to 1441, mentions a man named Gregor Strezow, who, among other goods, lost "1 karte vor 2 nobelen" (H.-G. von Rundstedt, *Hansisches Urkundenbuch*, Vol. VII, Weimar 1939, p. 425, no. 767, 23). The "karte" does not appear in the version edited by H. A. Poelman, *Bronnen tot de geschiedenis van den Oostzeehandel*, Vol. I/1, The Hague 1867, p. 607. The famous astrologer Simon de Phares (*b* 1444), in his *Recueil des plus illustres astrologues*, speaks of "maistre Robert de Cazel, residant avecque le tres adventurier Coullon, vicez admiral de la mer en Normandie", who "sceut le secrect de la quarte de naviguer" (J.-P. Boudet, *Le recueil des plus celebres astrologues de Simon de Phares*, Vol. I, Paris 1997, p. 584). If the use is a "secret", it was not a common or easily comprehensible practice.

[22] S. Medas provides a brilliant demonstration with numerous examples taken from seventeenth- and nineteenth-century navigational practice in the Adriatic in *De rebus nauticis. L'arte della navigazione nel mondo antico*, Rome 2004, pp. 97-105.

the conception of technical tools onto an age where technology played a very different and non-systemic role in everyday life.[23]

According to Benedetto Cotrugli's *De navigatione* (1464), two people must be expert in the reading of maps, the *comito* (the senior officer who commanded the crew) and the pilot. However, it is only as the ship approaches the coastline that someone is called upon to study the map. By simultaneously fixing two points on the shore, the pilot was able to determine the position of the ship and, using the map's scale, calculate the distance to shore. But Cotrugli added an essential remark: in order to ensure the success of the operation, it is indispensable that the pilot be familiar with the coastline beforehand.[24] The map is useful, on condition that it is confronted with the empirical experience of an expert.

This theoretical description corresponds with what we learn from accounts of maritime voyages that mention maps. During the fourteenth and fifteenth centuries, several pilgrims aboard Venetian galleys told stories of prolonged storms after which no one knew where the ship was. On such occasions, the officers on board held a meeting around a map in order to analyse the changes of direction that the ship had taken, according to variable winds during the storm, in order to estimate the distances covered and draw conclusions. This operation has a specific name, *carteggiare*, which shows that this intellectual exercise was common in such conditions on Italian vessels.[25] But a Venetian text of the fifteenth century clearly states: "it would be very bothersome to unroll the map *per chartizar* for every small thing".[26] In Cotrugli's treatise on navigation, as well as in real navigation, the map is not meant to replace or oppose non-reflexive empiricism. On the contrary, it is a convenient means

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[23] The same can be said about the use of the compass; but for R. Pujades i Bataller, "that instrument was present on board virtually every medieval sailing vessel" (*Les cartes portulanes. La representació medieval d'una mar solcada*, Barcelona 2007, p. 443); for him, "those who defend the exceptional nature of magnetic needles on board medieval ships do not really know what they are talking about" (p. 457).

[24] "E navigando per lo pelago e scoprendo alcuno locho de terra, mestier è che lo marinaro o vero lo piloto habbia bono occhio e cognosca lo loco, la qual cosa è potissima parte la qual lo marinaro deve havere in sé. Et allora, volendo sapere meglia sì lungi da terra et ponere lo puncto proprio dove te trovi in nella carta, allora avisarai per la bossola due lochi in terra…" (Benedikt Kotruljević, *De navigatione. O plovdivi*, ed. D. Salopek, Zagreb 2005, p. 220).

[25] For example, in the description of travel in the Holy Land by Roberto da Sanseverino (1458), in G. Maruffi (ed.), *Viaggio in Terra Santa fatto e descritto per Roberto da Sanseverino*, Scelta di curiosità letterarie inedite o rare dal secolo XIII al XVII 229, Bologna 1888, pp. 206-207 (repr. Bologna 1969).

[26] "…per che serie masa fastidio per ogni cosa pizola auerzer charta per chartizar…" (London, British Library, MS Egerton 73, f. 48).

of synthesizing the experience accumulated by the pilot. The map allows him to confront this general experience with particular circumstances, such as when he must land at a specific place or find his way again after a storm.

Like any technical object, the marine chart represents an *objet de pensée* (a materialized thought-object). This explains why its use largely exceeds the simple practice of navigation, and this is what scholars studying marine cartography seem sometimes unable to see. On the vessel escaping from Constantinople mentioned above, the pilot was not the only one to own a map. There was also a passenger, a rich merchant who died from his wounds, who possessed a *carta pro navigando* and the tools necessary for its use, the compass and hourglass.[27] According to *post-mortem* inventories of belongings of people living in great commercial cities, most maps appear among merchants' goods, occasionally among those of lawyers.[28] Here is one testimony, among many, concerning a merchant's interest for the maps. In 1398, a member of the Datini company wrote from Bruges to Mallorca: "I would need a good *carta da navichare*, like ours, for a friend, but I would want it to be more complete, in other words with the Saracen lands in the region of Alexandria and also in Romania…".[29] The reference to "Saracen lands" clearly demonstrates that, in this case, the chart was not intended for navigational use, but for a global perception of geopolitical and commercial relationships in the Mediterranean.

How should we explain this interest? The marine chart is a small-scale reproduction of the whole realm of commercial activity in the Mediterranean and the Atlantic. It not only allows the visualization of the location and activity of commercial business, namely by the vessels sent in particular directions, but it also places these sites in a broader environment and thus gives a strategic overview of the entire area where the merchants were struggling to multiply

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[27] Roccatagliata, "Da Bisanzio a Chio nel 1453".

[28] My emphasis on the relevance of the *post-mortem* inventories to the problem of the social categories of people possessing and using marine charts ("L'usage des cartes marines aux XIVe et XVe siècles", *Spazi, tempi, misure e percorsi nell'Europa del Bassomedioevo. Atti del XXXII Convegno storico internazionale, Todi, 8-11 ottobre 1995*, Centro italiano di studi sul basso Medioevo – Accademia Tudertina, Spoleto 1996, pp. 107-109) was recently reiterated by Pujades i Bataller, who adopted many of the examples cited (*Les cartes portulanes*, pp. 428-429).

[29] "Io are' bisongnio una bella carta da navichare per uno amicho della ragione della nostra, salvo la vorei più chonpiuta: prima vorei fosse tutta carta, e più vorei vi fosse dentro qualche terre del nertano, cioè di Saraini delle parti d'Allisandra, e così delle parte di Romania se fatta non avesse. Di questa che io dicho togliete una simile alla nostra o più chonpiuta se ssi può…" (Letter of Luca di Biondo, 10 June 1398, Archivio di Stato, Prato, D. 1060, 316064).

their profits. Marine charts were certainly used to plan commercial expeditions, to weigh the advantages and disadvantages of a route or one of its stages. In short, these maps facilitated commercial activity by allowing the merchant to conceptualize all aspects related to spatial conditions.

Hence, the marine chart was an abstraction and generalization of real space, a model that could be adapted to other domains and other environments. After the loss of the Latin Kingdoms in the Middle East, such a transposition took place, probably influenced by Franciscan thinking, which was attentive to structural and technical matters concerning power, military organization and economic conditions.[30] From the end of the thirteenth century onwards, several Crusades were planned. Maps of various kinds were linked to these projects, such as the schematic map of the Mediterranean that accompanies the text of Fidenzio di Padova.[31] The Venetian Marino Sanudo was more reflective in the use of the map. His project advocated sending a fleet that would be able to stop the distribution of the Eastern merchandise that was arriving in Alexandria and provisioning the Mamluks; the crusaders would then disembark in the Nile Delta, occupy Egypt and retake the Holy Land by land. Each step in the campaign could be discussed with the aide of the cartographic dossier that accompanied his text volume and which consisted of a *mappa mundi* and several regional maps of the Eastern Mediterranean, drawn on marine charts. The field of vision thus extended to the entire inhabited world, and one could focus on precise sites considered in relation to the whole world. Strategy and tactics could be verified, along with the logistical organization of the expedition. In a letter of 1332 sent to Philip, King of France, Sanudo stated that the head of the expedition must read his entire text and study all the maps, "especially those of Egypt and the one of the whole world, and the maps of the Mediterranean".[32]

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[30] P. Gautier Dalché, "Cartes, réflexion stratégique et projets de croisade à la fin du XIIIe et au début du XIVe siècle. Une initiative franciscaine?", *Francia* 37 (2010), pp. 77-95.

[31] Paris, Bibliothèque nationale, MS lat. 7242, f. 122v; Milan, Biblioteca Ambrosiana, MS Sala Prefetto 5 (C. 198 inf.), f. 103v (reproductions are in the article cited in the preceding note).

[32] "…necessarium est ut praedictus vester capitaneus seriem ipsius libri secretorum fidelium crucis totaliter consequatur, et ante oculos suos habeat, et videat mappas mundi et particulariter terrae sanctae et maxime terrae Egypti ac totius mundi, et mappas maris mediterranei cum quibus nautae dirigunt iter suum" (F. Kunstmann, "Studien über Marino Sanudo den Aelteren mit einem Anhange seiner ungedruckten Briefe", *Abhandlungen der historischen Classe der Königlich bayerischen Akademie der Wissenschaften* 7 [1855], p. 794).

The use of the map during the voyage takes on a meaning that goes beyond that of a simple *instrumentum* for someone to find his way. Since the fourteenth century, maps had also been used to structure imaginary literary travels. In this respect, two examples dating from the fourteenth century are well known: *The Travels of Sir John Mandeville* and the Castilian *Libro del conosçimiento de todos los reinos*, which is the work of a herald of arms (not of a friar, as previously stated).[33] Old-school moralist historians have often committed glaring anachronisms about these texts. They accused their authors of lying. It is interesting that a post-modern historicist, trying to discuss the very nature of European representational practices, makes the same assessment of Mandeville.[34] In fact, the authors of these texts were just playing a literary game with the map, which was a familiar object for their aristocratic readers – even if this did not stop some of them from thinking of these narratives as "real" travels.

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During the fifteenth century, with the travels to unknown regions, a clear link between travel and cartography seems to appear. However, to consider it as something new is another anachronistic illusion. The entire Middle Ages were imbued with a culture of travel based on cartography, one of the legacies of Alexander the Great. The Orient's fabulous animals and monstrous humans are connected with the image of the conqueror-explorer. For example, the natural scientist Roger Bacon constructed the entire geographical part of his *Opus majus* (1265) on the model of the relationship between Alexander and Aristotle, his tutor. The idea of associating the prince, willing to learn the secrets of the world in order to rule it, and the scholar who gives him advice for this purpose finds a cartographic application in Bacon's work. He sent Pope Clement IV a map plotted on the basis of longitude and latitude coordinates, even though he was aware of its imperfection due to the limited amount of

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[33] For a cogent demonstration that the author is not a friar, but a herald, see the recent edition of the *Libro* by M. J. Lacarra, M. del C. Lacarra Ducay and A. Montaner (eds), *Libro del conosçimiento de todos los rregnos et tierras et señorios que son por el mundo et de las señales et armas que han*, Zaragoza 1999.

[34] "The authors of the anecdotes with which this book concerns itself were liars – few of them steady liars, as it were, like Mandeville, but frequent and cunning liars nonetheless, whose position virtually required the strategic manipulation and distortion and outright suppression of the truth. But though they were liars, European voyagers to the New World were not systematic, so that we cannot have the hermeneutic satisfaction of stripping away their false representations to arrive at a secure sense of reality." (S. Greenblatt, *Marvellous Possessions: The Wonder of the New World*, Oxford and New York 1991, p. 7). *What* is the "truth"? *Who* establishes it? Like "travel", "lie" opposed to "truth" is another snare that leads to anachronism in valuating medieval culture.

precise data. He stipulated that the map could and should be improved by the director of an expedition that would renew Alexander's explorations, in order to preserve the *res publica christianorum* against her enemies and prepare for the last days.[35]

Here another corrective statement is needed in order to avoid the temptation of anachronism: the first mention we have of a map's actual practical use for directing an expedition is extremely ambiguous. It occurs in the story of the conquest of the Canary Islands, at the beginning of the fifteenth century, by the Norman knights John of Bethencourt and Gadifer de la Salle. Bethencourt wanted to go to the Rio de Oro; to do so, he *first* read the text of the *Libro del conosçimiento* to learn about the islands' relation to the African coast. It was only at a second stage that he consulted a marine chart in order to confirm the distance estimated by the book.[36] One of the functions of the map becomes clear: the map serves in the elaboration of a practical project, but it is not the only source involved in this process. During the entire fifteenth century, in all the great commercial cities interested in reaching the East by sea, data from all sources – oral, textual and cartographic – were collected and compared. The classic examples of this eclectic attitude are too well known to detain us here; they include the overestimated figure of Paolo dal Pozzo Toscanelli and Fra Mauro's map of the world – indeed a map, but also a collection of reflections based on cosmographical and geographical texts.[37] According to João de Barros, in 1486 King John II was eager to find the

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[35] Roger Bacon, *Opus majus*, ed. J. H. Bridges, Vol. I, London 1900, p. 301: "Et haec cognitio locorum mundi valde necessaria est reipublicae fidelium et conversioni infidelium et ad obviandum infidelibus et Antichristo, et aliis."; see D. Woodward and H. M. Howe, "Roger Bacon on Geography and Cartography", in J. Hackett (ed.), *Roger Bacon and the Sciences: Commemorative Essays*, Studien und Texte zur Geistesgeschichte des Mittelalters 57, Leiden, New York and Cologne 1997, pp. 199-221; P. Gautier Dalché, "Vers une '*perfecta locorum doctrina*'. Lieu et espace géographique selon Roger Bacon", in T. Suarez-Nani and M. Rohde (eds), *Représentations et conceptions de l'espace dans la culture médiévale / Repräsentationsformen und Konzeptionen des Raums in der Kultur des Mittelalters*, Scrinium Friburgense 30, Berlin and Boston 2011, pp. 9-43.

[36] "Et dit ainsi le frere dessus dit en son liure que l'en ne conte du cap de Bugeder jusque au flun de lor que VIIIc LX milez, qui valent environ C et L lieuez, et ainsi le trouvons-nous par la carte, et ce nest singleüre que pour III jours pour barge ou pour nave…" (E. Aznar *et al.*, *Le livre nommé Le Canarien. Textes français de la conquête des Canaries au XVe siècle*, Sources d'histoire médiévale publiées par l'IRHT 38, Paris 2008, p. 176; facsimile by B. Pico, E. Aznar and D. Corbella, *Le Canarien. Manuscritos, transcripción y traducción*, Instituto de estudios canarios, Fontes rerum Canariarum 41, La Laguna 2003, p. 113).

[37] A. Cattaneo, *Fra Mauro's Mappa Mundi and Fifteenth-century Venice*, Terrarum Orbis 8, Turnhout 2011.

kingdom of Prester John and to prepare for the arrival of Portuguese vessels in Asia. He discussed the project with his cosmographers, using Ptolemy's map of the world and the inventory of distances between the *padrões* marked on the African coast, known from maps.[38] One year later, Pero de Covilhã, who was sent by land, while Bartholomew Diaz travelled by sea, received a *carta de marear tirada de mapa-mundo*, a marine chart meant to serve as a practical aide for joining the navigator in Asia.[39]

All forms of cartography were used as intellectual matrices for exploration. But the maps had yet another function: the registration of discoveries. Navigators were cartographers themselves, and the newly discovered and recognized lands were drawn immediately. The example of Christopher Columbus is very well known. Less familiar is the role of the map as confirmation of the testimony presented during the *pleitos colombinos*, a long litigation between the heirs of Columbus and the Spanish Crown that ended only in 1535, a lawsuit intended to establish who first discovered the shores of South America. The maps drawn by Columbus' companions and successors were produced in a particularly interesting way. A number of witnesses declared that they knew that a geographical situation was exact because it could be found represented on the map and thus belonged to *public* knowledge. Among the many other examples, let me quote a witness testifying on behalf of Columbus in 1515:

> He said that he knows it as is contained in the question and that he knows it by the figure he has seen on the sailing charts and because those who draw them believe that they are drawing the truth and they are followed by the master chart of the discoverers that they see and discover and thus he believes that it is the land as it is depicted on the chart.[40]

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[38] João de Barros, *L'Asia*, 1, 3, 4, ed. A. Baião, Coimbra ⁴1932, pp. 83-84: "Donde tomando el rey com o cosmographos deste regno a tauoa geral de Ptolomeu da descripçam de toda Africa, e os padrões da cósta della, segundo per os sens descrobidóres estáuam arrumádos: e assy a distancia de dozentas e cinquoenta leguas pera leste onde estes de Benij dizian ser o estádo do principe Oganę: acháuam que elle deuia ser o Preste Joam por ambos andarem metidos em cortinas de sedá e trazerm o final da cruz em grande veneraçam."

[39] "…e que lhes derãn hũa carta de marear tirada de Mapamundo e que foram faho fazer desta carta ho licênçiado Calçadilla que he bispo de Viseu, e ho doutor mestre Rodrigo morador ahas pedras negras e ho doutor mestre moyses a este tempo judeo e que fora feita esta carta em casa de Pero dalcaçova" (F. Álvarez, *A verdadera informação das terras do Preste João das Indias*, Lisbon 1540, ed. 1889, p. 128). See A. Cortesão, "A carta de marear em 1487 entregue por D. João II a Pêro da Covilhã", *Memorias da Academia das ciências de Lisboa, Classe de ciências* 17 (1973) (repr. in *id.*, *Esparsos*, Vol. III, Coimbra 1975, pp. 215-226), which should be considered with caution due to the effects of the obsolete Portuguese "secrecy theory" on his reasoning.

[40] "A la trezena pregunta dixo que sabe esta pregunta como en ella se contiene e que

Another witness called by the Crown stated in 1513: "This witness holds as certain what is contained in this question, and because this is how he has seen it on the nautical charts and because it is public."[41]

The notion of a map as a support of "public things" that express geographical reality was necessarily determined by the existence of the *padrón real* in the Casa de Contratación. But concerning the same points of litigation, the two parties in the dispute approached the map with totally contradictory purposes. It would thus be very naive to interpret this phenomenon as the emergence of a "modern" conception of the map as a "copy" of the geographical "reality".

The *pleitos colombinos* illustrate something that is a commonplace in medieval cartography, but which we have difficulty in fully grasping today. Far from being simple objects whose supposed "symbolic" character rendered them unsuitable for "practical" use, the very different types of maps available during the Middle Ages had already made their public familiar with the idea that these representations – like all cartographic representations at all times – were based on convention. It is these very notions of "convention" and "code" that allow the use of the map in a critical confrontation of contradictory opinions, the stakes being its appropriateness to reality, which is always problematic.

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In closing, the subjects of travel and exploration, put aside, give way to a few more general remarks. While discussing the functions of the map during the Middle Ages, modern scholars often forget that no other pre-modern civilization, except perhaps the Chinese, was ever so imbued with what can be called a cartographic culture: *mappae mundi*, diagrammatic sketches, well-defined areas filled with several hundred place names, regional and local maps, plans and marine charts.[42] The *mappae mundi* were visible not only in monastic codices; they also adorned churches and royal palaces. Since the early Middle Ages, they were used in teaching, which was devoted above all to biblical

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la sabe por las figuras que a visto e las cartas del navegar porque los que las pintan creen que pintan lo çierto y ellos se siguen por el padron de los descubridores que lo ven e descubren e asi cree que esta la tierra como en la carta esta figurada." (W. D. Phillips, Jr, M. D. Johnston and A. M. Wolf, *Testimonies from the Columbian Lawsuits*, Repertorium Columbianum, Vol. VIII, Turnhout 2000, p. 339; translation, p. 117).

[41] "A la terçera pregunta dixo que oyo dezir lo contenido a Christoual Guerra e a Pero Alonso Niño e a otros muchos marineros e que tiene por çierto este testigo lo contenido en esta pregunta e porque asi lo a visto este testigo escrito en cartas de marear por cosa publica." (*ibid.*, p. 379; translation, p. 161).

[42] On this essential point, I disagree with the great historian of medieval cartography Paul Harvey; see, for example, his *Maps in the Age of Bede*, Jarrow Lecture, Newcastle upon Tyne 2006.

exegesis. In the fifteenth century, they figured among the pedagogical materials in the universities. Maps were both practical instruments that belonged to people involved in commercial activities and objects of luxury kept in royal and aristocratic collections. Large-scale maps intended to address rights issues concerning an estate or a province were, in my opinion, more numerous and used far earlier than the remaining examples suggest.

It would be anachronistic to reduce such a cartographic wealth and diversity to a few simple categories and to construct a teleological evolution determined by our own use of maps.[43] The domination of modern technology has made us lose track of a notion that was quite familiar in the Middle Ages, nurtured by reflections emanating necessarily from the diverse modes of cartographic representation available at the time. We have quite simply forgotten that maps are never identical to the space represented and that they never copy reality, as we spontaneously tend to believe. Maps are always materialized thought-objects and are thus interpretations of the world, inevitably variable and subject to criticism. To this extent, "modernity" has neither invented nor changed anything. We may carry on using the words "map", "travel" and "exploration", but we must be aware that they, like many other words, contain perilous snares for the historian.

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Translated from French by Patricia Stirnemann

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[43] For other examples, see P. Gautier Dalché, "Représentations géographiques savantes, constructions et pratiques de l'espace", *Construction de l'espace au Moyen Âge. Pratiques et représentations, XXXVIIe Congrès de la Société des historiens médiévistes de l'enseignement supérieur, Mulhouse, 2-4 juin 2006*, Paris 2007, pp. 14-38; Italian transl.: "Rappresentazioni geografiche dotte, costruzioni e pratiche dello spazio nel Medioevo", *Geographia Antiqua* 16-17 (2007-2008), pp. 137-151.