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Mapping the Silk Land: The Far East in Some Western Geographical Texts

1 Premise

In Greek and Latin geographical literature, the understanding of spatial relationships often derives from the travel narratives of merchants. This is particularly true for the Far Eastern regions of the Asian continent, which were largely imagined through the accounts of silk traders. Thus, studying the development of the concept of silk-producing country in ancient geographical literature provides valuable insights into the evolution of the silk trade across Asia in antiquity.

2 The *Periplus Maris Erythraei*

The earliest references to Chinese silk in Greek and Latin literature occur in the Latin poetry of the second half of the 1st century BC.[1] The adjective Σηρικός/ *Sericus,* used to identify this luxurious fabric, evoked the *Seres,* an enigmatic nation positioned beyond Bactria by Apollodorus of Artemita, and in a nebulous Far East by Mela and Pliny the Elder.[2] However, as the allure of silk and its luxurious qualities captivated the Roman aristocracy and the volume of trade increased,

1 Hor. *Epod.* 8.15; Verg. *Georg.* 2.121; Prop. 1.14.22; Ov. *Am.* 1.14.5–6. See recently Wang (2024). *Seres* are mentioned twice in the *Carmen de bello Actiaco* frg. 46.l.3 and (with *Indi*) 8. The text is too incomplete to draw any firm conclusions; l.6 *[nov]o[s] adportat in u[s]us* seems to suggest (see *usus luxuriantis aetatis* in Capit. frg. 12 Strzelecki) a commercial context comparable to Verg. *Georg.* 2.114–135. For a different perspective, see Geus/Günther/Sørensen (2021). For the characterization of *Seres* in Greek and Latin literature of Augustan times, see Günther (2023). Despite Karttunen (1997) 218–219, in Strab. 15.1.20 (= *BNJ*^{2}, 133, F19) the phrase τοιαῦτα δὲ καὶ τὰ Σηρικὰ ἔκ τινων φλοιῶν ξαινομένης βύσσου should be attributed to Strabo, not to Nearchus: Janvier (1984) 265.

2 *BNJ* 779 F 7a = Strab. 11.11.1; Mela 1.11; 3.59–60; Plin. *Nat.* 6.54, 88. A strand of Hellenistic ethnography portrays the Seres as people of extraordinary longevity: Strab. 15.1.34, 37; Plin. *Nat.* 7.27; Luc., *macrob.* 5; *Codex Monacensis Graecus* 287, fol. 158r (= Ctesias F 75 Lenfant, but Ctesias' paternity is suspect: Lenfant [2004] 334–335, Nichols [2011] 167–169). No text presents them concurrently as both long-lived and silk producers. It is uncertain whether the long-lived Seres preceded the silk producers, eventually being overshadowed by them. For a review of the ancient sources on the Seres, see Janvier (1984) and Schwartz (1986).

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Western mercantile communities gained a deeper understanding of the origins of this coveted material and the Asian trade routes through which it journeyed to the Mediterranean.

Written in the mid-1st century AD by an individual with Alexandrian connections and vested interests in the Indian Ocean trade, the *Periplus Maris Erythraei* served a dual purpose. The first was to map the lucrative commercial opportunities offered by the trading posts scattered along the *Erythrà thálassa*. The second was to provide a comprehensive description of the African (Chapters 1–18) and Asian (Chapters 19–63) coasts. This description culminates with the island of Chryse, situated in the Bay of Bengal, which is presented as "the furthest extremity towards the east of the inhabited world, lying under the rising sun itself". However, after Chryse, but in the far north, is the great inland metropolis called Thina — a city renowned for its role in the export of silk floss, yarn and fabric:

> μετὰ δὲ ταύτην τὴν χώραν ὑπ᾽αὐτὸν ἤδη τὸν βορέαν, ἔξωθεν εἴς τινα τόπον* ἀπολῃγούσης τῆς θαλάσσης, παράκειται [δὲ] ** ἐν αὐτῇ πόλις μεσόγειος μεγίστη, λεγομένη Θῖνα, ἀφ᾽ ἧς τό τε ἔριον καὶ τὸ νῆμα καὶ τὸ ὀθόνιον τὸ Σηρικὸν εἰς τὴν Βαρύγαζαν διὰ Βάκτρων πεζῇ φέρεται καὶ εἰς τὴν Λιμυρικὴν πάλιν διὰ τοῦ Γάγγου ποταμοῦ. εἰς δὲ τὴν Θῖνα ταύτην οὐκ ἔστιν εὐχερῶς ἀπελθεῖν· σπανίως γὰρ ἀπ᾽ αὐτῆς τινὲς οὐ πολλοὶ ἔρχονται. κεῖται δὲ ὁ τόπος ὑπ᾽*** αὐτὴν τὴν μικρὰν ἄρκτον, λέγεται δὲ συνορ[μ]ίζειν**** τοῖς ἀπεστραμμένοις μέρεσιν τοῦ Πόντου καὶ τῆς Κασπίας θαλάσσης, καθ᾽ ἣν ἡ παρακειμένη λίμνη Μαιῶτις εἰς τὸν ὠκεανὸν συναναστομοῦσα.
>
> * (εἴς Σινῶν τόπον Salmasius; εἴς Θινὸς τινα τόπον Müller; εἴς Σηρῶν τινα τόπον Fabricius) ** (A^1) *** (Müller: ἐπ᾽) **** (A^2)
>
> Beyond this region, at the northernmost point (the sea ending somewhere on the outer fringe), there is a very great inland city called Thina from which silk floss, yarn, and cloth are shipped by land via Bactria to Barygaza and via the Ganges River back to Limyrike. It is not easy to get to this Thina; for rarely do people come from it, and only a few. The area lies right under Ursa Minor and, it is said, is contiguous with the remote parts of the Pontus and the Caspian Sea, where the nearby Lake Maeotis also empties into the ocean. (transl. L. Casson, with modifications)

While earlier editors suggested inserting ethnonyms from Ptolemy's geography after εἴς τινα τόπον, Hjalmar Frisk retained the original text, arguing that the sentence accurately reflects the author's ignorance of where the sea "ends".[3] On the other hand, the author seems confident in the positioning of Thina. Just as Chryse is described to be "the furthest extremity towards the east of the inhabited world, under the rising sun itself", Thina is placed "exactly under the north", indeed "ex-

3 Frisk (1927) 121.

actly under Ursa Minor", and "said to be conterminous with the remote parts of the Pontus and the Caspian Sea".[4]

The passage holds significance on multiple fronts: it considers Thina not as a nation or country, but as a great inland city; it states that silk was exported to India in three forms — floss, yarn and fabric —[5] and by two land routes, one via Bactria to Barygaza and the other to the Ganges (from where it came by sea to Limyrike);[6] it makes it clear that Western geographical speculation located this hard-to-reach place in the northern limits of the inhabited world in the East — just as the remote parts of the Pontus, the Caspian Sea and Lake Maeotis were considered the northern limits in the West. Above all, however, the text is remarkable because, although referring to silk with the adjective *Serikos*, which many of its contemporary readers would have connected with the ethnonym *Seres*, it identifies a city called Thina as a hub for the overland transport of silk to India, providing the earliest Greek occurrence of the toponym from which the modern term 'China' derives.

Thina is a Greek rendering of the ancient Indian *cīna*, which appears in the *Arthaśāstra* as a choronym denoting the origin of certain types of leather and textiles: the *cīnasī* (Chinese leather) mentioned at *Arth.* 2.11.88–90 should correspond to the Σιρικὰ δέρματα of *PME* 39, whereas the *cīna-paṭṭāḥ* (Chinese textiles) of Arth. 2.11.114 are the ὀθόνια Σηρικά of *PME* 56.[7] The Chinese provenance of the *cīna-paṭṭāḥ* is assured by the specification that they are *cīna-bhūmi-jā* ("made in the land of China").[8] Whatever the origin of Greek *Serikos* and ancient Indian *cīna*,[9] the dissonance between a material called *Serikon* and a place (country or city) of production called *cīna/Thina* is remarkable. By the middle of the 1st

4 The expression τὰ ἀπεστραμμένα μέρη τοῦ Πόντου καὶ τῆς Κασπίας θαλάσσης identifies the northernmost parts of the Black and Caspian Seas. Conversely, at *PME* 18: τὰ ἀπεστραμμένα μέρη τῆς Αἰθιοπίας καὶ Λιβύης καὶ Ἀφρικῆς, are the southernmost parts of the African continent, along the meridians of East (Αἰθιοπία), Central (Λιβύη) and West (Ἀφρική) Africa. Different interpretations in Giangrande (1981) 47–49; Casson (1987) 142–143, 241; Belfiore (2013).

5 Of the three forms of silk, only silk textile is available in all the three major trade centres of the West coast of India. Silk yarn is available only at Barbarikon and silk floss is nowhere available (*PME* 39,; 49,; 56).

6 *PME* 64 fails to mention Barbarikon as a terminal of a land Silk Road, although silk textile and silk yarn were there available for export: *PME* 39. Moreover, no mention is made of a Silk Road's leg from Bactria to Euphrates or of a sea-route from Thina to India.

7 Cfr. *PME* 39, 49, 64.

8 *Arth.* 2.11.114.

9 The etymology of *cīna* is often connected with the Qin dynasty: e.g. Trautmann (1971) 5, whereas Σήρ (< Σηρικός) is sometimes claimed to be ultimately a loanword from Chinese: e.g. Frisk (1954–1972) 2, 697; Hyllested (2016). The question cannot be properly dealt with here.

century AD, the use of *Serikos* to identify silk was too deeply rooted in the Greek lexicon for the author of the *Periplus* to use another term for silk. Conversely, silk-producing *Seres* were unknown to Indian culture, which used the choronym *cīna* to distinguish the most typical Chinese goods.

The dichotomy between the Greek *Serika othonia* and the Indian *cīna-paṭṭāḥ* arises from the coexistence of two Silk Roads mentioned in the *Periplus*. An important detail from Zhang Qian's famous embassy report makes it clear that the two land Silk Roads from China to India did not develop simultaneously. Sent by the emperor to forge alliances against the Hsiung-nu, the eminent Chinese diplomat and explorer found himself in Bactria, where he was surprised to find *hu*, a kind of crepe silk,[10] from the Chinese region of Shu and bamboo sticks from the Chinese region of Qiong. When he asked about these goods, the locals told him that they came from the markets south-east of Yuandu (India), which were frequented by Shu merchants.[11]

This detail is revealing. Apparently, during Zhang Qian's time, Chinese silk reached Bactria only via the Gangetic plain, as the Silk Road through the Taklamakan desert and Bactria had not yet been established. Consequently, if Roman poets of the mid-1st century BC associated silk with the *Seres* — a nation placed beyond Bactria in Central Asia by Apollodorus of Artemita — it is because the Taklamakan desert Silk Roads had opened in the meantime. The designation of silk textiles as *cīna-paṭṭāḥ* is thus linked to the 'Gangetic' Silk Road and predates Zhang Qian's time. Conversely, the association of silk with the Seres relates to the Taklamakan Silk Roads, which emerged between Zhang Qian's expedition and the verses of Horace and Vergil.

3 Ptolemy

The *Periplus Maris Erythraei* is the only surviving example of a literary genre that flourished in the 1st and 2nd centuries AD but has since been lost to us.[12] Nevertheless, Ptolemy's Geography preserves significant remnants of what was once a remarkable literary achievement. In particular, Ptolemy refers to the ac-

10 *Han-Shu·Kuai Wu & Jiang Xifu's Biographies* (1960), vol. 45, 2176: 纱縠,纺丝而织之也.轻者为纱,绉者为縠, *sha* (纱) and *hu* (縠) are woven from spun silk (丝). The lighter one is called *sha*, and the crinkled one is called *hu*.

11 *Shi-Ji,·Southwest Barbarians*, vol. 116 (1997), 2995; *Shi-Ji,·Memoir of Da Yuan* (1997), vol. 123 3166.

12 De Romanis (2016).

counts of people who "sailed to India and visited the places over a long period of time, as well as those who came to us from there (sc. India)".[13] Among the information provided by these sources was a glimpse of the land and metropolis of the Seres, which they claimed lay to the north of the Sinai.[14] Two routes branched out from the land of the Seres: one led to Bactria via the Lithinos Pyrgos, and the other to India via Palimbothra.[15]

There is little doubt that these two routes correspond to the two Silk Roads mentioned in the Periplus. The route ἐπὶ τὴν Βακτριανὴν – διὰ τοῦ Λιθίνου Πύργου corresponds to the Silk Road διὰ Βάκτρων in the *Periplus*, while the route διὰ Παλιμβόθρων corresponds to the *Periplus'* Silk Road διὰ τοῦ Γάγγου ποταμοῦ. However, the fact that Ptolemy's sources indicate that these routes did not originate in Thina, but in the land of the Seres to the north of the land of the Sinai, reveals a markedly different conception of the Far East from that of the author of the *Periplus*.

The concept of a land of the Seres was disregarded, if not outright rejected, by the author of the *Periplus*. It was revived by an expedition commissioned by Maes Titianus, a merchant hailing from a lineage of traders and author of a measurement (*anametresis*) of Asia.[16] Titianus calculated the distance between Hierapolis and Lithinos Pyrgos to be 26,280 stades,[17] whereas his envoys estimated that the journey from Lithinos Pyrgos to the land of the Seres would take seven months.[18]

Titianus' distances were used by Marinus of Tyre who, in his cartographic work, aligned the leg from Hierapolis to Hekatompylos along the Rhodes parallel, and the leg from Lithinos Pyrgos to the land of the Seres along the Hellespontus and Byzantion parallels.[19] Even within Marinus' 225-degree-long *oikumene*,[20] the

13 Ptol. *Geogr*. 1.17.4 παρά τε τῶν ἐντεῦθεν εἰσπλευσάντων καὶ χρόνον πλεῖστον ἐπελθόντων τοὺς τόπους, καὶ παρὰ τῶν ἐκεῖθεν ἀφικομένων πρὸς ἡμᾶς.

14 Ptol. *Geogr*. 1.17.5 παρ' ὧν καὶ τά τε ἄλλα τὰ περὶ τὴν Ἰνδικὴν μερικώτερον καὶ κατὰ τὰς ἐπαρχίας ἐμάθομεν [. . .] καὶ ὅτι ὑπέρκειται τῶν Σινῶν ἥ τε τῶν Σηρῶν χώρα καὶ ἡ μητρόπολις.

15 Ptol. *Geogr*. 1.17.5 καὶ ὅτι οὐ μόνον ἐπὶ τὴν Βακτριανὴν ἐντεῦθέν ἐστιν ὁδὸς διὰ τοῦ Λιθίνου Πύργου, ἀλλὰ καὶ ἐπὶ τὴν Ἰνδικὴν διὰ Παλιμβόθρων.

16 Ptol. *Geogr*. 1.11.7 = *BNJ* 2213 T 1. On Maes Titianos, see Dan (2013); Heil/Schulz (2015) [non vidi]; Schulz (2022) 428–430.

17 Ptol. *Geogr*. 1.11.4= *BNJ* 2213 F 1.

18 Ptol. *Geogr*. 1.11.4, 8; 1.12.1.

19 Ptol. *Geogr*. 1.12.5 = *BNJ* 2114 F 11. Ptolemy criticizes Marinus for assuming that Lithinos Pyrgos and Sera metropolis were on the same parallel of Byzantion (Ptol. *Geogr*. 1.11.4, 6, 1. 12.1 = *BNJ* 2114 F 9–10). Ptolemy's latitudes for the three places are 43° N, 38° 35' N, and 43° 5' N (Ptol. *Geogr*. 6.13.2, 6.16.8?; 3.11.5; cf. 1.12.1), respectively. On Marinus, see now Shcheglov (2018).

20 Ptol. *Geogr*. 1.11.1= *BNJ* 2114 F 9.

Silk Road from Hierapolis to the land of the Seres stood out. The segment from Hierapolis to Hekatompylos extended for over 65° in longitude, while that from Lithinos Pyrgos to the metropolis of the Seres (measured at 36,200 stades) would have covered almost 99°.[21] This route covered more than two-thirds of the longitudinal extent of the inhabited land as estimated by Marinus.

Ptolemy could not accommodate that extension in an *oikumene* that stretched, in his opinion, for only 180°.[22] The lengths estimated by Marinus had to be reduced. The distance between Hierapolis and Lithinos Pyrgos was brought from 26,280 to 24,000 stades, and that from Lithinos Pyrgos to the metropolis of the Seres was halved, from 36,200 to 18,100 stades.[23] While Marinus' Silk Road was projected to extend for almost 165° in longitude, Ptolemy's calculated longitudinal distance from the Euphrates to the metropolis of the Seres along the Rhodes parallel (36° N) was only 105° 15'.[24] It is worth noting that the difference between Marinus' and Ptolemy's estimates depends largely on Ptolemy's reduction of the distance between Lithinos Pyrgos and the metropolis of the Seres.

Ptolemy's map reflects advances in knowledge of the geography of Southeast Asia following the expansion of Roman maritime trade in the Bengal Bay and beyond.[25] Chryse, now recognised as a peninsula, ceased to be "the furthest extremity towards the east of the inhabited world". A new world revealed itself further east. At 178° E and 8° 30' S, Ptolemy located Kattigara, referred to as a "roadstead of Sinai",[26] while at 180° E and 13' N he placed the Sinai metropolis.[27] Like *Periplus*' Thina, the name of Sinai is linked to ancient Indian *cīna*.[28]

In Ptolemy's time, and perhaps even earlier in Marino's, geographical speculation contained pieces of information that seemed difficult to reconcile into a co-

21 If a degree of longitude is 500 stades at the equator, at 43° N is cos 43 = 365,67 stades; therefore, 36,200 stades correspond to almost 99°.

22 Ptol. *Geogr*. 1.11.1.

23 Ptol. *Geogr*. 1.12.1.

24 Ptol. *Geogr*. 1.12.10.

25 Ptol. *Geogr*. 7.1–4. For the voyage from Chryse to Kattigara of a certain Alexander, see Ptol. *Geogr*. 1.14.1. The embassy from Daqin that reached the Han court in AD 166 and the merchant Ch'in Lun who visited the Wu state in AD 226 arrived from Rinan (Central Vietnam) and Jiaozhi (Northern Vietnam), respectively: Leslie and Gardiner (1996) 153–159. Pausanias' excursus on silk (Paus. 6.26.6–10, on which recently Sánchez Hernández (2016)) relies on accounts of Roman traders active in the Bengal Bay and the South China Sea.

26 Ptol. *Geogr*. 7.3.3.

27 Ptol. *Geogr*. 7.3.6. At 1.17.5 = *BNJ* 2114 F 34, Ptolemy criticizes Marinus for aligning along the same meridian Sera metropolis, Sinai metropolis and Kattigara. His longitudes for the three locations are 178° 15', 180°, 178°, respectively: Ptol. *Geogr*. 6.16.8, 7.3.6, 7.3.3.

28 Herrmann (1927); Herrmann (1936). In addition, it should be noted that many manuscripts at 7.5.13 and the Ω *recensio* at 8.27.12 read Θῖναι vel Θεῖναι instead of Σῖναι.

herent picture. What was to be made of the coexistence of a silk-producing nation called Seres and a land of silk called *cīna*/Thina/Sinai? And what of a space extending in latitude from the extreme north, where the Periplus located Thina, to 8° 30' south of the equator, where Ptolemy would position Kattigara? Even prior to Marinus, this immense latitudinal distance led to the postulation of a distinction between a northern land of the Seres and a southern land of the Sinai. Ptolemy accepted this distinction and set the borders at 35° N, with the land of the Seres extending to 63° N, the same parallel as Thule, while southwards, the land of the Sinai included Kattigara at 8° 30' S.[29]

4 Ammianus Marcellinus

It has long been recognised that Ammianus Marcellinus' geographical excursus on Persia and Central Asia (23.6.14–73) is largely dependent on Ptolemy's *Geography*.[30] But to what extent can Ammianus' information on the Seres and the Silk Road be reduced to Ptolemy's text?

At 23.6.60, Ammianus Marcellinus mentions Lithinos Pyrgos and the very long road by which the merchants reach the Seres:

> *cui [sc. Sacarum nationi] Ascanimia mons inminet et Comedus. praeter quorum radices et vicum, quem Lithinon pyrgon appellant, iter longissimum patet mercatoribus pervium ad Seras subinde commeantibus.*
>
> They [*sc.* the Sacae] are overhung by the mountains Ascanimia and Comedus, beyond the foothills of which and beyond a village, which they call Lithinos Pyrgos, a very long road extends, which is convenient for the traders who repeatedly journey to the Seres.

Lithinos Pyrgos is mentioned several times in Ptolemy's *Geography*. In the first book, after Marinus, it is referred to as a landmark along the road from the Euphrates to the Seres.[31] In the sixth book, its location is pinpointed as 135° E 43 N°.[32] At the same latitude, but no less than five degrees east, there was the nameless

29 The *thesis* of Serike in Ptol. *Geogr.* 6.16.1; that of the Sinai in Ptol. *Geogr.* 7.3.1; the latitude of Thule in Ptol. *Geogr.* 1.7.1, 20.7–8, 23.22, 24, 2.3.32, 3.5.3, 6.16.1; 7.5.12; 16; 6.8; that of Kattigara in Ptol. *Geogr.* 1.17.5.

30 Schmidt (1999) 19–40.

31 Ptol. *Geogr.* 1.11, 12, 17. Cf. *BNJ* 2114 F 9, 10, 11.

32 Ptol. *Geogr.* 6.13.2: ὁ καλούμενος Λίθινος Πύργος ἐπέχει μοίρας ρλε° μγ°.

'starting point of those who go to Sera to trade'.[33] Since Ptolemy refrains from specifying what kind of settlement Lithinos Pyrgos was, Ammianus' characterization of it as a *vicus* must come from another source. On the other hand, Ptolemy's longitudinal distance between Lithinos Pyrgos and the starting point of the road to the Seres helps to understand Ammianus' text,[34] where the preposition *praeter* clearly intends to distance Lithinos Pyrgos, west of the mountains Ascanimia and Comoedus, from the place, east of them, where *iter [. . .] patet [. . .] pervium*.[35]

A few lines below, at 23.6.64, Ammianus defines the boundaries of the Seres:

> *ultra haec utriusque Scythiae loca contra orientalem plagam in orbis speciem consertae celsorum aggerum summitates ambiunt Seras ubertate regionum et amplitudine circumspectos, ab occidentali latere Scythis adnexos, a septentrione et orientali nivosae* solitudini cohaerentes, qua meridiem spectant ad usque Indiam porrectos et Gangen. appellantur autem ibidem montes Anniba et Nazavicium et Asmira et Emodus et Opurocorra.*
>
> *uosae **VA** uastae **E** niuosae **G** ignotae *Mommsen* (cf. Ptol. *Geogr.* 6.16.1)
>
> Beyond these lands of both Scythias, towards the east, the summits of lofty mountain chains form a circle and enclose the Seres, remarkable for the richness and extent of their country. On the west they are bounded by the Scythians, and on the north and the east they extend to a snowclad waste; on the south they reach India and the Ganges. There are mountains there, called Anniba, Nazavicium, Asmira, Emodus and Opurocorra. (transl. by J.C. Rolfe, with modifications)

Comparison with Ptolemy's *Geography* (6.16.1–2) led Mommsen to emphasise the agreement regarding the western border of the Seres and the names of the mountains surrounding *Serike*.[36] Conversely, Polaschek pointed out the absence of the Sinai beyond the southern borders.[37] Another detail allows us to further clarify the degree of Ammianus' dependence on Ptolemy. According to Mommsen, the erroneous reading *uosae* in the Fulda manuscript, replaced by *nivosae* in Gelen's

33 Ptol. *Geogr.* 6.13.1: Ἰμάον ὄρος ὁρμητηρίου τῶν εἰς τὴν Σήραν ἐμπορευομένων, ὃ ἐπέχει μοίρας ρμ° μγ°; cf. 6.14.1; 6.15.3.

34 *Contra* Schmidt (1999) 33.

35 The translations of Rolfe (1940) 383, Fontaine (1977a) 115 and Seyfarth (1978^2) 103 — "along the base of which and through a village, which they call Lithinos Pyrgos", "A leurs pieds, et près de l'agglomération appelée La-Tour-de-Pierre" and "An ihrem Fuß entlang und durch ein Dorf namens Steinerner Turm", respectively — are not accurate. Better Selem (1973^2) 635: "Oltre le falde di quei monti ed al di là di un villaggio che chiamano Lithinos Pyrgos".

36 Mommsen (1881) 615. The hypothesis by Herrmann (1938) 35 that the *consertae celsorum aggerum summitates* refer to the Great Wall is rightly rejected by Den Boeft *et al.* (2012) 201–202.

37 Polascheck (1965) 770.

edition and by *vastae* in **E**, should be corrected to *ignotae*, bringing it closer to Ptolemy's ἀπὸ δὲ ἄρκτων ἀγνώστῳ γῇ.[38]

There are three arguments against adopting Mommsen's emendation. First, *nivosae* is much closer to the reading of the Fulda manuscript than Mommsen's *ignotae.* Secondly, it cannot be ruled out that Gelen read *nivosae* in the Hersfeld manuscript. Finally, even if *nivosae* was only a conjecture by Gelen, it is supported by the "very big frost" that makes inaccessible the regions beyond Thina as described by the *Periplus*[39] and by the snowy coastline of the northeastern Ocean described by Mela, Pliny, Solinus and Ammianus himself.[40]

Of course, Ammianus' *nivosa solitudo* and *glacialis Oceanus* do not necessarily imply a direct derivation from the *Periplus*, Mela, Pliny or Solinus. Much like the silent trade that characterises Ammianus' description of the Seres,[41] this detail may have come from one or more authors lost to us.

5 Cosmas Indicopleustes

While Ammianus' description still follows the Ptolemaic tradition, Cosmas Indicopleustes' account of the Silk Land draws on very different sources. In particular, Cosmas mentions neither Seres nor, strictly speaking, Sinai. Instead, he refers to the silk land as Tzinista, a choronym that resonates with the Sogdian *cynstn* of the second Sogdian Ancient Letter and the Syriac *cynst'n* in the Xi'an stele.[42] Cosmas' Tzinista covers the entire easternmost part of the world and exports silk both overland (to Persia) and by sea (to Taprobane).[43]

38 Mommsen (1881) 615 n. 1; endorsed by Fontaine (1977a) 116; *contra* Den Boeft *et al.* (2012) 202.

39 *PME* 66 διά τε ὑπερβολὰς χειμώνων καὶ πάγους μεγίστου δυσβάτων τε τόπων. It should be pointed out that in 1533 Gelen edited both the *Periplus* and Ammianus Marcellinus.

40 Mela 3.59 *ab his in Eoum mare cursus inflectitur, inque oram terrae spectantis orientem. pertinet haec a Scythico promunturio ad Colida primum ob nives invia, deinde ob inmanitatem habitantium inculta. Scythae sunt Androphagoe et Sacae, distincti regione, quia feris scatet, inhabitabili*. Plin. *Nat*. 6.53 *a Caspio mari Scythicoque oceano in E<o>um cursus inflectitur, ad orientem conversa litorum fronte. inhabitabilis eius prima pars a Scythico promunturio ob nives; proxima inculta saevitia gentium*; Solinus 50 *qua ab Scythico oceano et mari Caspio in oceanum eoum cursus inflectitur, ab exordio huiusce plagae profundae nives*; Amm. 31.2.1 *Hunorum gens monumentis veteribus leviter nota, ultra paludes Maeoticas glacialem Oceanum accolens etc.*

41 Amm. 23.6.67–68.

42 Sogdian Ancient Letter 2.18, 30: Sims-Williams (2001) 268–270; Eccles/Lieu (2016), Syriac text l. 1. (cf. also *cÿny'* at l. 13).

43 Cosm. Indic. 2.45–46; 11.15–16.

While information about the sea routes came from Indian Ocean traders, evidence for the overland Silk Road came from the reports of traders between Syria and Persia. Their accounts allow Cosmas to make his own estimate of the length of the inhabited world:

> ἀπὸ τῆς οὖν Τζίνιστα ὡς ἀπὸ σπαρτίου ὀρθῶς ἐπὶ τὴν δύσιν τις μετρῶν τὰ διαστήματα τοῦ μήκους τῆς γῆς εὑρήσει πλέον ἔλαττον μονῶν υ′ ἀπὸ μιλίων λ′. μετρητέον δὲ οὕτως· ἀπὸ τῆς Τζίνιστα ἕως τῆς ἀρχῆς τῆς Περσίδος πᾶσα ἡ Οὔννια καὶ Ἰνδία καὶ ἡ Βάκτρων χώρα εἰσὶ περί που μοναὶ ρν′, εἰ μή τι πλείους, οὐκ ἔλαττον· καὶ πᾶσα ἡ Περσῶν χώρα μοναὶ π′· καὶ ἀπὸ τοῦ Νίσιβι εἰς Σελεύκειαν μοναὶ ιγ′· καὶ ἀπὸ Σελευκείας εἰς Ῥώμην καὶ Γάλλους καὶ Ἰβηρίαν, τοὺς νῦν λεγομένους Ἱσπανούς, ἕως Γαδείρων ἔξω εἰς τὸν Ὠκεανόν, μοναὶ ρν′ καὶ πλέον, ὡς γίνεσθαι τὸ πᾶν μοναὶ υ′ πλέον ἔλαττον.[44]
>
> If one measures in a straight cord line the stages which make up the length of the earth from Tzinitza to the west, he will find that there are somewhere about four hundred stages (μοναί), each thirty miles in length. The measurement is to be made in this way: from Tzinitza to the borders of Persia, between which are included all Unnia, India and the country of the Bactrians, there are no less than one hundred and fifty stages, if not a little bit more; the whole country of the Persians has eighty stations; and from Nisibis to Seleucia there are thirteen stages; and from Seleucia to Rome and the Gauls and Iberia, whose inhabitants are now called Spaniards, onward to Gadeira, which lies out towards the ocean, there are more than one hundred and fifty stages; thus making altogether the number of stages to be four hundred, more or less. (transl. by J.C. McCrindle)

The total distance from Tzinista to Cadiz results from four addends of unequal reliability. The shortest and most accurately measured segment, the thirteen μοναί from Nisibis to Seleucia, was undoubtedly the best known to the sources of Cosmas. Reliable informants also provided the estimate of the length of Persia in eighty μοναί. By contrast, the distances from Tzinista to Persia and from Seleucia to Cadiz are both approximations, though of different kinds. In particular, while the latter is given in "more or less" (πλέον ἔλαττον) one hundred and fifty μοναί, the former is estimated in no less than one hundred and fifty μοναί if not a little bit more (εἰ μή τι πλείους, οὐκ ἔλαττον). The nuance may seem small, but it has significant implications.

The unit used by Cosmas — μονή, equated to thirty miles — corresponds to a caravan's day's journey, and the "no less, if not a little bit more" than one hundred and fifty μοναί from Tzinista to Persia represent actual days of travel.[45] On the other hand, the "more or less" one hundred and fifty μοναί between Seleucia

44 Cosm. Indic. 2.47.

45 Cosmas' μοναί correspond to Pliny's *mansiones* (Plin. *Nat*. 6.102, 12.52, 64–65) and the *marḥala* of the Arab geographers: Bosworth *et al.* (1991).

and Cadiz is only a theoretical abstraction, since no caravan road directly connected these two places.

When considering the measurement in terms of μοναί, Cosmas' estimate of the distance between Tzinista and Persia may at first seem inconsistent with the seven-month journey claimed by Titianus' envoys. However, if the one hundred and fifty μοναί are translated, as Cosmas prescribes, into 4,500 miles, this length appears as an endorsement of the 36,200 stades (equivalent to 4,525 miles) deduced by Marinus as the distance between Lithinos Pyrgos and the metropolis of the Seres, and as a rejection of Ptolemy's correction into 18,100 stades (or 2,262.5 miles).

The reason why an average day's travel was translated into only 21.5 miles by Marinus and into 30 miles by Cosmas remains open to speculation. One possible explanation, however, is that the former took into account the days of rest at each stage, whereas the latter only considered the distance covered in a day's march.[46]

6 Brahmans

While discussing the sea and land routes linking Tzinista to the West, Cosmas refers to a cosmographic theory attributed to "the Indian philosophers called Brahmans":

> καί φασιν οἱ Ἰνδοί, οἱ φιλόσοφοι, οἱ καλούμενοι Βραχμάνες, ὅτι ἐὰν βάλῃς ἀπὸ Τζίνιστα σπαρτίον διελθεῖν διὰ Περσίδος ἕως Ῥωμανίας ὡς ἀπὸ κανόνος τὸ μεσαίτατον τοῦ κόσμου ἐστί, καὶ τάχα ἀληθεύουσιν.[47]
>
> The Indian philosophers called Brahmans say that if you stretched a rope from Tzinista through Persis up to Romania, it would turn out to be the very centre of the world, as if it had been measured with a ruler, and perhaps they are telling the truth.

How would a rope from Tzinista through Persia to Romania mark the centre of the world? Here, as elsewhere in the Christian Topography, the word *kosmos* clearly stands for the inhabited land and its four navigable gulfs — the Mediterranean, the Arabian, the Persian and the Caspian. The inaccessible ocean and the land of paradise beyond it are excluded.

46 For a caravan road broken into stopping places, cfr. Plin. *Nat*. 12.64, where the 65 *mansiones* are on average 300 stades from each other.

47 Cosm. Indic. 2.45.

If the rope followed the straight line drawn at 2.47 from Tzinista to Seleucia (ὡς ἀπὸ σπαρτίου ὀρθῶς ἐπὶ τὴν δύσιν), such a statement would hardly be consistent with Cosmas' measurement of the width of the world or his theory of *klimata*.[48] Moreover, I am not aware of any ancient Indian document that refers to a straight line connecting China, Persia and Romania as representing the very center of the world. For example, Āryabhaṭa, an Indian astronomer roughly contemporary with Cosmas, is familiar with concepts such as *sthala-madhya* (the center of the land) and *sthala-jala-madhya* (the center of the land and water), but they do not refer to a straight line running from China to Rome:

> *svarmerū sthalamadhye narakas baḍavāmukham ca jalamadhye/*
> *amaramarās manyante parasparam adhassthitās niyatam//*
> *udayo yo laṅkāyāṃ so 'stamayah savitureva siddhapure/*
> *madhyāhno yamakoṭyāṃ romakaviṣaye 'rdharātraḥ syāt.//*
> *sthalajalamadhyāllaṅkā bhūkakṣyāyā bhaveccaturbhāge/*
> *ujjayinī laṅkāyāḥ taccaturaṃśe samottaratas.//*[49]
>
> Heaven and Meru are at the centre of the earth. Hell and Baḍavāmukha are at the centre of the water. Gods and demons always consider each other to be subordinate. The sunrise in Laṅkā is the sunset in Siddhapura, noon in Yamakoṭi and midnight in Romakaviṣaya. Laṅkā is at the centre of the earth and water, at a quarter of the earth's meridian; and exactly north of Laṅkā, at a quarter of that distance, is Ujjayinī.

Sthala-madhya identifies Mount Meru, which, located at the North Pole, was considered the centre of a northern hemisphere of land. Conversely, *jala-madhya*, at the South Pole, was the centre of southern hemisphere of water. *Sthala-jala-madhya* characterises the island of Laṅkā, which lies on the equator, between a northern hemisphere of land and a southern hemisphere of water, as well as 90° east of *Romakaviṣaya* (the Roman Kingdom).

One way of explaining the Brahmans' statement that there is a straight line from Tzinista to Romania is to assume that Cosmas' Brahmans were working from the same cosmography outlined by Āryabhaṭa but with a different point of view. Imagining the terrestrial globe with a northern hemisphere of land and a southern hemisphere of water, they may have identified the very centre of the world with the mean latitude of the landmass — exactly halfway between the

48 Cosmas places his central latitude either directly over Alexandria (Cosm. Indic. 2.48) or over a place situated between Alexandria and Syene (Cosm. Indic. 6.12). Remarkably, Cosmas not only mentioned a theory that contradicted his own views, but also admitted, albeit hesitantly, that it might be correct.

49 Āryabhaṭa, *Āryabhaṭīya* 4.12–14; the same picture in *Sūryasiddhānta* 12.35–41; the same longitudinal distances in Varāha Mihira, *Pañcasiddhāntikā* 15.23. See Kirfel (1920) 28* 174; Gombrich (1975) 119; Schwartzberg (1992) 352.

North Pole and the equator. In essence, while Āryabhaṭa's centralities are astronomical and relate to the entire globe, Cosmas' Brahmans' centrality was based on geography, and considered only the northern hemisphere of land. As a consequence, Āryabhaṭa associated the central point with either the poles or the equator, whereas Cosmas' Brahmans pinpointed their centre of the world at 45° Lat N.

The idea of a straight rope stretching from Tzinista to Persis and Romania was obviously suggested by the overland Silk Road, the eastern leg of which, from Lithinos Pyrgos to the Seres, was placed by Marinus of Tyre at 43° Lat N, just two degrees from the mid-latitude between the North Pole and the equator.

Like Āryabhaṭa's 90° longitude between Laṅkā and *Romakaviṣaya*, so too the claim of Cosmas' Brahmans was somehow based on data elaborated by Western mathematical geography.[50] Based on the mixture of Indian cosmographic theories and Western geographic data, the Brahmans' statement is a precious relic of Indian cosmographic speculation. The fact that this concept found its way into Cosmas' text is further evidence of the exchange of ideas along the Silk Roads in Late Antiquity.

50 The longitudes of Rome and Taprobane's northern promontory are 36° 40' and 126°, respectively: Ptol. *Geogr*. 3.1.61 and 7.4.2. See further De Romanis (2024).