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# Fuat Sezgin and the Re-writing of the History of Geography

Detlev QUINTERN\*

## ABSTRACT

Fuat Sezgin has shown in his deep studies on the history of mathematical geography and cartography in Islam and its continuation in the West that during the reign of Abbāsid caliph al-Ma'mūn (813-833 AC) the disciplines had been further developed decisively. The al-Ma'mūn era went hand in hand with an early enlightenment. While introducing a new world view – not least into the history of cartography – European mapmakers started from the mid of the 13th century onwards to adapt the Arabic rational cartography. Against the background of current debates on theoretical approaches towards history of sciences, the contribution will discuss motives behind mapmaking. World maps reflect intentions beyond pure cartographies, thus also with regard to various meta-scientific and extra-scientific objectives. Map-making in Venice in the first quarter of the 14th century was motivated by imperial expansion. The world map of Marino Sanuto (1260-1331) is an outstanding example of early imperial geography and cartography. Geographical and cartographical knowledge of so far unknown regions and oceans, especially the Indian Ocean, was a precondition for expansionist proto-imperialism of European powers in the footsteps of the so-called crusades. In contrast to the travel reports of the Venetian traveller Marco Polo (1254-1324) – still playing an important role in Eurocentric geographies, cartographies and in so-called history of discoveries – the “Secret Book of the Holy Crusade” (liber secretorum fidelium crucis) spoke plainly on the desire to conquer Egypt and Palestine. In the context of recent debates on theoretical approaches towards history of science which mainly discuss problems of e.g. global or entangled history, it will be asked for motivations and intentions of map makers. As history of science and techniques in general, not least history of geography, cartography and so-called

1

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discoveries are in urgent need to be discussed critically. The following paper will, based on the path-breaking findings of Fuat Sezgin, contribute to the decolonization of early European map-making.

**Keywords:** Fuat Sezgin, history of cartography, al-Ma'mūn era, Marino Sanuto, Marco Polo, Imperial map making, decolonial history

## Fuat Sezgin ve Coğrafya Tarihinin Yeniden Yazımı

### ÖZ

Fuat Sezgin, İslam Dünyası ve onun devamındaki Batı matematiksel coğrafya ve kartografi üzerine derin çalışmalarıyla, Abbasi halifesi el-Me'mûn'un hükümdarlığı döneminde (813-833) bu alanların belirgin bir biçimde ilerlediğini göstermiştir. el-Me'mûn dönemi, bir erken aydınlanmayla el ele gelişmiştir. XIII. yüzyılın ortalarından itibaren Avrupalı haritacılar, -yalnızca coğrafya tarihi bakımından da değil- yeni bir dünya anlayışını tanıtırken Arap rasyonel kartografisini benimsemeye başladılar. Bilimler tarihindeki güncel teorik tartışmaların aksine bu katkı, haritacılığın ardındaki motivasyonları tartışacaktır. Dünya haritaları salt kartografi değildir, niyetleri de yansıtır; dolayısıyla farklı farklı meta-bilimsel ve bilimin dışındaki hedefleri de hesaba katarlar. XIV. yüzyılın ilk çeyreğinde Venedik'teki haritacılık, emperyal yayılcılık motivasyonu ile yapılmıştır. Marina Sanuto'nun (1260-1331) dünya haritası, erken emperyal coğrafyacılık ve haritacılığın çok önemli bir örneğidir. Özellikle Hint Okyanusu gibi uzak ve bilinmeyen bölgelerin coğrafi ve kartografik bilgisi, Avrupa güçlerinin sözde Haçlı seferlerinin devamındaki yayılcı proto-emperyalizminin ön koşuluydu. Venedikli gezgin Marco Polo'nun (1254-1324) gezi raporlarının aksine - Marina Sanuto hâlâ Avrupa merkezli coğrafyalar, kartografiler ve sözde keşifler tarihi kitaplarında önemli yerler alan- *Kutsal Haçlı Seferinin Gizli Kitabı*'nda (liber seretorum fidelim crucis), Mısır'ı ve Filistin'i fetih isteginden açıkça bahsetmektedir.

Bu çalışmada bilim tarihinde küresel ya da dolanık tarih gibi problemleri tartışan çağdaş kuramsal yaklaşımlar bağlamında, haritacıların motivasyonları ve niyetleri soruşturulacaktır. Yalnızca coğrafya, kartografi ve sözde keşifler tarihi değil, genel anlamda bilim ve teknikler tarihi de ciddi bir biçimde eleştirel düşünmeye ihtiyaç duymaktadır. Fuat Sezgin'in çığır açan bulgularını temele alan bu makale erken dönem Avrupa haritacılığının dekolonizasyonuna katkı sağlayacaktır.

**Anahtar Kelimeler:** Fuat Sezgin, kartografi tarihi, el-Me'mûn dönemi, Marina Sanuto, Marco Polo, emperyal haritacılık, dekolonizasyon tarihi

## Introduction

When writing his comprehensive oeuvre “Geschichte des Arabischen Schrifttums” (History of Arabic Writings) in 17 volumes, Fuat Sezgin did not follow theoretical approaches explicitly. Nevertheless, he unfolded a clear and source-based critique of the historiographical concept “Renaissance” which constitutes a key concept of meta-scientific Eurocentrism. The Renaissance, which is localised usually in long 15th century northern Italy (Florence, Venice, Bologna), often is associated with the emerging of a new era not only in the histories of art but also the history of sciences. Derived from the Italian word “Rinascimento” (Rebirth) the term suggests a direct historic connectivity between the assumed innovative and path-breaking 15th centuries developments in art and science and ancient Graeco-Roman sciences.

“In a crude periodisation of the history of science that is far removed from reality, the phenomenon called Renaissance is conceived as an immediate continuation of the Greek period. In this chronological vault Arab-Islamic culture remains at best in the role of a transmitter through preservation and translation of certain Greek texts.” (Sezgin 2010 : 1)

It is characteristic that the construct “Renaissance” excludes or marginalizes systematically Arabic and non-European contributions in general to any innovations in the fields of sciences, medicine, philosophies or techniques. While jumping over two Millenniums of historical development, the Renaissance celebrates the Ancients as a new starting point. At the meantime the intermediate period of flourishing Arabic sciences – written mainly in Arabic but sometimes also in Persian and other languages – is faded out from historic consciousness by the “Renaissance” construct. The recovery of e.g. Greek commentators on Aristotle is in the focus, while Arabic commentaries, discussions and evolutions are out of sight. Even if it is out of doubt that towards the middle of the 16th century Aristotelian commentaries extant in Greek and Latin became available in print – although the origin of each commentary has to be clarified historically – there can be no disagreement that Arabic readings, interpretations and discussions of Aristotle, mainly based on Ibn Rušd /Averroes (1126-1198), still in the second half of the 16th century played a predominant role in the teaching of philosophy at universities in Bologna or Padua (Ley 1957: 457).

We have to bear in mind that since the mid of the 13th century Catholic clergyman had tried to wipe out the teachings of Averroes, among them the philosophy of the eternity of the world.

In the field of the history of optics and vision, Hans Belting has proven masterfully how optical knowledge of Arabic provenience contributed to the mathematization of the understanding of light. The translation of the Optics of Ibn Haytham (965-1040) into Latin was the basis for the development of the central perspective which became a characteristic of Renaissance Art (Belting 2008: 104). The study was translated by Zehra Aksu Yilmazer and published in Turkish under the title “Floransa ve Bağdat: Doğu’da ve Batı’da bakışın tarihi” (2015).

We cannot deepen the question of Eurocentric periodization in the history of science at this point, but we will touch current debates on theoretical dimensions of history of science as far as they are related to the history of geography and cartography.

The latest debates on theory of history circle around questions of entanglement, *histoire croisée*, global vs. universal history, one or many histories, the interplay between micro- and macro-history, and the interconnections of global and local historical events, developments, structures and practices. Sciences were not necessarily and exclusively transferred textual but often passed on practically from one generation to another. In this context theories of scientific practices as currently discussed by Angelika Eppel seem to be helpful (2018: 390-407). Nautical sciences are an interesting example, beside practices of healing. On a theoretical level the question of practice had been slightly touched by Sebastian Dorsch, thus in the context of trans-local scientific actors (2016: 778-795). But the theoretical debates in the history of sciences are far from being fully developed, led alone being enmeshed in and interconnected with empirical-historical materials (texts, instruments etc.). As mapmaking is eminent practical, cartographers can be historicized as scientific actors in a wider biographical and socio-historical context. So far histories of science do rarely reflect current theoretical discussions. Debates on history of science in global and post-colonial frames have begun to emerge only recently (Nyhart 2016: 7-23).

When looking back to the historiography of science history we find that historians of science rarely applied specific theories and methods while approaching various problems of the historical sub-discipline. This holds true

also for the standard reference work *History of Cartography*, even though maps were embedded theoretically into the historical context: “Indeed, any history of maps is compounded of a complex series of interactions, involving their use as well as their making. The historical study of maps may therefore require a knowledge of the real world or of whatever is being mapped; a knowledge of its explorers or observers; a knowledge of the mapmaker in the narrower sense as the originator of the artifact; a knowledge of the map itself as a physical object; and a knowledge of the users (or—more likely—the community of map users).” (Harley 1987: 2) Knowledge on the map users and of the historical context they are acting in seems to be tremendously important. We have to ask—especially when it comes to questions of post-colonialities—for what purposes maps were made? While Akerman discussed the necessity to decolonize the history of cartography in the context of late colonialism in the 18th and 19th centuries (Akerman 2017), the genesis of colonial map making is yet not been researched.

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Often theoretical approaches were unreflected, more intuitive but none the less integrative and universal. George Sarton (1884-1956), a pioneer and eminent authority in the history of science, already problematized questions of trans-disciplinarity, the embeddedness of science history in the political, social and religious environment. For Sarton the unfolding of sciences went hand in hand with cosmic evolution: “Our main object is not simply to record isolated discoveries, but rather to explain the progress of scientific thought, the gradual development of human consciousness, that deliberate tendency to understand and to increase our part in the cosmic evolution.” (Sarton 1927: 6) Sarton followed to a certain extent an understanding of the development of science which evokes a Hegelian and teleological spirit.

When it comes to the history of cartography it becomes obvious that a ladder progress in the visualization of world cartographies is beyond historicity. To the contrary, geographic figures, once depicted closer to reality, were often lost for centuries and replaced with imaginative shapes. Sciences do not follow an evolutive schemata, climbing progressively from lower to higher stages. This holds true especially for the long period from the beginning of

the 9th century—going hand in hand with an early enlightenment during the Abbāsid caliph al-Ma'mūn who reigned till 833 AD in Bagdad—the metropolis of science at that time—before mouthing into later European Enlightenment, having its starting point to the common understanding in the 18th Century in France. But even then, French cartographers still figured, as we will see, e.g. the Nile, in the same manner as the famous al-Idrīsī in the mid of the 12th Century did. In contrast to the Ma'mūn geographers and cartographers, Africa was, up to late 19th century and even beyond, “terra incognita” for Europeans.

Joseph Needham (1900-1995) the prominent historian on Chinese sciences compared the history of science with a river moving itself by several tributaries. Different peoples in various spaces and during successive times are contributing to the one flow of sciences: “Modern science is indeed composed of contributions from all the peoples of the Old World, and each contribution has flowed continuously into it, whether from Greek and Roman antiquity, or from the Islamic world or from the cultures of China and of India.” (Needham 2004: 25) Needham had followed a universal approach towards the understanding of science history; he was at the same time an important secondary source for Arabic contributions which he included into his overall view of universal sciences’ unfolding.

Coming from a different world view also Sarton was in line with a universal, or, as it is also called nowadays, transcultural historic approach as the subtitle of “History of Science” already shows: “From Homer to Omar Khayyam” (2004: 25).

Sarton was far from being trapped in Eurocentric models of periodization, e.g. the so-called Renaissance, tracing scientific unfolding in the 15th and 16th centuries back to non-negotiable “ancients” (Aristoteles, Euclid, Ptolemy etc.) while jumping over hundreds of centuries of Arabic sciences into a mystified past of so-called antiquity. There was no doubt for Sarton that the unfolding of scientific methods was due to the experimental spirit which flourished in Bagdad from the second half of the 8th century onwards. We also have to be aware, that neither Aristoteles nor the Alexandrian Ptolemy would have identified themselves with a Greco-Hellenistic entity as it was constructed after Grecomania and Philhellenism had spread over Europe in the course of the formation of the Greek nation-state (1832). The Ancients were not following 19th centuries’ nationalistic border demarcations.



Contradicting the Renaissance model, the German artist Albrecht Dürer (1421-1528) portrayed on his celestial map beside Ptolemy (fl. c. 150 AC) the Arabic astronomer Abd ar-Raḥmān aṣ-Ṣūfī (903-986). This reaffirms that around 1500 the scientific community was still aware of all their teachers, among them aṣ-Ṣūfī in the field of astronomy.

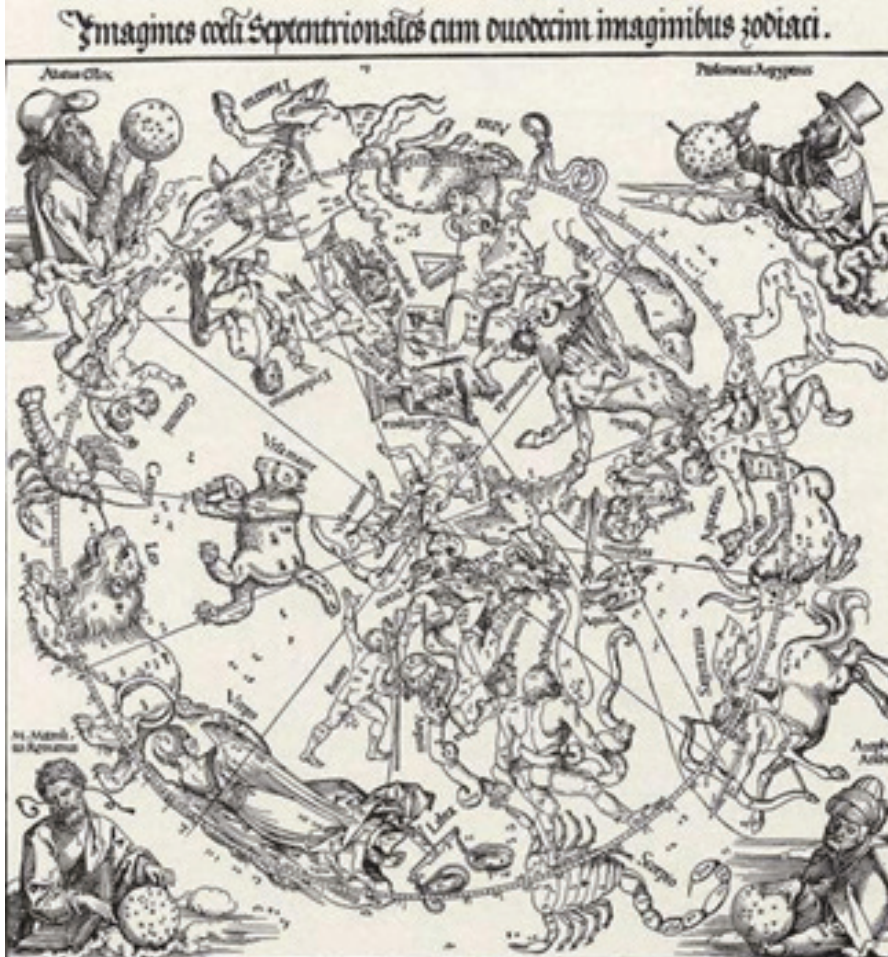


Fig.1 Albrecht Dürer, Celestial Map, the northern hemisphere, wood engraving, 1515.

Niedersächsische Staats- und Universitätsbibliothek Göttingen

The Renaissance Model which came up in the second third of the 19th century faded out especially Arabic-Islamic but also Chinese, Indian or African contributions to scientific and technological advancements in the history of

human beingness. A historiographic model which became a cornerstone of Eurocentrism and nationalistic writings of history in general. As Edward Said has shown in his famous study *Orientalism* (2003) so convincingly: after the French occupation of Egypt in 1798 and during the long 19th century the Orient was imagined as the counterpart to scientific modernization in the West. But to the contrary, the French invaders were enabled to orientate themselves in geographically unknown Egypt by the translation—prepared in Paris by a group of orientalist scholars who intensively studied Arabic sources—of e.g. al-Khiṭaṭ, a history and geography of Mamluk Egypt/Cairo written by al-Maqrīzī (1364-1442). (Brett 2015: 245)

Edward Said's studies, characterizing the 'Orient' as an imagined geography, will have to be supplemented with realities behind the discourses of Eurocentric story telling. The analyses of Foucauldian discourses entrapped to a certain extent Edward Said's approach as it did not ask for truth beyond orientalist imagination. But this was not what Said wanted to discuss in *Orientalism*. Edward Said's discursive immanence is comprehensible at this stage of his critiques (Quintern 1996: 57). The imperial knowledge was based largely on the assimilation of Arabic scientific writings, maps and instruments etc. Without orientalist studies especially in the fields of geographies and cartographies—mainly translations from Arabic first into Latin then into the young European national languages—European conquerors would not have been able—while sailing vast oceans (Atlantic and Indian Ocean)—to go beyond the coastal lines which they had reached often randomly.

An aim of the following contribution is to overcome Eurocentrism and to decolonize the history of cartography. In this context the astronomer, mathematician and geographer Claudius Ptolemy (c. 100 AC - c. 170 AC) and the Venetian traveller Marco Polo (1254-1324) play an outstanding role when it comes to maintain Eurocentric supremacy in historiographies of geography, cartography, and so-called discoveries. As we will see, both protagonists are living legends in a still Eurocentric oriented historiography of cartography and geography.

### **From the Ma'mūn Geographers to the world map of Brunetto Latini**

The era of the Abbāsīd Caliph al-Ma'mūn (786-833) with the metropolis Baghdad at its center went hand in hand with the rise of sciences. Also, literature—the oldest fragment of a manuscript of the Arabian nights' dates back to the early Abbāsīd era—and techniques (paper and book production, mills etc.) begun to flourish at that time. A more rational understanding of life, ensured

by the doctrines of the philosophical school of the Mu‘tazila—in the first third of the 9th century a kind of state doctrine—supported scientific projects in all disciplines. The Mu‘tazila refused any kind of predetermination, underlining self-responsibility of the human being. Against any religious restriction, autonomy was guaranteed to science and philosophy. An intellectual climate and a culture of tolerance to the benefit of the further development of science in general for astronomy, geography and cartography in particular. Fuat Sezgin contextualized and analyzed the era with a focus on the history of geography and cartography in the volumes 10, 11, 12, and 13 of his „Geschichte des Arabischen Schrifttums“ (2000-2007). Based on the translations of scientific works of various disciplines (philosophy, medicine etc.) and not least astronomical and geographical treatises, written in Sanskrit—Indian astronomy and mathematical methods e.g. triangulation played an important role in the early translation period—middle-Persian and Greek, an early enlightenment was introduced at the end of the 8th century, having Bagdad to one of its centres. Al-Ma‘mūn not only encouraged and supported scientific developments and projects—e.g. the establishment of state-run observatories in Baghdad and near Damascus—he himself participated in scientific excursions. An interdisciplinary working group of researchers set itself the target to examine and to proof—and if necessary, to improve the geographical and cartographical data—of the astronomical and geographical works of Claudius Ptolemy (ca. 100-160) and Marinus von Tyre (fl. in the 2nd century AC before Ptolemy). Many of the 8000 coordinates, documented by Ptolemy, were proven and accepted, or, in case of inaccuracy corrected. With regard to the circumference of the earth—the length of the transmitted stadia varied and were unprecise—the Ma‘mūn geographers considered new measurements necessary.

Most probably Ptolemy did not enclose maps to his geographical study which he finalized around 150 AC. (Dilke 1987: 178) Fuat Sezgin discussed this question extensively in volume 10 of his “Geschichte des Arabischen Schrifttums” (Sezgin 2000: 39-45). In fact the “Geography” (Geographike Hyphegesis) was an instruction on how to draw a map (cylindric projection etc.). No Ptolemaic map survived or was handed down to later antiquity (Buri 2013: 49).

The oldest world map ascribed to Ptolemy dates back to the year 1297 AC. The map was produced and drawn by a team under the Byzantine monk Maximus Planudes (1260-1330) who worked in Constantinople at that time. The core question is now: what happened during around 1150 years after Ptolemy? Was there a still stand in the history of geography and cartography?

This appears highly improbable. Against this backdrop the history of cartography is confronted with several problems.

Fuat Sezgin discovered many non-Ptolemaic elements in several of the surviving maps, among them the drawing of a second more southern latitude below the Equator. This is only one among many details analysed by Fuat Sezgin and which make it seem plausible that the Ma'mūn geographers and their followers had an important impact on the so-called Ptolemaic maps which circulated from early 14th century onwards in more than twenty manuscripts before book printing started.

Often histories of cartography qualify the Ptolemaic maps as scientific breakthrough towards modern world maps, compared to the mainly mythological "Mappae Mundi" (World Maps) in European medieval times which were more an eschatological guide than maps of the world (e.g. the Hereford and the Ebstorfer "mappae mundi" dating both back to around 1300 AC).

At this point I will not go into further details of the "Ptolemaic Question". Fuat Sezgin developed a convincing and comprehensive answer after more than thirty years of extensive and intensive research in the already mentioned "Geschichte des Arabischen Schrifttums" (Vol. 10, 11., 12, 13).

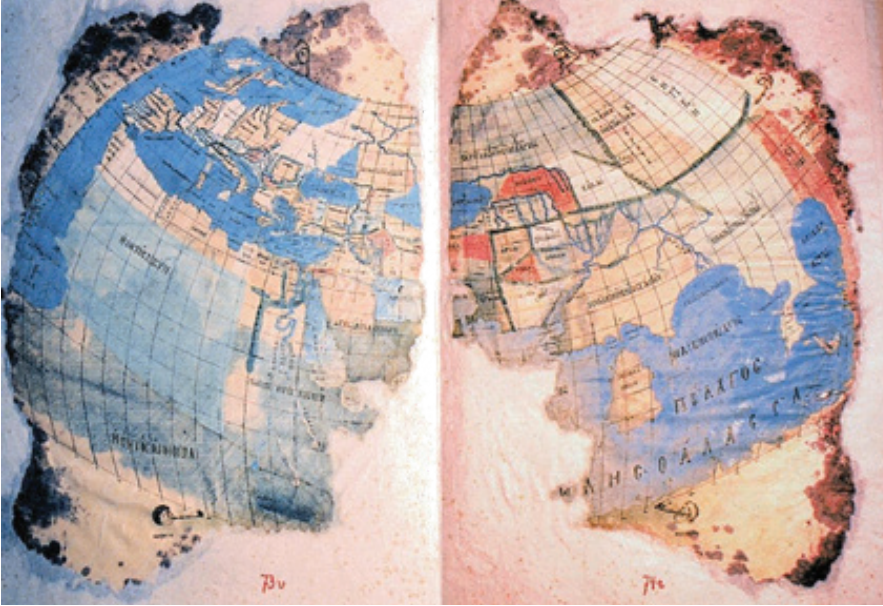


Fig. 2 Ptolemaic World Map by Maximus Planudes, 1297 AC, Codex Seragliensis GI 57, Topkapı Museum, Istanbul



On the world map of Planudes, ascribed to Ptolemy, the Indian Ocean is depicted as an inland lake, surrounded by a landmass, corresponding to an old belief which was already questioned by Alexander the Great when he reached the Indian coast.

It is an open question why the Ptolemaic World Maps reproduced this obsolete and outdated cartographic depiction which was long before corrected by Arabic cartography. We still find the outdated over-extension of the length of the Mediterranean (63 degrees) and the “melon-shape” of the Caspian Sea.

The Ma'mūn geographers had determined precisely the equinox, the inclination of the ecliptic (astronomy), the length of the year, the length of a degree in geographical latitude and not least geographical coordinates (Kunitzsch 2016: 259). Most important for geography, cartography and nautical sciences was the determination of one grade in the meridian as 56 2/3 miles (c. 111, 12 km) (Wiedemann 1984: 624). An important precondition to measure the circumference of the earth which then again made it possible to draw more precise world maps and to construct globes. Already in the 9th century astronomical-geographical tables enabled the development of an increasingly dense grid of the known earth (graticule), especially in Arabic-Islamic lands. As a result, a new and more precise type of maps came up.

The oldest Arabic maps which survived in copies—today preserved in the Library of the University of Strasbourg—, are regional maps, among them of the Nile and the Sea of Azov, in *Kitāb Šūrat al-Arḍ* by Mūsā al-Khwārizmī (d. 850) who was most probably active in the team of the Ma'mūn astronomers and geographers. Yet it is not perfectly clear whether he is identical with the famous mathematician and astronomer who introduced the Indian zero into the Arabic numeric system and to whom European terminologies owe the name “algebra” (= “al-ğabr” from the book title: *al-Kitāb al-muḥtaṣar fī ḥisāb al-ğabr wa-l-muqābala*). The maps date back to 1037 AC and are so far the oldest surviving Arabic maps. I will focus on the map of the Nile which gives us a clear idea about large sections of the course of the world's longest river. Here of particular interest is that the cartographic figure of the Nile was depicted already by the Ma'mūn geographers probably around 830 AC. Throughout the history of cartography until long into the 18th century we find in many world and Africa maps the takeover of two different versions of the Nile figure, one drawn by Khwārizmī in around 830 AC, the other by Idrīsī in the mid of the 12th century.



Fig. 3 Al-Khwārizmī, Map of the Nile, 1037 AC, Bibliothèque Nationale et Universitaire de Strasbourg.



Fig. 4 World Map of Al-Idrīsī 1154 AC, Bibliothèque nationale de France. Département des manuscrits. Arabe 2221

If we compare the Sanuto / Vesconte World Map (1321) it becomes clear that Vesconte, the map maker, adopted especially the section of Africa from Idrīsī, including the depiction of the Nile mouthing into the Atlantic. The main difference is the orientation of the map towards the East by Sanuto / Vesconte.

In Latin Europe the Ma'mūnian enhancements in the disciplines of astronomy, geography and cartography was passed on under the name Meon, introducing a more rational school of geography and cartography to Europe. Starting with the Ma'mūn cartographers and further to the maps of al-Idrīsī we can follow the adaption of cartographical data and figures on European maps, among them the Nile. Compared to the mythological T-O Maps, e.g. the 13th Centuries Hereford and Ebstorf Maps, the silent world map in *Li Livres dou Trésor*, (Sezgin 2003: 13) an encyclopedia finalized in between 1260 and 1265 by Brunetto Latini (1220-1294)—a teacher and friend of Dante—shows a more rational world view.

The map in Arabic tradition is orientated towards the South. Latini was several times at the court of Alfons the X. (the Wise), striving for making Arabic knowledge accessible for Latin scholarly, might have brought Latini into contact with an Arabic map (von den Brinken 2006: 803).



Fig.5 Silent World Map (1265), Oxford, Ms. Bodl. Douce 319, fol. 8r, Bodlain Library, University of Oxford

Like Arabic maps (e.g. Idrīsī) the world map is oriented towards the South. The circum-navigability of Africa and the open Indian Ocean (in Arabic tradition contrary to the later Ptolemaic World Maps) are clearly visible. Cartographical knowledge which has gone lost a century later in Constantiople.

Fuat Sezgin has proven the Arabic origin of more rational European maps, tracing it up to the 18th centuries. This proves also true for the world maps of Ptolemy from about 1300 AC onwards. After decades of manuscript based and comparative research, he came to the conclusion that the earliest Ptolemaic world maps were redacted while having not only data but most probably also Ma'mūnian maps serving as a blue-print (Sezgin 2000: 193). Maps could not only serve for geographical orientation but also for con-

quering lands. When it comes to questions of necessary de-colonization of the history of cartography, knowledge and power then intentionality plays a decisive role. By the example of Sanuto's "Liber Secretorum" (1321) an early proto-imperial cartography is historicised. Maps serve here also as historic image sources.

### **Mapping Crusade — the World View in Marino Sanuto's Secretorum**

Marino Sanuto descended from a rich and influential Venetian trader family with an extensive network in the Mediterranean where he travelled beside other places to Cyprus, Rhodes, Alexandria, Constantinople and Acre in Palestine which he visited for the first time in 1285. The decades after the crusaders had been defeated in Acre in 1291 Sanuto must have been driven forth to design a strategy to conquer Palestine which is, as he wrote, "attractive to every nation ... situated in the middle of the habitable world and like a point of circumference. It faces Africa, Asia and Europe." (Torsello 2016: 159). Sanuto also gave a detailed insight into the trading networks linking the sea routes of the Indian Ocean with the Mediterranean port cities, e.g. Gaza, Antioch, Iskenderun etc. He elaborated the advantages of controlling the trade with spices, sugar, textiles etc. But, first of all the enforced embargo should not have any gaps, "that wood, iron, pitch and anything else should not be transported at all or anything imported from those lands. And this is the reason: because if Christians accept spices, sugar, cotton and other merchandise from the Levant, they export to that place too." (Torsello 2016: 57) Obsessive about the plan he had in mind, he wrote down his strategy in the following decades. The plan included an embargo against Egypt, prohibiting to trade wood and other naval supplies and "no Christian should purchase any goods whatsoever brought from the lands of the Sultan." (Torsello 2016: 31) Hereafter, he presents the military components. Under Venetian command "will be assigned in all 15,000 foot soldiers and 300 cavalry, and a deputy shall be chosen in his place lest one of them is absent: all this at the expense of the church together with ships, supplies and other things necessary for him to wage war. And the matter should be entrusted to only one captain because a well-ordered enterprise needs only one head." (Torsello 2016: 69) Sanuto was hoping that Germans and Tatars would support the crusade. Here it is not the place to go into more details of the whole enterprise. World and area maps, made by the Genoese cartographer Pietro



Vesconte (fl.1310–30)—he was working in Venice by 1318— for the book of Sanuto were the important visual part of the book. Cartography was a decisive factor in the imperial plan. On the 24th of September 1321 and during an audience he finally presented his book under the title *Liber Secretorum Fidelium Crucis* (Book of the Secrets of the Faithfull of the Cross) to Pope John XXII of Avignon. “In the same books”, we wrote, “I have published four maps of the world: one of the Mediterranean Sea the second of the sea and the land, the third of the Holy Land the fourth of the land of Egypt ...”. (Torsello 2016: 21).

Sanuto didn't mince his words. The purpose of the “mappamundis [was] to conquer and to hold the Holy Land and the lands roundabout it.” (Torsello 2016: 25)



Fig. 6 World Map of Pietro Vesconte. Oxford, Ms. Bodl. Tanner 190, foll. 203 v-204 in Marino Sanuto's *Liber Secretorum*

It is not known from where he had his information on sailing routes and harbours. Interestingly, Sanuto never once referred to their contemporary fellow, the Venetian, merchant and traveller, Marco Polo (c.1254–1324), be it in the text of the *Secreta* or in the surviving letters. Neither he nor Pietro Vesconte used any information from Marco Polo's travels in their maps or in any other way. (Torsello 2016: 8) The fact that the contemporaries, Sanuto

and Vesconte, do not mention him—even though Polo, Sanuto and Vesconte were Venetians—supports the assumption that Marco Polo was mere a later fabricated legend then a widely travelled man.

### Marco Polo — a legendary traveller

Marco Polo became one of the most important sources for European geographers and cartographers, thus especially when it comes to Central and East Asia, the Indian Subcontinent and the Indian Ocean. When Columbus sailed at the service of the Portuguese along the West African Coast, he consulted the astronomical measurements of Alfraganus or Ibn Kaṭīr al-Farḡānī (Bucher 2006: 84).

The astronomer was part of the team of the al-Ma'mūn geographers. The Book of Farḡānī on the history of geography, translated into Latin, had been prevailed widely among scholars in Europe; it influenced Robert Grosseteste, Dante Alighieri and Hermann of Reichenau (Hermanus Contractus) (Sezgin 2000 vol. 11, 233). Not only did Christopher Columbus had a copy of Polo's "Divisament dou monde" (Description of the World)—the copy still exists with marginal notes by Columbus in the Columbus Library in Seville—but we also find traces of Marco Polo's legends inscribed on the globe of Gerhard Mercator (1512-1594) to whom we owe the still valid global and celestial Mercator Projection.

Was Columbus misled by Marco Polo's positioning of Cipango (Japan). Polo speaks of a sea battle on the shores of Japan. Such an event also appears on the globe of Mercator: „Zipangri insula gemis atq[ue] auro longe ditissima frustra obsidione tentata a Magno Chan Cublai Tartarorum 6 Imp[eratore] anno 1289 (The Island Zipangri, the far most richest of jewelry and gold, was besieged in vain by the sixth emperor of the Tatars Qubilai Khan in the year 1289) (Legend taken by the author according a photography of the Mercator Globe in the Historic and Town Museum in Duisburg). Already Columbus had referred to spheres (sic!) and maps when sailing the Caribbean Sea. Columbus noted in his diary on Wednesday, October 24, 1492: “es la ysla de Cipango, de que se cuentan cosas maravillosas, y en las esp[h]eras que yo vi y en las pinturas de mapa mundos es ella en esta comarca.” (Pérez, Quintana 1995: 59). (“On the spheres that I saw and on the paintings of world maps it is this region, Cipango is in this region.” trans. by D.Q.) But where did these wonderful stories of Marco Polo had its origin in? And, had Marco Polo ever

been near Japan or even in China?

The comparative study by Frances Wood under the title „Did Marco Polo go to China?“ (1996) is promising in regards to the necessary demystification of Eurocentric discovery legends. Wood analysed overlapping of Polo's reports with Arabic and Persian accounts before coming to the conclusion that Polo and the famous scientific traveller Ibn Baṭṭūṭah (1304-1369 or 77) might both have referred to common Arabic-Persian sources. Wood, who inclined to the view that Marco Polo never travelled further than the family's trading posts on the Black Sea and in Constantinople, concluded: „If he [Marco Polo] had, indeed, been provided with documentation by his family whilst in prison, a Persian guidebook in the family's possession or Persian accounts of the Mongol conquests, could have given him source material.“ (Wood 1996: 146) In this case Marco Polo—spending time in prison at least from 1298 on for two years—would resemble the German novelist Karl May (1842-1912) who was jailed during 1865-1869 in Zwickau in Germany and who became famous also for his fictive stories on the Orient.

18

Apart from that, Polo's "Description of the World" is a valuable source on Central Asia, China and the Indian Ocean whether Marco Polo travelled there or not. Mentioning here only peripherally, it was Giovanni Battista Ramusio (1485-1557) a later editor of Marco Polo's account who added passages which were not part of the older manuscripts. As Wood have shown, it is highly probable that Marco Polo compiled Arabic-Persian-Chinese reports which had been available to him. Columbus had these descriptions in his mind's eye when sailing the Caribbean. I do not want to dwell on the Polo debate but will adding at this point that often if historians of cartography are not able to prove geographical information it is Marco Polo who appears as witness.

This sounds then like this: "It is curious that one of Fra Mauro's main sources was Marco Polo's *Divisament dou Monde*, but none of these moments of doubt relate to Polian material. In fact, Polo is not mentioned by name anywhere on the map." (Davies 2012: 223)

Legends of Marco Polo wandered also to the Globe of Martin Behaim (1459-1502), and he was also inscribed on the Asia map (1560) of Giacomo Gastaldi (1500-1566). Following Fuat Sezgin who has proven along the Asia Map of Abraham Ortelius (1527-1598)—he underlined in a legend on his

own Asia map that the Gastaldi Map of Asia was made in the tradition of the Arabic geographer Abū al-Fidā' (1273–1331)—it becomes obvious that contrary to the geographical reports which were somehow handed down by Marco Polo, the geographical information and coordinates translated from the works of the Latinized Ma'mūn geographers, e.g. Alfarganus or Abulfeda (Abū al-Fidā') guaranteed better orientation in less known lands.

When the German Alexander von Humboldt travelled Central Asia in 1829, he compared his own astronomical measurements e.g. of the latitudes of the Aral Sea with the coordinates transmitted by Abū al-Fidā'. Also Johann Gustav Droysen who later became known for his hermeneutical approach towards the understanding of history referred in his "History of Alexander the Great" (*Geschichte Alexander des Großen*) extensively to Abū al-Fidā'. (Droysen 1833). Until long into the 19th century the Ma'mūn and other Arabic geographers, e.g. Abū al-Fidā', were not only reliable but sometimes the only available geographical source for Europeans of still unknown lands.

## Bibliography

- Akerman, James R. (2017). *Decolonizing the Map*, Chicago: University Press.
- Brett, Michael (2015). *Approaching African History*, New York: Rochester, James Curry.
- Brinken von den, Anne Dorothee (2006). "Die stumme Weltkarte im Bodleian Douce 319 – ein arabisches Dokument in einer abendländischen Handschrift", *Wissen über Grenzen, Arabisches Wissen und lateinisches Mittelalter*, Berlin: Walter de Gruyter.
- Bucher, Corinna (2006). *Christoph Kolumbus, Korsar und Kreuzfahrer*, Darmstadt: Primus.
- Burri, Renate (2013). *Die Geographie des Ptolemaios im Spiegel der griechischen Handschriften*, Berlin, Boston: De Gruyter.
- Davies, Surekha (2012). "The Wondrous East in the Renaissance Geographical Imagination: Marco Polo, Fra Mauro and Giovanni Battista Ramusio", *History and Anthropology*, 23:2, pp. 215-234.
- Dilke, O. A. W. (1987). "The Culmination of Greek Cartography in Ptolemy", *The History of Cartography*, Vol. I, Cartography in Prehistoric, Ancient and Medieval Europe and the Mediterranean, ed. by J. B. Harley and David Woodward, Chicago: Chicago University Press.
- Dorsch, Sebastian (2016). "Translokale Wissensakteure: Ein Debattenvorschlag zu Wissens- und Globalgeschichtsschreibung", *Zeitschrift für Geschichtswissenschaft*, 64, Heft 9, pp. 778-795
- Droysen, Johann Gustav (1833). *Geschichte Alexander des Großen*, Hamburg: Perthes.
- Eppel, Angelika (2018). "Calling for a practice turn in Global History: Practices as Drivers of Globalization", *History and Theory*, 57, No. 3, September 2018, pp. 390-407.
- Harley, John Brian (1987). "The Map and the Development of the History of Cartography", *History of Cartography*, Vol. I, Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean (John B. Harley, David Woodward Eds.), Chicago: University Press.

- Kunitzsch, Paul (2016). "Al-Ma' mün", *Encyclopaedia of the History of Science, Technologies, and Medicine in Non-Western Cultures*, Helaine Selin (Ed.), Dordrecht: Springer.
- Nyhart, Lynn K. (2016). "Historiography of History of Science", *A Companion to the History of Science*, Bernard Lightman (Ed.), Oxford: Wiley, Blackwell, pp. 7-23.
- Needham, Joseph (2004). *Science and Civilization in China*, Vol. VII, 2, General Conclusions and Reflections, edited by Kenneth Girdwood and Ray Huang, Cambridge: University Press.
- Pérez, Demetrio Ramos, Quintana, Marta González (1995). *Diario del Primer Viaje de Colón*, Granada: Diputación Provincial de Granada.
- Quintern, Detlev (1996). *Zur Leistungsfähigkeit der Universalistischen Geschichtstheorie von Karam Khella in der Analyse internationaler Zusammenhänge*, Hamburg: Theorie und Praxis.
- Said, Edward (2003). *Orientalism*, New York: Vintage.
- Sarton, George (1927). *Introduction to the History of Science*, Vol. I, From Homer to Omar Khayyam, Baltimore: Carnegie Institution Washington DC.
- Sezgin, Fuat (2000). *Mathematische Geographie und Kartographie im Islam und ihr Fortleben im Abendland*, Band X, Historische Darstellung, Teil 1, Frankfurt am Main: Institut für die Geschichte der Arabisch-Islamischen Wissenschaften.
- \_\_\_\_\_ (2000). *Mathematische Geographie und Kartographie im Islam und ihr Fortleben im Abendland*, Band XI, Historische Darstellung, Teil 2, Frankfurt am Main: Institut für die Geschichte der Arabisch-Islamischen Wissenschaften.
- \_\_\_\_\_ (2000). *Mathematische Geographie und Kartographie im Islam und ihr Fortleben im Abendland*, Band XII (2000), Kartenband, Frankfurt am Main: Institut für die Geschichte der Arabisch-Islamischen Wissenschaften.
- \_\_\_\_\_ (2000). *Mathematische Geographie und Kartographie im Islam und ihr Fortleben im Abendland*, Band XIII (2007) Autoren, Frankfurt am Main: Institut für die Geschichte der Arabisch-Islamischen Wissenschaften.

Sezgin, Fuat (2003). *Wissenschaft und Technik im Islam*, Bd. 1, Einführung in den Katalog der Instrumenten Sammlung des Instituts für die Geschichte der Arabisch-Islamischen Wissenschaften, Frankfurt am Main: Institut für die Geschichte der Arabisch-Islamischen Wissenschaften.

Wiedemann, Eilhardt (1984). „Über die Dimensionen der Erde nach muslimischen Gelehrten“, *Gesammelte Schriften zur Arabisch-Islamischen Wissenschaftsgeschichte*, 2. Bd., Schriften 1912-1923, gesammelt und bearbeitet von Dorothea Girke und Dieter Bischoff, Frankfurt am Main: Institut für die Geschichte der Arabisch-Islamischen Wissenschaften.

Sanudo Torsello, Marino (2016). *The Book of the Secrets of the Faithful of the Cross, Liber Secretorum Fidelis Crucis*, translated by Peter Lock, Crusade texts in translation, Vol. 21, Routledge: London, New York.

Wood, Frances (1996). *Did Marco Polo go to China?* Colorado: West View.