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Egypt and Maps, Or: What Early Modern Maps Are (Not) Telling Us about the History of Egyptology in Europe

Summary

Egyptology attempts to find its origins and its earliest archeological discoveries on ancient maps. However, it is a misunderstanding of the nature of ancient maps to believe that they could represent a source for a history of discovery. They depict the country as it was known and perceived by Greek and Roman people, not the ancient sites discovered or identified by travelers and scholars. However, ancient maps of Egypt are not without use for Egyptology as they depict a summary of everything that was known and considered to be important about Ancient Egypt. Through the study of myths about the Egyptian origin of mapmaking, consideration of the sources at the disposal of mapmakers, and tracing the evolution of maps of Egypt from the 15th to the 18th century, what people thought of Ancient Egypt can be revealed.

Keywords: history of cartography; history of Egyptology; history of mentalities; history of sciences; reading practices

Die Ägyptologie sucht ihre Ursprünge und ersten archäologischen Entdeckungen in alten Karten. Es ist aber ein Missverständnis im Bezug auf alte Karten, anzunehmen, dass sie eine Quelle für die Entdeckungsgeschichte darstellen würden. Sie geben das wieder, was in der griechischen und römischen Welt von Ägypten bekannt war und wahrgenommen wurde, keineswegs stellen sie antike Fundorte dar, die von westlichen Reisenden und Wissenschaftlern entdeckt oder identifiziert wurden. Dennoch sind antike Karten von Ägypten für die Ägyptologie nützlich, da sie eine Zusammenfassung dessen liefern, wie man sich das alte Ägypten in Europa vorstellte. Durch das Studium von Mythen über einen ägyptischen Ursprung der Kartographie, die Erwähnung von Quellen, die den Kartographen zur Verfügung stehen, und die Entwicklung der Kartierung Ägyptens vom 15. bis zum 18. Jahrhundert offenbart sich, wie man sich im Westen das antike Ägypten vorstellte.

Keywords: Geschichte der Kartographie; Geschichte der Ägyptologie; Mentalitätsgeschichte; Wissenschaftsgeschichte; Lesepraxis

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1 Introduction

Even if the birthdate of Egyptology is generally placed in the early 19th century with the decipherment of the hieroglyphs, European fascination for Egypt, notably ancient Egypt, is much older.[1] At first, it was linked to the Christian part of Egyptian history, to the Bible of course, but also to the Scriptures. Monachism is said to have been born in Egypt.[2] Also, the fascination for Egypt owed a great deal to Greek literature which expressed much awe mingled with disdain for the neighbors on the southern shore of the Mediterranean Sea.[3] It inspired humanism, hermeticism, and later freemasonry. Afterwards, for centuries, Egypt captured the attention as a major political and economic stakeholder. From the Crusades to Bonaparte's expedition, conquest projects never ceased, especially in France, even if they were not executed.[4] Tradesmen commonly took mummies home with them as keepsakes from their trips to Egypt.[5] Gardens and squares were ornamented by modern pyramids and statues of the River Nile depicted by the figure of a bearded man surrounded by putti.[6]

Thus, long before Bonaparte's expedition, people in Europe, and notably France, were very familiar with the pharaonic country. Jean-Baptiste Le Mascrier (1697–1760), in his preface to the *Description de l'Égypte*, written at the very beginning of the 18th century by Benoît de Maillet (1656–1738), the French consul in Cairo, could say:

> Everybody talks about the ancient cities of Thebes and Memphis, Libyan deserts, Thebaide's caves. For most people, the Nile is as familiar as the Seine. Even the children are told about the cataracts and river mouths. Everybody saw, or heard about mummies.[7]

As a European, you did not have to be educated to have heard about Egypt. You did not even have to be an adult. But what exactly was known about Egypt? The pyramids, of course, and, somewhat surprisingly, Thebaide's caves, in other words, 'The King's Valley', despite the fact that they had not been rediscovered. In fact, until the 18th century and even later, knowledge about Egypt was obtained mainly from books. Maillet's quotation informs us that toponymy and topography also took up a lot of space in this very brief summary of common knowledge about Egypt: cities (Memphis, Thebes), rivers (the Nile, cataracts, river mouths) and deserts (Libyan desert). Geography was at the core of what an average man or woman should have known about Egypt at the beginning of the 18th century.

Obviously educated people were familiar with geographical descriptions of Egypt and a few people knew maps of Egypt. But where did the mapmakers find the inspiration to create their maps? Did the ancient Egyptians draw maps? How did mapmakers manage to find information about Egyptian geography? Did they travel? As historians or archeologists, could we know if a place was rediscovered by Europeans thanks to old maps? In other words, if a toponym was located on a map, does that mean that a western traveler actually visited this place? And, finally, how did the European maps of Egypt evolve between the 15th and the 18th centuries?[8]

2 Did the ancient Egyptians draw maps and did they influence western maps of Egypt?

From the 15th century to the 18th century, there were a lot more maps of Egypt than there were of other African countries. Egypt was considered to be the most famous country in Africa, and even one of the most famous countries in the world. According to Nicolas Lenglet-Dufresnoy (1674–1755), author of widely read textbooks, such as *La Géographie des enfans* (1736) or the *Méthode pour étudier la géographie* (1736): "Except for Egypt and the Barbary Coast, Africa did not interest us as far we know it […]."[9] Likewise, as an armchair map-

1 Donadoni 1990; Bruwier 2000; Humbert 1988, 50–71; Solé 1972, 473–482.
2 Mayeur, Pietri, and Le Boulluec 2000, 751–755.
3 Froidefond 1971.
4 Dainville 1940, 322–324.
5 Aufrère 1990; Dewachter 1999, 351–357.
6 For instance, in the 18th century, the statue of the Nile God adorned the Jardin des Tuileries.
7 "On ne parle que des anciennes villes de Thebes & de Memphis, des deserts de la Libye, des grottes de la Thebaïde. Le Nil est aussi familier à beaucoup de gens, que la Seine. Les enfans même ont les oreilles rebattues de ses cataractes et de ses embouchures. Tout le monde a vû, ou entendu parler des Momies." (Le Mascrier 1735, p. III).
8 For the quotations from maps, all translations from the Latin are by Lucile Haguet.
9 "A l'exception de l'Egypte & de la Barbarie, l'Afrique ne nous interesse pas plus qu'elle nous est connuë […]" (Lenglet Dufresnoy 1736, p. 183).

maker, interested in ancient geography, you had to draw at least one map of Egypt during your career. As recorded by Jean-Baptiste d'Anville, one of the main French mapmakers of the 18th century: "My commitment toward ancient geography did not allow Egypt to be ignored."[10]

But why was it so essential for European mapmakers to draw a map of Egypt? For a variety of reasons, ancient Egypt was a crucial place for Christianity. It had also strongly impressed Greeks and Romans, and therefore the Europeans. But there was another reason, which was very specific to maps. Mapping Egypt was particularly significant because up until the 18th century people in Europe commonly believed that mapmaking was invented by the ancient Egyptians. Thus, in the "Préface historique dans laquelle on traite de l´origine, des progrès, et de l'état actuel de la géographie" from the *Atlas universel* by Gilles Robert de Vaugondy (1688–1766), it was said:

> (Mapmaking was) born, so to say, and developed in Egypt, like the other arts. The yearly inundation of the Nile, which had the effect of fertilizing Egypt, moved the boundaries of each plot of farmland. The need to mark out his land forced the owner to study the value of lines and angles that can be traced on a field: herein lie the origins of geometry, which is the science of measuring the earth. Thus, having measured and divided the same land for several years, one after another, the Egyptians were quick to draw plans in order to facilitate and speed up their work. It is likely that these operations led to their careful marking of towns and other notable localities that they found in their alignments. This gradation is too natural not to make one think that this was the time of the first geographical plans. The first map mentioned by the writers is that which Sesostris, the first great conqueror from Egypt, presented to his people in order to let them know the nations he had subdued and the extent of his empire, the limits of which were located at the mouths of the Indus River and the Danube.[11]

In its infancy, the history of geography often cited Egypt as the inventor of mapmaking. According to Robert, its emergence had two origins: taxation needs and the display of power. The first form of mapmaking would have been a cadastral plan made for collecting taxation information during the pharaonic era. During these time, Egypt's unique characteristic was its impermanent physical geography, caused by the annual flooding of the Nile that erased the landscape. This common explanation that is offered by historians and mapmakers was supplemented by Didier Robert de Vaugondy (1723–1789). He, as son and grandson of famous royal mapmakers and in his function as a royal censor, seems to have been unconvinced that the assessment of taxes offered an edifying origin for mapmaking and added another new explanation. He preferred to attribute the invention to Sesostris,[12] who was considered the most famous pharaoh in the 18th century, known as a great conqueror.

As most beliefs about Egypt, these notions came from ancient Greek literature. Antoine Sabatier de Castres (1742–1817) and Bassin de Préfort (17..–…), in their *Dictionnaire des origines, decouvertes, inventions* suggested they stemmed from Herodotus and Strabo:

> Egypt, of all the countries we know where the Sciences appear to have been cultivated the earliest, was the cradle of geometry. According to

10 "L'application que j'ai donnée à l'ancienne géographie, ne me permettoit pas de négliger l'Égypte" (D'Anville 1766, p. III).

11 "Née, pour ainsi dire, & cultivée en Egypte comme le reste des beaux arts, on la vit successivement occuper l'attention des Grecs, des Romains, des Arabes & des peuples occidentaux de l'Europe. L'inondation annuelle du Nil, qui servoit à fertiliser l'Egypte, dérangeoit les limites de chaque possession. La nécessité de retrouver son champ, obligea le propriétaire á étudier la valeur des lignes & des angles, que l'on peut tracer sur un terrein: de-là l'origine de la géométrie qui est la science de mesurer la terre. Après avoir mesuré & divisé ainsi plusieurs années de suite le même terrein, les Egyptiens ne tardèrent pas á en tracer les plans pour faciliter & abréger leur travail; ces opérations durent les engager ensuite à marquer avec soin les villes & autres lieux remarquables qu'ils rencontroient dans leurs alignemens; cette gradation est trop naturelle pour qu'on ne pense pas que ce fut là l'époque des premiers plans géographiques. La première carte dont parlent les auteurs, est celle de Sésostris, le premier & le plus grand conquérant de l'Egypte, fit exposer à son peuple, pour lui faire connoître les nations qu'il avoit subjuguées, & l'étendue de son empire, dont les bornes étoient les embouchures de l'Inde et du Danube" (Gilles Robert de Vaugondy, Didier Robert de Vaugondy, "Préface historique dans laquelle on traite de l'origine, des progrès, et de l'état actuel de la géographie", in: G. Robert de Vaugondy and D. Robert de Vaugondy 1757, p. 3).

12 The pharaoh whom people then called Sesostris condensed several historical figures.

> Herodotus and Strabo, as the Egyptians were unable to recognize the borders of their inherited farmland after they had been distorted by the Nile floods, they invented the art of measuring and dividing the lands in order to be able to distinguish theirs […].[13]

And the Egyptian origin of mapmaking did indeed appear in Herodotus's *History*:

> Moreover, this king (Sesostris) […] divided the country among all Egyptians by giving each an equal square parcel of land, and made this his source of revenue, appointing the payment of an annual tax. And any man who was robbed a part of his land by the river would come to Sesostris and declare what had befallen him; then the King would send men to look into it and measure the space by which the land had been diminished, so thereafter it should pay in proportion to the tax originally imposed. From this, to my thinking, the Greeks learnt the art of measuring land.[14]

And it also appeared in Strabo's *Geography*:

> There was need for this accurate and minute division on account of the continuous confusion of the boundaries caused by the Nile at the time of its increases, since the Nile takes away and adds soil, and changes conformations of land, and in general hides from view the signs by which one's own land is distinguished from that of another. Of necessity, therefore, the lands must be re-measured again and again. And here it was, they say, that the science of land-measuring originated […].[15]

Only Herodotus mentioned Sesostris as the inventor of mapmaking. But neither Herodotus nor Strabo wrote that the map was invented to depict the enlargement of the pharaoh's empire, as was suggested by Robert de Vaugondy. This interpretation appears to be a late invention of the Enlightenment, perhaps because 18th century mapping was a powerful tool for the state and Egypt was imagined as a powerful centralized state. Moreover, taxation as a stimulus for mapmaking could not be well perceived at a time where the weight of taxes in France was subject to a great deal of criticism.

However, it is true that most of the Greek texts linked maps to Egyptian royalty, as the *Argonautica* (Greek: Ἀργοναυτικά), a Greek epic poem written in the 3rd century BC by Apollonius Rhodius, mentioned maps kept by an Egyptian king L IV v. 279.[16]

Nevertheless, despite Herodotus and Strabo, very few topographical maps from the pharaonic time have ever been found.[17] David O'Connor mentions some, such as that identified in the temple of Hatshepsut at Deir el Bahari (the map representing the Land of Punt) or at Abu Simbel Temple (the map illustrating the Battle of Kadesh).[18] But the most famous of the pharaonic topographical maps is the one kept in the *Museo Egizio* in Turin.[19] Well known and much studied, this map was drawn on a papyrus from the New Kingdom (1150 BC). It represents the location of a quarry in the Wadi Hammamat (today, between Qosseir and Qena, a path very frequently used during pharaonic times). The map was not made to find a gold mine, as was suggested, but to point out the location of a quarry of schist. The aim of the expedition was to extract a bloc of greywacke to carve a statue, maybe for Ramses IV (1153–1146 BC).

This topographical map is the only one that has been found to date. Most of the known pharaonic maps are religious maps, like maps of the underworld, which fit the broad definitions of maps given by historians of cartography: a codified spatial representation. After all it is possible that there was no need for topographical maps in Egypt. It was probably not particularly difficult to find your way around in Upper Egypt, considering that there was only one main direction along the Nile. However, topographical maps were not mainly used for pathfinding; they represented the landscape, generally

13 "L'Egypte, celui de tous les pays que nous connaissons où les sciences paroissent avoir été le plus anciennement cultivées fut le berceau de la géométrie. Selon Hérodote et Strabon, les Egyptiens ne pouvant reconnoitre les bornes de leurs héritages, confondues par les inondations du Nil, inventerent l'art de mesurer et de diviser les terres, afin de distinguer les leurs […]." (Sabatier de Castres and Préfort 1777, p. 230).

14 Herodotus, *The Histories*, II, CIX.

15 Strabo, *Geography*, L. XVII, 1.

16 Apollonius Rhodius, *Argonautica*, L IV v. 279.

17 Shore 1984, 117–129.

18 Talbert 2012, 47–79.

19 Gardiner 1914, 41–46; Goyon 1949, 337–392; Harrell and Brown 1992, 81–105.

for other purposes, e.g. land use, water sources, land types, elevations and depressions for agricultural, administrative, military, and planning purposes. Then, the next ancient maps made in Egypt that reached Europe were perhaps Ptolemy's maps, a Greek citizen born in Alexandria. Scholars are still hesitant about whether the maps were inspired by ancient models or not.[20]

So, can we assert that ancient Egyptians (before Ptolemy) were familiar with topographical maps? The contradiction between the Greek texts asserting that ancient Egyptians invented mapmaking and the sparse archeological proof cannot be resolved for the moment. The ancient Greeks may have been mistaken, fooled by secondhand information. It is also possible that there are no topographical maps left because most Egyptian heritage had disappeared. They may have not survived because they were not considered to be valuable items. As tools, they might have worn out and finally been destroyed. The nautical maps from the Middle Ages met the same fate. There are only very few left, and the ones which remain were the ones made mainly for show, pinned on the wall to attest the prestige of their owners.[21] The others vanished.

3 How did mapmakers manage to find information about Egyptian geography, or: how to read an ancient map?

When Europeans felt compelled to map Egypt, what were their main sources of information? Obviously, it was not ancient maps. Except for the hypotheses of the survival of Ptolemean maps through the centuries, Europeans did not know any maps from ancient Egypt. They could have used the Nile Mosaic of Palestrina (120–110 BC), a late Hellenistic floor mosaic depicting Egypt from Nubia to the Nile delta placed in the lower part of the representation, in accordance with ancient Egyptian orientation looking to the south.[22] 20 feet in length by about 15 feet in breadth, it was part of a sanctuary-cave at Palestrina in Italy. Noticed in 1507 by the humanist Antonio Volsco (14…–15…), Palestrina passed to the Barberini family, a family of the Italian nobility that rose to prominence in 17th century Rome. The major part of the mosaic was detached from the wall between 1624 and 1626, and kept at the Palace of Palestrina. In many respects, the mosaic can be considered a map. The names of the cities can be followed in an up-river direction. Moreover, Nilotic scenes were introduced by a Greek artist from Ptolemaic Egypt active in ca. 165 BC, called Demetrius the Topographer, a name connected to geography.

Since the 17th century, depictions of the mosaic have spread widely across Europe through stamps. It was first figured in eighteen drawings imitating the original colors ordered by the Commandeur Cassiano dal Pozzo (1588–1657). Then it was briefly described by Joseph-Marie Suarès (1599–1677), Bishop of Vaisar, in his *Praenestes antiquae* (1655). It was also engraved by Athanasius Kircher (1602–1680) in 1671 in his *Latium*, by the Cardinal Francesco Barberini (1597–1679) in 1721, by Bernard de Montfaucon (1655–1541), Jean-Jacques Barthelemy (1716–1795), and the earl of Caylus (1692–1765).[23] However, the mosaic did not influence mapmaking, neither in terms of topographic delineation – quite difficult to interpret – nor in the way of drawing pharaonic buildings on maps.

We have to remind ourselves that Europeans had no idea what an Egyptian temple looked like before the imperfect/approximate drawings of Paul Lucas in 1704,[24] and, above all, Frederic Louis Norden's drawing in 1755 (1795 for the translation into French),[25] who were among the first travelers to the south of Egypt to come back with sketches. Before the 18th century, very few travelers went to southern Egypt. Most of them never went beyond Cairo. But in Egypt, the temples that are still standing are further south than Cairo. So until the end of the 18th century, Egyptians temples were pictured according to the imagination of the artist. For instance, maps of the Renaissance represented Egyptian temples as an accumulation of obelisks, pyramids and sphinxes (Fig. 1).[26] Artists built Egyptian temples with items they were familiar with. The Nile mosaic of Palestrina was the only known representation of an ancient Egyptian temple, however, it seems that the buildings

20 Gautier Dalché 2009, 16–19.
21 Hofmann, Richard, and Vagnon 2012.
22 Meyboom 1995; Burkhalter 1999; Coarelli 1990, 221–251.
23 Serres 1835, 59–62.
24 Lucas 1704.
25 Norden 1795–1798, t. III, pl. LX.
26 See for instance, Ortelius 1565.

were not perceived as such. At least, the mosaic of Palestrina had no influence on the western way of perceiving pharaonic art.

In a nutshell, the sources for mapmaking in ancient Egypt were not maps from Egyptian antiquity. During the Middle Ages, mapmakers mainly found information about ancient Egyptian topography in the Bible, the Scriptures. Ptolemy's geography was known through Arabic sources.[27] Greek and Latin literature was initially unfamiliar in many cases. The content of Pliny's *Natural History* was widely known, mostly thanks to a summary by Solinus (IIIrd or IVth century). But the main sources concerning Egypt, like Strabo, Herodotus and Ptolemy, were not translated into Latin before the 15th century. Before this date, only fragments of their works arrived through the borrowing of the patristic literature.

That is why, not surprisingly, medieval maps do not focus on ancient Egypt but mainly represent biblical Egypt or modern Egypt. Medieval maps of modern Egypt benefited from field explorations deep in the Nile delta, a very privileged situation, considering there were very few travelers to the south of Egypt and the deep Nile delta until the very late 17th century, except, as far as we know, an anonymous Venetian, who left a travelogue in 1589 and whose report was not edited until the 20th century. Maps of the Nile delta were made in the field in order to prepare a new crusade. The Venetian merchant Marino Sanudo thus took advantage of his travels to Egypt to gather information for the Pope and the crusaders on how to conquer the Holy Land.[28] Mapmakers, like Fra Mauro, a monk of the Camaldolese Monastery of St. Michael in Murano, also gathered information by questioning Portuguese missionaries, and in his *Mappamundi* (1460) was able to depict a representation of the origins of the White Nile before the Latin translation of Ptolemy's *Geography*.[29] If we add the nautical maps made thanks to the direct observations of mariners to this list, the Middle Ages can almost be considered a Golden Age in the field mapping of Egypt, at least by comparison to the following centuries.

Very few pharaonic ruins were mentioned, except for the pyramids and ruins in Alexandria. Pyramids were often represented as towers, because these Egyptian monuments were not yet called by their Greek name, but designated using the Latin word 'turris' for 'tower'[30] (Fig. 2).[31] Because they were known from textual sources rather than from graphic representations, the word determined the way they were depicted.

After the translation of *Geography*, the trend was reversed. Maps of Egypt were now seldom based on field information. Considering that Egypt remained a familiar destination for lots of western travelers (especially tradesmen and pilgrims), the lack of field sources for western maps may sound surprising. In the 16th century, thousands of western pilgrims went to Jerusalem through Alexandria and Cairo, where they did not forget to visit the balsam-tree of the virgin Maria at Matarea[32] and Saint Catherine's Monastery.[33] Travelers, tradesmen and diplomats explored Alexandria and Cairo. But the conditions of their trips are well-known and highlight why all these travelers could not help improve knowledge of Egyptian geography nor help discover ancient ruins. Pilgrimages were very often very well organized. People just went from previously determined place to place without deviation from the plan. Between stops, pilgrims went by caravan – a group protected by armed men – from which it was not recommended to wander. Diplomats and tradesmen did not enjoy any more freedom. It was too dangerous to break the rules and take the risk. French traveler Jean Palerne, on his arrival, was informed that a man from the French city of Lyon had decided to go alone and had paid for this imprudence with his life.[34] Even though many travelers went to Egypt, they all saw the same spots, the same "must-sees",[35] the same sacred places: Alexandria, Cairo, Matarea (a garden outside of Cairo), Heliopolis (an ancient site outside of Cairo), Saint Catherine's Monastery, and, to a lesser extent, Rosetta and Damietta Port. Some religious men and tradesmen, such as the Venetian mentioned above, visited other places that were not known to mapmakers of the modern age (16th – 18th centuries) because they did not write, or because their work remained unknown.

But the fact that, for a long period of time, no new information was provided from the field, paradoxically

27 Gautier Dalché 2009.

28 Bouloux 2002, 45–68; Billanovitch 1952, 376–388; Degenhard and Schmitt 1973, 137; Brincken 1988, 23–88.

29 La Roncière 1932, 369–372; Falchetta 2006.

30 Venise 1328.

31 Harant, C. Brejnik, and A. Brejnik 1972, p. [184] or André Thevet, "Cosmographie de Levant", in: Chesneau and Thevet 1984, p. 137.

32 Halikowski Smith 2008.

33 Gomez-Géraud 1999.

34 Palerne 1971, 45–46.

35 Tinguely 2000, 116.

Fig. 1 Abraham Ortelius, Aegyptus, 1565.

did not mean a decrease in map production. On the contrary, maps of Egypt kept being published and improved with the help of second-hand sources. The persistent dynamics of the production can be explained by the translation of Ptolemy's *Geography* into Latin. The quickly printed translation of the *Geography* was accompanied by maps and stimulated a new way of mapping.[36]

The book summarized Greek geographic knowledge of the inhabited world *(oekoumene)*, located roughly between Iceland and Sri Lanka. Mostly divided into two parts, Ptolemy's book first described how to make a map based on astronomical coordinates, a system which enables every location on the Earth to be specified by a set of numbers. These coordinates have been called longitude and latitude. The main difficulty was to represent a sphere on a flat surface. The book proposed several different projections to solve this difficulty. Furthermore, it provided a valuable topographic list of each country with their astronomical coordinates. The list of Egyptian toponyms is long and detailed, which is not surprising, considering that Ptolemy was a Greco-Roman citizen of Egypt. It can be assumed that he knew his own country quite well.

By introducing astronomical coordinates and, above all, a list of the cities of the known world, even though it did not entirely replace medieval methods

36 Aujac 1993; Gautier Dalché 2009.

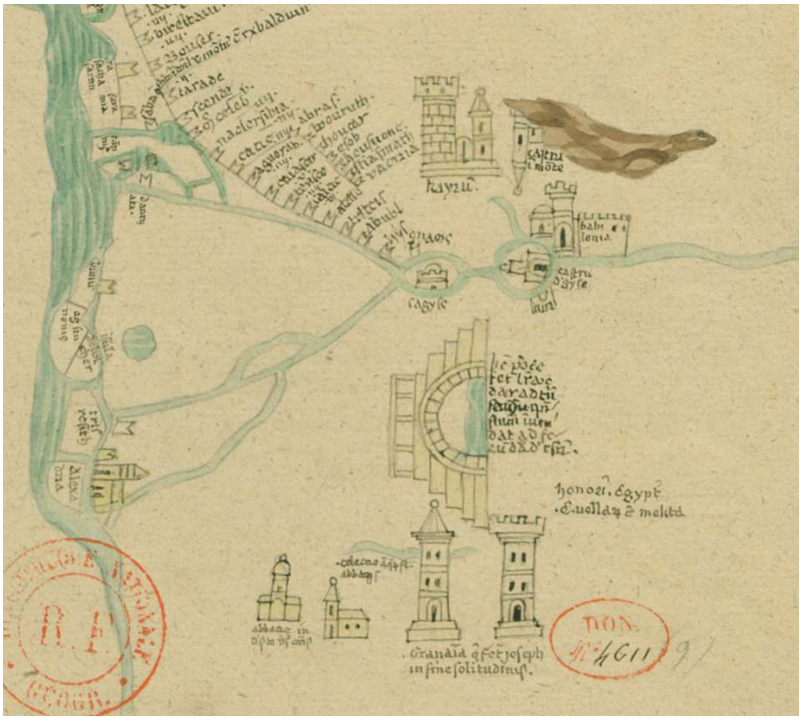

Fig. 2 Paulin de Venise, *Mapa regnorum Syrie et Egypti*, v. 1328.

of cartography and the art of making nautical charts, Ptolemy's *Geography* fundamentally renewed the construction or compilation of maps at the end of the 15th century. The new maps were not better than the previous ones. The appearance of mathematical maps must not necessarily be seen as an improvement. For instance, the outlines of continents and countries were described with less accuracy than in older nautical maps, which were much more detailed in this regard. This novel approach should be valued rather as a new way of integrating information in a codified space.[37]

The mathematician, astronomer, geographer and astrologer, Claudius Ptolemy lived between the first and second centuries AD under Roman rule. Besides the *Geography*, he has written several treatises, among them an astronomical treatise now known as the *Almagest* (from its translation into Arabic) and an astrological treatise known as *Tetrabiblos*. One should not be misled by the geographical content of the book: Ptolemy was not a traveler. He compiled the works of other geographers, travelers or not. Notably, Ptolemy used the works of Marinos of Tyre, which introduced improvements to map construction and developed a system of nautical charts. He also used gazetteers of the Roman Empire which were lists naming geographical locations and the distances between them. His chief legacy was to be the first to assign a specific latitude and longitude to each place. He used the meridian of the Isles of the Blessed (Canary Islands or Cape Verde Islands) as the zero meridian.

Why was the *Geography* not used before the 15th century? After the 4th century, the text had disappeared from the Latin world. Between the 12th and 13th centuries, a number of Greek texts reached Europe thanks to the Arabic translations, like the *Almagest* and the *Tetrabible*. Unfortunately this was not the case with the *Geography*. However, although the Greek text did not reach Europe before the 14th century, the *Geography*'s content was not unknown among scholars. They had some second-hand knowledge of it.[38] Nevertheless, after the *Geography*'s translation Ptolemy's influence on maps of Egypt became really obvious.

The story of the rediscovery of the *Geography* is well-known. At the end of the 13th century, in Constantinople, Byzantine scholar Maxime Planude found a Greek version of the text. Several maps were made. It remains unclear whether they were made according to the text or according to original maps, or even if such maps

37 Besse 2003, 420.

38 Gautier Dalché 2009.

ever existed. In 1397, Manuel Chrysoloras (1355–1415), a Greek scholar, had the opportunity to teach Greek in Firenze. As a professor, he did not have enough books to teach, and so he received some help from Palla Strozzi (1372–1462), who had been born into the rich banking family of the Strozzi and was well-known for establishing an important collection of rare books. Palla Strozzi imported some manuscripts by Plutarch, Plato and a copy of Ptolemy's *Geography*. Manuel Chrysoloras began a translation into Latin, which was continued by Jacopo d'Angelo, one of his students. The work rapidly became a great success. A large number of copies was manufactured, handmade at first.[39]

The influence of Ptolemy's *Geography* on western maps of ancient Egypt was very significant. A lot of new cities were added compared to the rest of Africa, which, in comparison, appeared quite empty. As Ptolemy had provided geographical coordinates for each city, the new maps were very detailed and accurate. Although it was quite easy to measure latitude with simple instruments and the help of the stars, the accurate measurement of longitude would not be possible until the end of the 18th century – Ptolemy himself admitted that. However, except for the Nile delta, which is a much more complex space, the pinpointing of the location of settlements along the Nile was considered quite satisfactory, as the river runs fairly straight, almost like a geographical meridian itself. Thus people thought Alexandria and Aswan were more or less on the same line.

A major consequence of the rediscovery of the *Geography* was that the maps of Egypt were now made to include the toponyms from Ptolemy's time.[40] However, most of the ancient cities mentioned on the maps quite accurately were not actually rediscovered. In other words, Thebes, under the Latin name of *Diospolis magna*, was already located on the maps of the 15th century, although it was well-known that the location of Thebes was lost. For a historian, these maps are of no use in terms of knowing if a place had been discovered or explored, because they were mainly made thanks to ancient sources.

Even when a place with substantial archeological and historical evidence was genuinely rediscovered by a traveler, it did not appear on the map at all. Maps look identical before and after the identification of historic places in the field. For instance, when the French Jesuit Claude Sicard (1677–1726) rediscovered Thebes during one of his explorations at the beginning of the 18th century, there was no indication on the maps that Thebes now was no more mapped by conjecture. The historian of the 21st century cannot deduce the rediscovery of Thebes by comparing the maps of Egypt preceding Sicard with those made by Jean-Baptiste d'Anville in accordance with Sicard's discoveries.

In the same way, physical features can be drawn on a map according to second-hand sources that are quoted by an ancient author. As is well known, the origins of the Blue Nile were not explored by a European traveler until Henry Stanley came upon them in 1871. Nonetheless, the putative origins were mentioned on maps as early as the 15th century based on Ptolemy's data. However, just as in the case of Thebes, readers knew that the origins of the River Nile were unknown. In accordance with the famous verses by Lucan, the river god was often represented on sculptures as a veiled man because its origins were unknown.

> Nature has revealed to none its hidden source,
> nor has it been permitted to mankind to see the
> stripling Nile.[41]

The verses were not only known by scholars, but also by a much wider public. Most of the people walking in the *Piazza Navona* in Rome by the *Fontana dei Quattro Fiumi,* built in the 17th century, knew that the origins of the Nile were a mystery. The fountain represents the longest rivers of each continent known at that time: the Rio de la Plata, the Ganges, the Danube, and the Nile. The latter was the only one represented with its head covered, indicating to every passerby that the origins of this river were unknown. The statue was a reference to popular knowledge. As quoted above, "for most people, the Nile is as familiar as the Seine" (and probably the Tibre), including the mystery of its origins.

These two examples have deep implications for the way we have to perceive and read old maps. Maps were not seen as an exact reflection of the earth, but as a state of knowledge at a given moment.[42] This also means

39 Aujac 1993; Besse 2003, 420.

40 Dainville 1940, 76; Broc 1975.

41 *Arcanum natura caput non prodidit ulli / Nec licuit populis parvum te, Nile, videre.* (Lucanus, *Pharsalia*, X).

42 Haguet 2011, 95–106.

that the content of maps were not perceived in a uniform way: some parts were based on verified information, some were not. In other words, different ranges of knowledge were represented at the same level on the map, from certain to vague assumptions or even to declared ignorance. For instance, on the maps of Egypt, the exact localization of Alexandria was beyond doubt, known as the place of intensive trading with the countries surrounding the Mediterranean. But the positions of southern modern cities were only more or less probable, depending on the degree of reliability of the sources used or on the precision of testimonies. Between almost certitude and fragile hypothesis, every shade of certainty and uncertainty appeared on the maps of Egypt, and of any other country.

The unknown could be clearly distinct as a specific type of information and was sometimes hinted at by a blank, a picture, or a textual explanation of why this place is unknown. Toponyms that mapmakers were not able to localize were listed on tables added to the maps. These tables were a way of not losing knowledge without localizing places randomly.

So except the unknown, which could be explicitly expressed by a blank, a text, or a list of unlocalized toponyms, (or other graphic devices such as different styles of letters, dotted lines, underlining or other symbols), there was generally no way to know the value of the information on maps just by looking at them, because certitudes, probabilities and hypotheses were represented in the same way. This leads us to conclude that the people of Early Modern History did not perceive or read maps the way we do. They did not take what was drawn and written on a map for granted. They knew that maps were works in progress – especially in the case of far-away countries. Most of the readers had minimal geographical knowledge and were incapable of examining maps critically, or only to the extent of knowing that the origins of the River Nile were in debate, for instance. They were not scholars and were not able to analyze the map in depth. Most of the cities mentioned on the maps of Egypt were unknown to the public. Only the toponyms related to famous events were memorized.

If a non-negligible part of the knowledge on the map took the form of hypotheses, this means that different maps of one country could be sold at the same time, because the mapmaker's conclusion could diverge or because some maps were not up-to-date. Consequently, the laymen who entered the shop of a map seller had to choose between several different representations of Egypt. Not surprisingly, customers' guides became more and more popular. In the 18th century, the *Catalogue des meilleures cartes géographiques* by Nicolas Lenglet-Dufresnoy was republished on numerous occasions and also updated.[43] This *Catalogue* helped the buyer to get the best map for a specific country, covering various European cartographers. It was not enough to rely on recommendations for the best mapmakers. Some of them were better at mapping some places, but were not as good at mapping other places. Mapmakers could also sell new versions of their work during their career and it was not rare to have two, three or four versions of one country mapped again and again by the same people.[44] Sometimes, they even drew different versions of one country on the same copperplate, in separate cartouches (Fig. 3).[45] In the 18th century, according to the different editions of the *Catalogue* by Lenglet-Dufresnoy, the best maps of Egypt were, in 1741, the *Aegyptus antiqua* by Pierre du Val or the *Ancienne égypte* by Henri Liébaux because they were made according to Claude Sicard's *Mémoires*.[46] In 1768, d'Anville's map of Egypt appeared and it was commented on in the *Catalogue*: "Outstanding, & well above everything that has been done before."[47]

In a nutshell, for an historian, producing an ancient map is not enough to assert that a city was precisely localized in the field at that time. Contemporary readers were not misled by maps.[48] To a certain extent, ancient maps were based on hypotheses , and viewed as such. This does not negate the historical value of the maps.[49] They are a pertinent source to understand how Europeans perceived Egypt, which commonplaces Egypt summarized for them. Even if today maps are seen primarily as a tool for traveling or a "weapon" in war,[50] people from the Renaissance and the classic age mainly saw maps as a way

43 There were four editions of the *Méthode pour étudier la géographie* in which the catalogue was published: Lenglet Dufresnoy 1716, Lenglet Dufresnoy 1736, Lenglet Dufresnoy 1741–1742 and Lenglet Dufresnoy 1768.

44 See, for instance, Manne, Du Barbié Bocage, and Dacier 1802, 51, n° 42.

45 See, for instance, R. Pococke 1743 or Kircher 1652a.

46 Lenglet Dufresnoy 1741–1742, 94.

47 "Excellente, & bien supérieure à tout ce qui avoit été donné" (Lenglet Dufresnoy 1768, 503).

48 Haguet 2011, 95–106.

49 Harley 1988, 70–75; Harley 1995, 61–85; Jacob 1992.

50 Lacoste 1976.

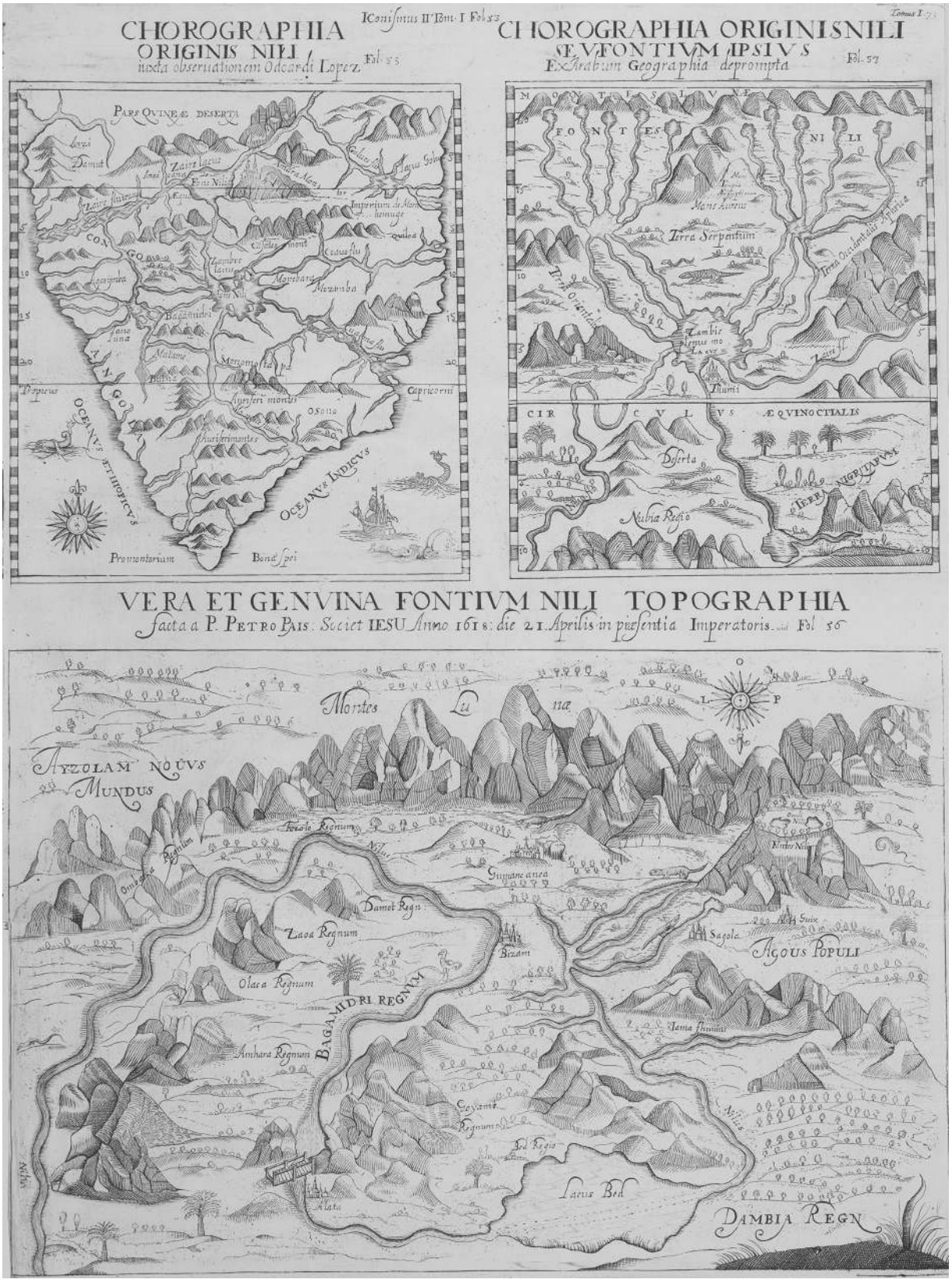

Fig. 3 Athanasius Kircher, *Chorographia originis Nili*, 1652.

to understand and memorize history. They were called the "eye of History"[51]. As much as possible, maps tried to offer an accurate report of the toponymy and topography of a country to understand past times as much as the present space.

4 How did the maps of Egypt evolve between the 15th and the 18th centuries?

Since mapmaking was a science of hypotheses and steady work in progress, it is interesting to outline the evolution of the mapping of Egypt between the 15th and the 18th centuries. Within the framework of this article, I concentrate on the development of the maps of *ancient* Egypt only.[52]

But what should be understood by 'maps of ancient Egypt'? First, we have to remember that the distinction between the maps of ancient Egypt and maps of modern Egypt was not quite explicit before the 18th century. Frequently, the title of a map alone gave no clue about the content of the map itself. It was just 'Egypt' or Latin *Aegyptus*, *Aegypto*, *Aegypti*, *Aegyptum*. Variations in spelling were frequent: *Egypto*, *Egipto*, *Egitto*, *Egyptus*, *Egyptum*, *Aegiipti*, *Aegiptus*, *Aegypusi*, *Aegypte*. The designations were adapted to the national languages: *Aegypten* in Germany, *Egipten* in the Netherlands, *Aegypt* in England, and *Égypte* in France.[53] Nevertheless, it was up to the reader to guess by reading the map if it represented ancient or modern Egypt. Sometimes it was almost impossible to decide. The map of '*Aegyptus*' by Abraham Ortelius (1565) is an example of an ambiguous map. Decorated by pyramids and mentioning mostly ancient toponyms, it looks like a map of ancient Egypt. But by reading the map legends carefully, one could notice that the map also mentioned contemporary places of trade:

> Ombi, sometimes Chana, here merchandise from Cairo is transported to the port of Kosseir. Posidium, Ques or Zuem, once a trade place where merchandise from India was usually gathered, and from there sent to Cairo or Alexandria. Today, it is less busy, after the Spanish navigators carried the Indian merchandise to them.
> The great Oasis, today the region of Gademes, full of rich dates, but because of the shortage, they trade with the Nigritae (a people living by the Niger River, L.H.).[54]

In general terms, the map of *Aegyptus* of 1565 clearly had encyclopedic ambitions and mixed the must-see places ("ancient ruins and notable Egyptian inscriptions"[55]), the natural wonders ("Source of the sun, which, although it is cold during the day, boiled during the night"[56]), biblical scenes ("Here, the sons of Israel were surrounded by mountains, the sea, and the Pharaoh's army"[57]), or Roman history ("Syëne, Esna, Sevenech. Here, Romans had three cohorts of defense by favor"[58]).

In 1584, Ortelius published a map bearing the name of *Aegyptus Antiqua*. This map no longer mentioned contemporary trade places. Moreover, the period covered by the map remains vague, as if '*Aegyptus antiqua*' should be understood as a long period covering pharaonic times, the Greek and Roman Empires and biblical events.

However, the *Aegyptus antiqua* was not a 'historical map' in the sense of the 10th century mapmakers. 'Historical maps' were maps of the activity of humans more than maps of space. They usually represented a very specific period of time like the *Imperium Sesostris* by Wilhem Haas (around 1742). Very few dealt with the pharaonic period. Usually, historical maps that included Egypt are maps of the Roman Empire.[59] Regarding ancient maps, they described the world as it was known by ancient people. They adopted the point of view of one or several ancient authors. The cosmographer Pieter Bert, for example, based his work on Ammien Marcellin (around 1600).[60] The geographer of the king, Pierre du Val, draw

51 Haguet 2009, 125–132.
52 About the history of the geography of Egypt, Broc 1975, 353–361.
53 Haguet 2007, 226.
54 *Ombi n. forte Chana, hinc merces que a Cairo veniunt ad portu Cosir vehuntur /Posidium n. ques, sive Zuem emporium olim qua solebant merces ex India convebi, indeq. Cayrum et Alexandria: hodie minime frequentatur, postq. Hispani navigationes indicas ad se transtulerunt /Oasis magna hodie gademes regio dactilis dives sed ob frumenti inopiam cum nigritis negociantur.*
55 *Bubastus n Azioth ex antiquitatis ruinis, inscriptionibusq[ue] aegyptiacis admirabilis fuisse videtur.*
56 *Solis fons, qui interdiu frigidus noctibus fervet.*
57 *Hic filii Israël conclusi erant, montibus, mari, et exercitu pharaonis.*
58 *Syëne n. Asna H. Sevenech. Hic romani habebant tres cohortes presidii gratia. Multa hic antiquitatis monumenta Latinis aegyptisq litteris inscripta.*
59 See Gossellin 1791, or Sanson 1684.
60 Bert 1600.

an *Egipte dressée sur le second livre d'Hérodote* (18th century).

This analysis is not the product of historians of cartographic works. Contemporaries themselves understood the distinction between '*antiqua*' and 'historical' maps without further explanation. Didier Robert de Vaugondy wrote the following definitions in the *Encyclopédie, ou Dictionnaire Raisonné des Sciences, des Arts et des Métiers* in the entry 'geography':

> Ancient geography, which is the description of the Earth, according to the knowledge that the ancients had of it until the fall of the Roman Empire […].
> Historical [geography], that is when a country or a city is indicated, its diverse revolutions are displayed, which princes ruled them successively, what kind of trade is conducted, battles, sieges, peace treaties, in short, everything which is connected with the history of a country.[61]

Finally, maps of ancient and modern Egypt appeared at the end of the 17th century, a period when scholars tried to understand the past territory on the basis of the present territory, and vice-versa.[62] They represented modern Egypt, to which ancient toponyms were added alongside the cities' modern names. Guillaume Delisle (1675–1726), geographer of the king, proposed a 'double' toponymy, an equation of the ancient and current toponyms, separated by the word 'or', e.g., "Armand ou Hermonthis", "Asna ou Isné ou Esné ou Latopolis".

In the 15th century, the first maps of ancient Egypt (even if it was not explicitly designated as such) appeared with the translation of Ptolemy's *Geography*. As the maps were made according to Ptolemy's text and Ptolemy lived around the 1st century AD, they naturally display a late version of ancient Egypt. Before the dissemination of Ptolemy's *Geography*, most of the maps of Egypt were nautical charts or field maps for preparing conquests.[63] Pilgrims very rarely drew maps.[64] With the translation of the *Geography*, a new standard for maps of Egypt appeared. We have to wait until the 16th century and Abraham Ortelius's maps to see the emergence of a new model, inspired through ancient Greek and Latin texts such as texts from Herodotus, Strabo, Diodorus of Sicily, or Pliny (Fig. 4). From this time on, the representation of ancient Egypt remained very stable. Of course, details diverged from one map to another, for example, the number and the location of canals supposedly connecting the Nile with the Red Sea or the shape of the Moeris Lake (Qeroun Lake), which was sometimes crescent-shaped[65], sometimes rectangular[66] (Fig. 5). But in any case, they all followed the same pattern for two centuries.

It was not until the 18th century that the emergence of a radical update of Egypt's representation began to manifest itself thanks to Jean-Baptiste d'Anville's maps which became the new model to follow. D'Anville (1697–1782) made extensive use of Sicard's map but also provided his own improvements, as he explained in his *Mémoires de l'Égypte ancienne et moderne*. Sicard's work mainly became known thanks to d'Anville, as his map was not printed and existed only as two manuscripts. One of these was sent to the French king who showed it to d'Anville to help him improve the maps of Egypt. Still d'Anville was not the only one to rethink Egypt's outlines thanks to Sicard's map. Richard Pococke and Didier Robert de Vaugondy were also influenced by the Jesuit's work, but only d'Anville's map was of influence and was passed on to posterity.

D'Anville's method of working was specific. He especially tried to improve knowledge of ancient Egypt's geography by using modern geographical methods. Before the end of the 17th century, the maps of ancient Egypt and the maps of modern Egypt evolved in parallel, but not together. With d'Anville and his contemporaries like Claude Sicard or Guillaume Delisle, the approach changed. D'Anville finished his map of modern Egypt in 1750, but waited 15 years to publish it because he wanted to publish this map and his map of ancient Egypt at the same time. D'Anville explicitly wrote that he made the first map in order to make the second, because, in his eyes, it was not reasonable to publish the first one alone.[67]

61 "[Géographie] historique, c'est lorsqu'en indiquant un pays ou une ville, elle en présente les différentes revolutions, à quels princes ils ont été sujets successivement, le commerce qui s'y fait, les batailles, les sièges, les traités de paix, en un mot tout ce qui a rapport à l'histoire d'un pays." (D. Robert de Vaugondy 1756, p. 613).

62 *Aegyptus, Mesraim, Egypte 1799*; Jomard and Jacotin 1829.

63 Marin Sanudo, [Egypt], in: Sanudo 1306–1321.

64 One exception: Breydenbach 1486.

65 D. Robert de Vaugondy 1756.

66 Haas 1739a, Haas 1739b.

67 D'Anville 1766, p. III.

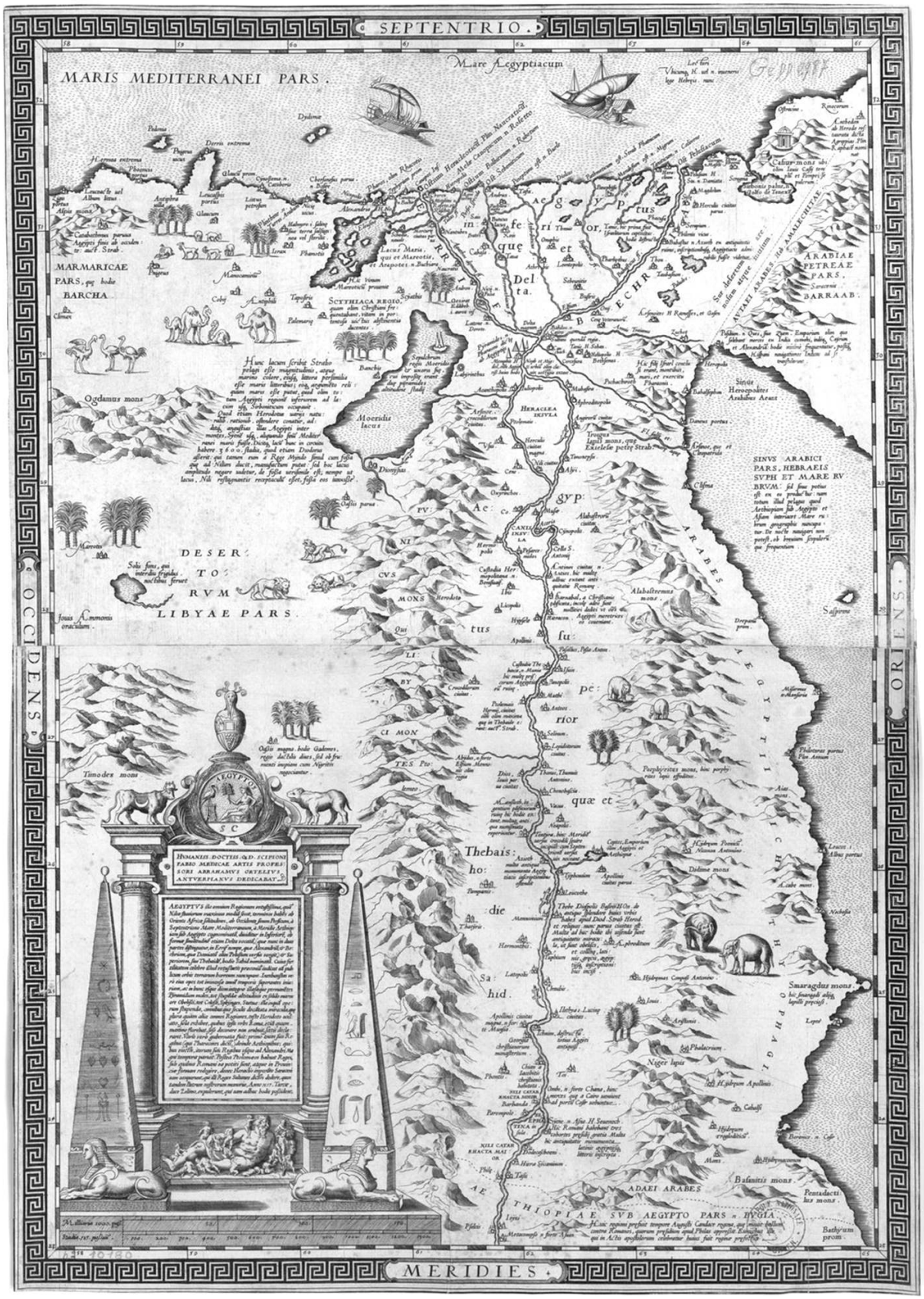

Fig. 4 Abraham Ortelius, *Aegyptus*, 1565.

Fig. 5 Johann Matthias Haas, *Typus aetiologicus* I, II.

D'Anville's map of modern Egypt was brought to Egypt by Bonaparte in preparation for the French campaign in Egypt.[68] However, for the first publication of the *Description de l'Égypte* in around 1809, the *Aegyptus antiqua* by d'Anville was chosen to be printed with the book (Fig. 6), because Bonaparte used his veto and forbade the publishing of the modern map for military reasons.[69] The influence of d'Anville's map of ancient Egypt was long lasting and inspired the geographical work of Jean-François Champollion, a well-known scholar among Egyptologists. According to him, he was able to use the map of Upper Egypt as drawn by d'Anville without having to make any modifications.[70]

5 How did mapmakers create geographical maps?

Before I enumerate the sources the mapmakers used over centuries, I have to stress that not all of them were known by or at the disposal of all mapmakers. The circulation of knowledge was not smooth. Even after the printing revolution initiated by Johannes Gutenberg in around 1450 in the western countries, it was still difficult to access information. Documents could be difficult to locate. At worst, it could be hard for a mapmaker to know if the document needed even existed. Then, it was necessary to find out where the document was kept. Finally, membership of a particular network could be required to gain the right to enter the library or archive or get a copy of the document. For this and other reasons, certain maps were used by modern mapmakers and not used by others.

Scholars extensively used Roman and Greek literature when these texts were available. They found information in Herodotus, Strabo and Pliny, but also in Joseph et Stephanus de Urbibus's *Ethnikon* (edited in Latin in 1669 and 1678), in the works of the Roman historian Ammianus Marcellinus, in Pomponius Mela's *De chorographia* published in Milan in 1471, in Solinus's *Polyhistory* and many others. Mapmakers examined every word of the Greek and Latin writings in order to find information about ancient geography. They employed ancient registers of the stations and distances along the various roads of the Roman Empire that contained directions about how to get from one Roman settlement to

68 The copy of the map annotated by Bonaparte is kept at the Château de Chantilly. The map is reproduced in Godlewska 1988, 7.

69 Laissus 2005, 225. The maps made by the members of the Expedition were published in 1821.

70 Champollion 1811, 384–385.

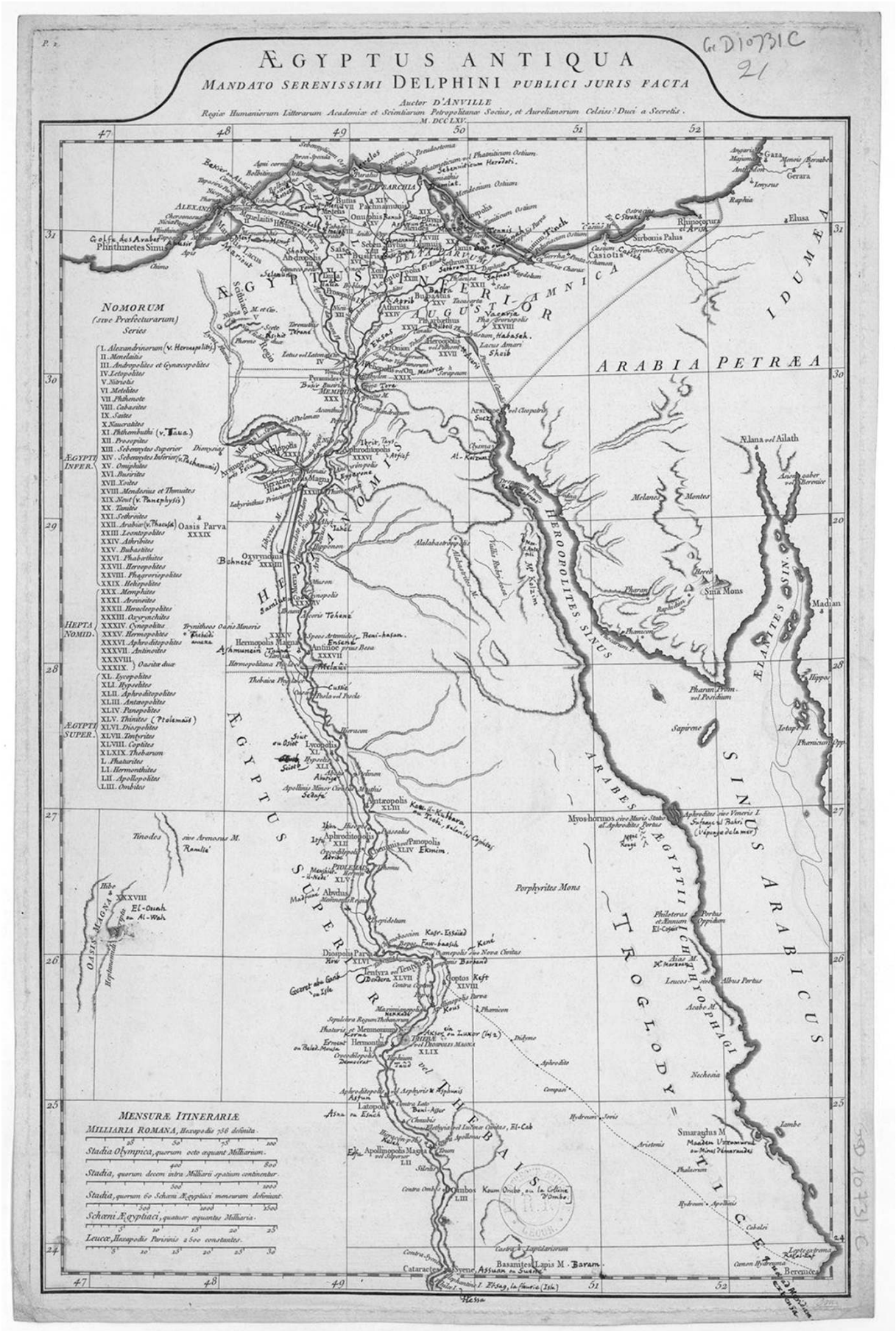

Fig. 6 Jean-Baptiste d'Anville, Aegyptus antiqua, 1765.

another. The *Antonine Itinerary* was one of them and was well-known by mapmakers.[71] Nothing is known with certainty as to the date or the author. Scholars consider it likely that the original edition was prepared at the beginning of the 3rd century. It provides the names of the cities and the distances between them. Mapmakers also used ancient maps that survived from the Roman world, like the *Tabula Peutingeriana (Peutinger Map)*. The *Tabula Peutingeriana* was a map showing the road network in the Roman Empire. The original Roman map was last revised in the fourth or early fifth century. It covered Europe, North Africa and parts of Asia (the Middle East, Persia, and India). It was named after Konrad Peutinger (1465–1547), a German humanist and antiquarian, but the map was already well known among humanists thanks to a 13th century copy that was discovered in a library in Worms (Germany) by the German humanist Conradus Celtis (German: Konrad Pickel; 1459–1508). He passed on the map to Konrad Peutinger in 1508. The Peutinger Map is known for its very elongated shape, which has been explained by various hypotheses. According to some scholars, the map was shaped to fit a papyrus roll. Recently, other scholars has hypothesized that the map might have been used as a decorative frieze made for a 'place of power.'[72]

The mapmakers used the Bible and the Scriptures to draw maps of ancient Egypt, but also ecclesiastical literature, like patristical works, notably, the texts of the Desert Fathers. The Desert Fathers were hermits, ascetics and monks who lived mainly in the Scetes desert of Egypt from the 3rd century AD onwards. The monastic desert communities that grew out of the informal gatherings of hermit monks became the model for Christian monasticism. Beginning as an oral tradition in the Coptic language, their wisdoms were only later written down in Greek text. They are also a gateway to the Greek and Roman sources that they re-used. Their works became known in the Latin world mainly through the *Egyptian Paterikon (Historia Monachorum in Aegypto)* by Rufinus Tyrannius (4th – 5th centuries) through which one can feel the influence of the Greek and Latin works. In the 18th century, the Jesuit and mapmaker Claude Sicard added ancient Coptic literature like the "martyrologe des coptes" or the "dictionnaires copto-arabique" to this literature.[73]

The influence of the Arabic sources goes far back, as well. They even gave an initial idea of Ptolemy's *Geography* before its translation into Latin in 1411. Between the 8th and the 14th centuries was the Golden Age of Arabic geography. Whereas the mathematic architecture of geography (such as geographical coordinates) was inspired by Ptolemy, the descriptive part was inspired by Persian sources. The Renaissance was characterized by a renewal of the use of Arabic sources. The 16th century is especially characterized by the spread of Abulfeda's *Geography* (13th century). It was brought back to France by the traveler Guillaume de Postel (1510–1581), who was assigned to buy Arabic works during his stay abroad by King Francis I of France. Abulfeda did not really renew the mapmaking of ancient Egypt, but he confirmed the Greek information. His work was used by the Jesuit Athanasius Kircher who was especially interested in the geography of Egypt and the decipherment of hieroglyphs.[74] By the 17th century, the number of translations of Arabic texts had increased. A work by Al Idrissy was translated into Latin by Gabriel Sionite (Paris, 1619), under the title *Geographia Nubiensis*. Many geographical texts were translated by Jacobus Golius (1596–1667) and Albert Schultens (1685–1750).[75] Orientalism scholarship thrived, notably with the publication of the *Bibliothèque orientale* by Barthélemy d'Herbelot in 1697, which is said to be the foundation stone of Orientalism.

As they described modern Egypt, Arabic sources mainly influenced the mapping of modern Egypt. For instance, the Italian translation of *Description of Africa (Descrittione dell'Africa)* by Giovanni Battista Ramusio in his collection of travelers' accounts *Delle navigationi e viaggi* (Venice, 1550) renewed the mapping of modern Egypt and, perhaps as extensively as Ptolemy's *Geography*, contributed to renewing the mapping of ancient Egypt.[76] But these new maps of modern Egypt did not influence the way in which ancient Egypt was mapped, with a few

71 Cuntz and Wirth 1990. There is no recent edition.

72 Talbert 2010, 145–153.

73 Sauneron and Martin 1982, XIX.

74 Athanasius Kircher, "Aegypti descriptio chorographica antiqua", "Aegypti descriptio chorographica recentior" in Kircher 1652b.

75 Albert Schultens, "Index geographici" in Aboulfeda 1755. Jacob Golius, "Appendix sive Excerpta ex Muhammedis Alfergani astronomicis" in *Arabia Seu Arabum vicinarumq[ue] gentium Orientium leges, ritus, sacri et profani mores, instituta et historia. Accedunt praeterea varia per Arabiam itinera, in quibus multa notatu digna enarrantur 1633*.

76 A French edition was published in 1556 for the African part: Léon l'Africain.

exceptions, such as mapmakers putting ancient names on modern maps of Egypt.[77] Until the 18th century, maps of ancient and modern Egypt evolved completely separately, as they were two different countries.

However, it is the case that Arabic sources were also used for the mapping of ancient Egypt, although their influence is not always easy to pinpoint. The Ortelian habit of mentioning his sources on the map close to the toponyms was scarcely followed by his successors. However, some authors mentioned their Arabic sources in the title, e.g. Kircher when he used Abulfeda's work,[78] the Jesuit Claude Sicard, and later the French geographer Jean-Baptiste d'Anville when he used the *Geographia nubiensis*, a compendium of Al-Idrissy.

Claude Sicard is known to have drawn the first accurate map of Egypt, identifying ancient places based on his observations in the field. But that should not obscure the fact that he used textual sources to refine his map, such as Greek and Latin literature, the Scriptures, ecclesiastical literature, but also Arabic sources. He quoted the *Bibliothèque orientale* by Barthélemy d'Herbelot. He was influenced by the *Annales* by Saʿīd ibn Biṭrīq, maybe through the Latin edition that was made by the orientalist Edward Pocock in 1658.[79] Thanks to his familiarity with Coptic and Arabic, he could look through Arab itineraries and *scalae*, works containing a grammar, a Coptic dictionary, and a chapter dedicated to the Egyptian toponyms.[80]

Jean-Baptiste d'Anville also mentioned Arabic sources in his essays called *Mémoires*.[81] In these *Mémoires*, d'Anville analyzed the sources he used to make a map. Very typical for d'Anville, these essays allow us to know how he built maps. He used the *Bibliothèque orientale*, but also Abulfeda, Idrissy, Macrizi, and Mutardi, newly discovered documents like the *Dénombrement du pays, traduit de l'Arabe, & qui est sorti du Divan du Caire*, brought over by the French scholar Louis Picques (1637–1699), or an *Itinéraire* given to Jean Thévenot in 1652 by a prince of Tunis.

From the end of the 17th century, western travelers also influenced maps of Egypt when they began to travel to the south of the country, and to disseminate the discoveries they made. Western travelers scarcely produced maps before the 18th century, except for the map of Lower Egypt that Bernhard von Breydenbach included in his travelogue *Peregrinationes in Terram Sanctam* in 1486. But mapmakers of the 18th century began to feel the necessity to know the field to map the past. Clearly, as they were visiting modern-day Egypt, they did not draw ancient maps, but what they called comparative maps or 'parallèles géographiques', which were two-dimensional syntheses of past and present Egypt.

Travelers' accounts were unspecific, insufficiently detailed or did not answer the questions asked by mapmakers. This is why the French geographer Guillaume Delisle wrote to the French consul in Cairo, Benoît de Maillet (1656–1738), in order to obtain maps of Egypt that were, in accordance with his instructions, made in the field. He specifically asked for information to "determine exactly the course of the Nile, research the locations of places mentioned by ancient authors".[82] Lenoir du Roule, as he could not reach his post in Damiette because of an uprising, was instructed to answer Delisle's questions. He made maps of Egypt which were sent to France. A few years later, again thanks to the consul, Delisle got in contact with Claude Sicard, who it was thought might fulfill the task. As a Jesuit, he was trained in mapping.[83] He also could speak Arabic. For the first time, a western foreigner explored Egypt in detail on several explorations through Lower and Upper Egypt. Claude Sicard was not a traveler. He lived in Egypt as head of the Jesuit mission in Cairo and had more time for exploring the country than a temporary wayfarer. Egypt was in a state of instability which made it difficult to explore. Many travelers and diplomats died by going off the beaten paths (e.g., Lenoir du Roule when he tried to reach Ethiopia). But Sicard knew how to keep safe by looking poor and hungry. He was also the first to

77 See for instance "Égypte" in du Val 1661.

78 "Note to the reader: once, according to Strabo, Egypt was divided in 30 nomos or districts, a phrase that Ptolemy borrowed, as shown on this map; and that fit exactly the Arab descriptions taken from the geographer Abulfeda."; *Nota ad lectorem: Aegyptus olim, teste Strabone in 30 nomos, id est prgraaefecturas fuit divisa, quam et ptolemaeus secutus est, uti ex hac mappa patet; et Arabum descriptioni quam ex Abulfeda geographo deprompsimus, exacte correspondet.* (Kircher 1652b).

79 Ibn-Biṭrīq, E. Pococke, and Selden 1658.

80 Sicard 1982, V–XXV.

81 For his essay about his maps of Egypt, see D'Anville 1766.

82 "Déterminer exactement le cours du Nil, rechercher les emplacements de certains points indiqués par les anciens auteurs". Note from the minister Pontchartrain to Lenoir du Roule. See Caix de Saint-Aymour 1886, 213–214; Lhuillier 1890, 285–320. See also Bonnet 1891, 374–388.

83 Dainville 1940. Daniel 1879, p. 801–823.

take astronomical measurements for each city that he described.[84] This explains why no other maps achieved this kind of accuracy before the work of the French scholars who escorted the Bonaparte expedition or the English surveyors. The large-scale maps made by Frederick Ludwig Norden and published in French in 1755 were not drawn up with the help of astronomical observations, but just by observation, which led the geographer Jean-Baptiste d'Anville state that they were useless.[85]

Claude Sicard himself used travelogues to improve his map. He asked to be sent the travel accounts by Pierre Belon (1518–1564), Jean Thévenot (1633–1667), Jean-Michel Vansleb (1635–1679), and Paul Lucas (1664–1737).[86] Jean-Baptiste d'Anville, following his working method, achieved exhaustiveness, mentioning traveling accounts by Pierre Belon, Claude Granger – whom he also interviewed, Paul Lucas, and, of course, Claude Sicard.

Discussion about the sources of maps is incomplete if we do not also look at maps as sources in more detail. They were, of course, a major source for scholars. Abraham Ortelius even published a list of mapmakers *(Catalogus cartographorum)* whose works he had used. They strongly influenced each other – to such an extent that the maps often resembled one another. However, when scholars planned to review the map of Egypt, they did not always use geographical sources. For instance, Claude Sicard did not use geographical works, like geographical dictionaries or atlases equivalent to the *Notitia orbis antiqui* by Christopher Cellarius (1701), even if he mentioned Abraham Ortelius. Sicard considered such sources had too many flaws. On the contrary, in his *Mémoire de l'Égypte ancienne et moderne*, Jean-Baptiste d'Anville quoted maps as his primary sources for the drawing of his own maps. He therefore gathered printed maps like the *Hanc tabulam Aegypti* by the traveler Richard Pococke, also inspired by Sicard, "Une carte manuscrite des deux principales branches du Nil au-dessous du Caire, & jusqu'à la mer", which is perhaps the *Carte de la Basse Égypte et du cours du Nil de Paul Lucas* (1717), a copy of a map by Lenoir du Roule about the Nile's course until Girgeh from 1715 and a copy of Sicard's map. D'Anville also read the *Parallèle géographique* written by Sicard, an annotated listing of toponyms, which he called 'table'. He refused to admit any influence from Norden's atlas, which displayed Egypt on a large scale "[…] le cours du Nil au-dessus du Caire, distribué en 29 feuilles, ne mérite aucune confiance en ses positions".[87]

D'Anville mainly used Sicard and Pococke for the general outlines of the Nile and the identification of the toponyms. His map of Lower Egypt is inspired by a map manuscript (anonymous) of the Delta and Lenoir du Roule's map. He also mentioned the astronomical work of the "ingénieur hydrographe", Jean Mathieu de Chazelles (1657–1710). In 1693 Chazelles was sent to Egypt by the Académie royale des sciences to determine the position of the Alexandrian meridian. He measured the position of Alexandria and some of the most important cities of Lower Egypt.[88]

6 Conclusion

Until the 18th century western geographical knowledge of ancient Egypt was dominated by a paradox. The main cities were known and approximately located. Ancient Egypt, like modern Egypt, was unquestionably the most well-known region in Africa. However, this knowledge was mainly second-hand, and even with Greek and Roman supplementary information, it was still difficult for western travelers to identify ancient places when they were actually in Egypt. The more familiar places, such as the city of Thebes, were as famous as they were notoriously difficult to find. Theoretical knowledge of Egypt did not match the practical knowledge of the country. However, maps did not claim to be fully complete, even if they tried to be. They were work in progress, and the public understood them as such. Chronology was not important, as different periods of time often coexisted on one map. Finally, maps not only gave information about topography and toponymy, but also about history. They also testified how a country is known and perceived from abroad. More than a story of the rediscovery of Egypt by western people, early modern maps tell us how they conceived this faraway yet familiar country, omnipresent in Greek, Latin, Muslim and Christian culture.

84 Sicard and Martin 1982, p. 55.
85 D'Anville 1766, p. IV.
86 Sauneron and Martin 1982, XVII.
87 D'Anville 1766, p. V.
88 See Nouet 1800, t. 3, p. 103–104.

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