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Networks in the Roman Near East and Beyond

edited by Håkon Fiane Teigen and Eivind Heldaas Seland

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Front cover: Antiochus I of Commagene shaking hands with Heracles, Arsameia on the Nymphaios, Turkey, 1st century BCE. Photo: Jørgen Christian Meyer Back cover: Loculus relief depicting mother and daughter. Ny Carlsberg Glyptotek, Copenhagen I.N.

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# 10. Palmyrene merchant networks and economic integration in competitive markets

Katia Schörle\*

Abstract: This paper proposes the use of economic thinking to understand the motivations and reasons behind the development of the extensive commercial networks of Palmyra. As opposed to macro-economics, micro-economics refers to the study of economic behaviours of individual units; here two different forms of merging will be studied while examining the patterns of Palmyrene merchant activities: vertical and horizontal integration. For this purpose, the paper will review parts of the corpus of epigraphic evidence available in order to explain economic advantages and strategies behind the creation or use of social networks.

Keywords: Palmyra; Roman East; Roman economy; economic integration; social networks;

merchant networks

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#### Introduction

There has been a long-standing academic interest in the economy of the Roman world, often with different methodologies and approaches used in order to examine its nature. While the dichotomy of primitivist/modernist approaches has long fuelled discussions, scholars have begun to distance themselves from both models and argued that we need to find different approaches such as institutional economics, or network analysis, but that we also need to nuance our discourse.<sup>2</sup> There is no doubt, however, that modern methodologies remain useful in that they form a proposition from which to examine aspects of ancient societies, even if we only use data with caution, and acknowledge that the data will always be fragmentary and often insufficient. The sorts of viable conclusions we can make depend on both caution and clear-sightedness on the limitations of the dataset. Overall, when looking at the trends in an economy, each approach has generally focused on the large scale, or aggregate economy, which is often referred to as macro-economics.<sup>3</sup> The focus has thus been on the total sum of economic activities in the Roman world, growth and performance, structure, and the decision-making processes on a very wide level, whether empire-wide, regional, or what is now sometimes called 'global economies.' In this paper, I would like to consider a different approach to economics by taking a bottom-up approach focusing on individuals. As opposed to macro-economics, micro-economics refers to the study of the economic behaviour of individual 148 Katia Schörle

units within the economy. These can be a person, a household, a firm or an industry. The main approach is therefore to look at patterns on a very small-scale basis to assess the individual impact of particular actions, decisions or collaborations, for example, and is entirely feasible for certain sets of data concerning the period in question – the Roman imperial period.

#### Integration and ancient economies

Micro-economics is the study of factors that affect individual economic choices, as well as the effect of changes in the factors on individual decision making. Individual connections and networks are therefore considered to be important in the assessments of the wider economic activities of an individual or individual unit. One aspect of micro-economics that has recently been employed in the study of the ancient world and in the interpretation of the epigraphic corpus is that of integration, which looks at ways in which the industry or individual units within the industry merge.

In 2009 Morris Silver proposed that despite the difficulties and gaps in the historical and archaeological data it was in some cases possible to identify the way people chose to concentrate parts or sectors of commercial activities into the hands of a person or group of people, according to a principle which in modern economic terms is coined vertical integration.<sup>4</sup> Essentially, vertical integration defines mergers of different activities within a commercial supply chain or the taking over of different phases of the process of bringing goods from the point of origin (initial production or manufacture) to the selling point. Vertical integration can be described as backward or forward integration depending on whether a person or a group (as in the case of the Palmyrenes) acquires an additional activity closer to the source (backward integration) or the selling point (forward integration). Following from Silver's observations, Broekart pointed out that vertical integration could indeed be identified in the major sectors of trade in the ancient world, namely grain, wine, meat and cattle, olive-oil and fish and fish-sauces. He therefore argued that the processes of integration could be found more easily than expected, and that integration was not an uncommon process in the Roman world.<sup>5</sup> For example, G. Terentius Varro, who became notorious as a consul in Asia Minor and was involved in several networks, was, according to one tradition recorded by Livy, of humble origins. His father was supposedly a butcher who employed his son to engage in commercial transactions as well. 6 In this example, by integrating the retail industry through forward integration, the Varros could invest efforts into a different activity within their line of business and integrate/control several parts of the meat sector.

Theoretically, integration can also be multiple and multidirectional, so backward and/or forward or integrating several steps backward or forward is entirely possible within any type of commercial activity, just as it is possible to control all the chains of production and transport from origin until the final sale. While vertical integration describes the taking over of stages of the process of bringing goods from the point of origin to the selling point, another type of merger is also commonly discussed in modern economics, but has so far not yet been discussed with regard to the ancient world, namely horizontal integration. Horizontal integration also concerns the acquisition of a new branch of activity but in a different way: by definition, horizontal integration describes the process of acquisition of additional business activities that are at the same level of the value chain in similar or different industries. The key point here is that the activity is at a similar level of the supply chain, while in vertical integration different levels of the value chain are integrated.

In terms of examples, a fuller or a group of persons acquiring different fulleries within the same town, or deciding to acquire fulleries in different cities, would thus engage in horizontal integration.

#### Identifying the Palmyrenes' commercial activities: networks and commercial practice

I will now focus on identifying these economic strategies within a well-known group of merchants from the eastern part of the Roman Empire, from the city of Palmyra. Indeed, in the case of the East and commerce to the Euphrates, there is no doubt that the Palmyrenes occupied a central role in the organisation of the transport of goods to and from the Persian Gulf from the first through to the third century AD.<sup>7</sup> Despite the fact that the exact nature of the wares transported still escape us, we are particularly well informed by the Palmyrene merchant inscriptions.

In total, some thirty-five merchant dedications dated between AD 19 and AD 260 have been identified throughout Palmyra. Most of the dedications mention individuals who assisted caravans returning from the Euphrates and the Persian Gulf and are the most important pieces of evidence for long-distance trade via Palmyra. Very formulaic in style, a few thank the leader of the caravan successfully returning from one of these cities. The name of the *synodiarchês*, the caravan leader, is sometimes given and he is being thanked by a group of merchants, whose names or number is never given. These dedications, all but one found in Palmyra, provide enough details to reconstruct a network through the group of people engaged in trade (generally referred to as 'the merchants') and the locations. These are tied by links formed by the known journeys of these merchants, and an organisation which clearly always has Palmyra as its centre: we can speak of a network.

In the case of Palmyra, the epigraphic inscriptions make it very clear that transport and travels were organised by the merchants as a community whose clear intent is to engage in business as a group while abroad. While the earliest inscriptions mention travels to Seleucia (most likely Seleucia Ctesiphon) and Babylon, the majority of inscriptions in Palmyra mention Spasinu Charax or Vologesias, cities much further south on the Euphrates or near the river's mouth by the Persian Gulf. Palmyrene activities were therefore first focused on trading and transporting goods with the cities and market centres closest to Palmyra before reaching more attractive centres further south or on the Persian Gulf. The city of Palmyra thus engaged in both overland and in all likelihood fluvial transport. A third-century AD inscription mentions *askonautopoioi*, men belonging to the association of Palmyrene raft-makers, but carrying goods by rafts made with skins was a practice used earlier on, and is in fact already attested as an Assyrian practice. 12

At some stage, in order to increase their economic advantage, and presumably increase their margin of profit, Palmyrenes begun to expand their activities and absorb new sectors or parts of the transport industry – so to speak in economic terms, to develop through vertical integration. Land transport, via the Syrian Desert, became associated with more extensive fluvial transport. These activities were organised within the caravan's expedition, as a commercial activity organised within the group.

Over time, Palmyrene merchants began to expand their trade in the Persian Gulf itself and towards the Indian Ocean rather than using intermediaries. By the second century AD, Palmyrenes could rely on the island of Bahrain as a port of call for Palmyrene vessels on their way to India. This is known from several inscriptions. The involvement in seafaring, hence in a new economic sector and activity linked to trade and transport, is known for example from an AD 157 dedication

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by a group of merchants who went to Scythia (Northern India) in the boat of Honaino, son of Haddudan. Another inscription, also from AD 157 again mentions merchants coming back from Scythia on the ship of Beelaios Kyrou, while a third has recently been reinterpreted as mentioning the land of Kushan, which would imply a maritime voyage as well, but also demonstrates the ownership of seafaring vessels by the Palmyrenes.<sup>14</sup> These inscriptions therefore clearly point to the development of activities in a very specific sector linked to mercantile activities, namely that of maritime transport, and not to merchant activities alone. The funerary relief of Julius Aurelius Marona (Tomb no. 150) of AD 236 also shows a merchant with a ship in the background, expressing the Palmyrene merchant's interest in maritime trade, or even the ownership of a sea-going vessel.<sup>15</sup>

The inscriptions and perhaps also the tomb relief attest to Palmyrene ownership of ships in the Persian Gulf, and potential direct sailing to India and the Indian Ocean. Most importantly it shows the expansion of activities linked to the transport of presumably similar types of goods in order to increase profit margins, bypass more expensive intermediaries and avoid unnecessary risk by developing a network of trust, thus reducing transaction costs. The absorption of different sectors of the transport industry for commercial wares coming from the Persian Gulf and Indian Ocean is a clear testimony of vertical integration undertaken by Palmyrene merchants dealing in Indian Ocean goods in order to reduce transaction costs and increase their profits.

Identifying and defining the merchants as a group or network is key to building the argument that we can speak of economic integration principles concerning the Palmyrenes' long-term mercantile strategy. The network built by the group has as an aim to take over stages of bringing goods from their point of origin to their point of sale in Palmyrene or Mediterranean markets. That is not to say that all networks act according to economic principles, or that a network necessarily serves in favour of economic integration; a strong network of disparate or isolated merchants could be created to counter a serious competitor controlling much of the supply chain. In the case of the Palmyrenes, the network serves to take over and gain competitive advantage in the supply chain.

#### In search of other networks

Whether a Palmyrene merchant community network existed in the Mediterranean is less clear. <sup>16</sup> Evidence of Palmyrenes in the Mediterranean exists, but finding direct mercantile ties between groups of Palmyrenes is a challenging task given the nature of the evidence. Military or individual inscriptions aside, few Palmyrene inscriptions can directly be linked to the realm of merchant activities. A Palmyrene is known, for example, on the island of Kos, from an altar with a dedication to Bel, Iarhibol and Aglibol. <sup>17</sup> Kos was an important island along the maritime trade route past Asia Minor, and Koan wine was well known and exported throughout the Mediterranean since it was much appreciated for its singular taste. It would be tempting to think of a Palmyrene being present on the island to engage in mercantile activities, but nothing links the inscription to any Palmyrene mercantile network.

A Palmyrene community also existed in the city of Rome, as is known from several altars found in the area of the temple of Sol at Porta Portese, 18 next to the Tiber river and opposite Rome's fluvial warehouses, in particular the Horrea Galbae. An altar has both a Latin and a Palmyrene dedication by Tiberius Claudius Felix, his wife and his son. The last line of the Latin dedication, *Calbienses de coh(orte) III*, possibly refers to the third *cohors* (court/warehouse) of the Horrea Galbae, Rome's major fluvial warehouse on the left bank of the Tiber, which was characterised by

three long rectangular warehouses. 19 If Tiberius Felix was a worker at the *horrea*, he could also have been engaging in mercantile activities, yet there is no direct link between his activities and either the community in Rome, or at Palmyra. In the Transtiberim district (Trastevere), almost directly across from the horrea, a further two Palmyrenes commemorated the consecration of the Temple of Bel, one of whom, C. Licinius N., may be related to a C. Licinius Flavius known from the Palmyrene agora. 20 Yet the connection between these Palmyrenes and the city of Palmyra itself is never explicitly made; whether we may identify a diaspora trading community in the Mediterranean is therefore unclear. While some Palmyrenes may have invested in carrying goods towards Rome, it is more likely that the bulk of goods were simply funnelled towards the main trading centres of the Levant and the wider Mediterranean. So far, as tempting as it would be, there is not enough evidence available to ascertain either, or to point to direct networks or links between traders, transporters or people working in warehouses and Palmyra in order to discuss the advantages of economic integration and joint ventures made with the aim to carve a niche in a competitive market at the heart of the Roman Empire. So far, the evidence suggests that Palmyrenes preferred integration along the Persian Gulf and Indian Ocean routes rather than in the Mediterranean. Their community was already well implanted and represented outside the Roman Empire, and this advantage combined with less competition from long-established mercantile networks as in the Mediterranean may have been part of the incentive to develop along commercial routes which they had already mastered in part. One exception concerning evidence of Palmyrene mercantile trade in the Roman Empire however stands out, and deserves further attention: that is the case of Egypt.

#### Horizontal integration and Palmyrene investment in Egypt

While the evidence for commercial networks with Rome or in the Mediterranean as a whole remains difficult to assess, two inscriptions from Egypt reveal that Palmyrenes were commercially involved in Egypt via the Red Sea, and also engaged in fluvial transport along the Nile.

The first inscription comes from Koptos, a strategic city on the Nile in Upper Egypt at the gates of the Eastern Desert of Egypt, which was found during excavation in 1912. In the building discovered by Reinach was an inscription dated to the mid-second century CE which reads as follows:<sup>21</sup>

]ιον Ζαβδάλα Σαλμάνου καὶ Άνείνα Άδριανῶν Παλμυρηνῶν ναυκλήρων Ἐρυθραικῶν, ἀναστήσαντα ἀπὸ θεμελίου τὸ προπύλα[ι]ον καὶ τὰς στουὰς τρεῖς καὶ τὰ θυρώ[μ]ατα ἐκ καινῆς, τὰ πάντα ἐκ τῶν ἰδίων αὐτοῦ φιλοκαγαθίας χάριν [Ά]δριανοὶ Παλμυρηνοὶ συνέμποροι τὸν φίλον. 152 Katia Schörle

Zabdalas son of Salmanos, also (called?) Aneinas, of the ship owners of the Red Sea from Hadriane Palmyra, who has set up anew from the foundations the *propylaea* and the three *stoas* and the chambers, entirely from his own funds, the merchants of Hadriane Palmyra (set this up) to their friend, for his friendship and distinction.<sup>22</sup>

This inscription reveals that Zabdalas, who belonged to a group specifically called the Palmyrene ship owners of the Red Sea, must have been sufficiently established at Koptos to dedicate the foundations of a building there, much in fact like Soades, an important Palmyrene figure in the trade to the Euphrates, who built a temple at Vologesias.<sup>23</sup> The dedication holds further important information: it specifies that it was given by 'the merchants from Hadriane Palmyra,'<sup>24</sup> which implies a direct link to the city of Palmyra, and thus that both the Palmyrene Red Sea ship owners and the Palmyrene merchants had clear common commercial interests, and worked together.

Furthermore, a second inscription strengthens the argument for a Palmyrene presence on the Nile and at the gates of the Eastern Desert of Egypt.<sup>25</sup> An inscription from Denderah dated to the second half of the second century AD, though very fragmentary, brings us perhaps further along in the argument that there was a network of Palmyrene traders working in Egypt itself:

```
[? Ἰούλ(ιον) Αὐρ(ήλιον) [Z......]

Μακκαί[ου/ον?...... οί? .......]

καὶ ἔμπο[ροι? ........]

τὸν παρα[κομίσαντα ? τήν]

συ[νοδίαν .........]

'Julius Aurelius... (son of?) Makkai (or Makkaios?) ... and the merchants ... bringing a caravan...'<sup>26</sup>
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On the left-hand side, one can still make out the Palmyrene script, while the central part of the inscription mentions the name of a Palmyrene in connection with merchants. Although there are no *naukleroi* mentioned in the inscription,<sup>27</sup> there are sufficient details, in particular the mention of *emporoi* and the formulaic nature of the inscription, to connect this inscription to the wider network of Palmyrenes since the Koptos inscription at least is clear about the presence of traders nearby. The inscription offers us an interesting detail which requires further consideration.

Both inscriptions come from very strategic locations in Egypt, namely not the maritime harbours of the Red Sea, such as Berenike or Myos Hormos, but the warehouses and points of transhipment at Koptos on the Nile, that is to say after the cargoes of goods were transported under seal from the harbours and had passed the customs at Koptos. But how do we explain a presence at Denderah which, on the other bank of the Nile, had its own navigational significance? While Koptos was obviously the connection point between the Nile and the Red Sea land route, Denderah was an important resting place after a difficult journey upstream of almost 40 km, when the navigators in the sailing season had the full power of the flood against them, and little or no northerly wind to help counter the current.<sup>28</sup> The Denderah bend was thus often a necessary stopping point in order to wait for better wind conditions to sail up the Nile. Having a Palmyrene presence there fully emulated the Palmyrene model of communities implanted in the main trading centres on the Euphrates in order to facilitate the commercial interests of the community as a whole.

The expansion into an entirely new geographic area but within the same sphere of activities as those the Palmyrenes engaged in along the Euphrates can be described as horizontal integration.

Once the Palmyrenes had successfully taken over all the transport sectors of one of the two routes linked to the commerce of Persian and Indian Ocean goods, it was much easier for them to grow by developing laterally towards the Mediterranean, namely by expanding towards the Red Sea, and then further on into Egypt.

#### Conclusion

To conclude, between the first to third centuries AD, the Palmyrenes extended their economic activities by using two different economic concepts linked to integration: both vertical and horizontal integration. The accumulation or aggregation of different parts of the links in the trade into the hands of a group – trading, taking care of land, fluvial and maritime transport, so integrating vertically, was one of the ways that the Palmyrenes were able to gain economic advantage – namely by reducing transaction costs linked to different sections of the transport industry. Although for the Mediterranean as a whole the evidence of Palmyrene networks is relatively scarce, Egypt particularly stands out. The Palmyrene data shows that Palmyrenes were both engaging in vertical integration in order to offset transport and transaction costs along the Euphrates, Persian Gulf and Indian Ocean, but that their activities of transportation and trade extended beyond their usual geographic area: the extension on a lateral level, namely horizontal integration, implied that in order to grow, the Palmyrenes extended their networks into Egypt, where the bulk of lucrative Indian Ocean goods landed before making their way into the heart of the Roman Empire.

#### Notes

- \* I would like to express my deepest gratitude to Jean Andreau who kindly agreed to read and discuss this text with me, and also to Jean-Baptiste Yon who supplied me with a reference which I could not verify in timely fashion. My warmest thanks also go out to the editors and reviewers for their useful comments. Any mistakes, of course, remain entirely my own.
- The main divide in research into ancient economies has been along the 'modernist' and 'primitivist' approaches, a debate described by Hopkins, for example, as an 'academic battleground' (K. Hopkins, "Introduction," in *Trade in the Ancient Economy*, ed. P. Garnsey, K. Hopkins, and C. R. Whittaker (London: Hogarth, 1983), ix.
- 2 For example: J. G. Manning and I. Morris, *The Ancient Economy: Evidence and Models* (Stanford, CA: Stanford University Press, 2005); W. Scheidel, I. Morris and R. P. Saller (eds.), *The Cambridge Economic History of the Greco-Roman World* (Cambridge: Cambridge University Press, 2007).
- 3 One such approach, for example, is that of the Oxford Roman Economy Project.
- 4 M. Silver, "Glimpses of Vertical Integration/Disintegration in Ancient Rome," *Ancient Society* 39 (2009), 171–184.
- 5 W. Broekart, "Vertical Integration in the Roman Economy," Ancient Society 42 (2012), 109-125.
- Livy, Ab Urbe Condita, 22.25.18–19. '[...] C. Terentius Varro, qui priore anno praetor fuerat, loco non humili solum sed etiam sordido ortus. Patrem lanium fuisse ferunt, ipsum institorem mercis, filioque hoc ipso in servilia eius artis ministeria usum.' This was Gaius Terentius Varro, praetor of the year before, whose antecedents were not merely base but even sordid. It is said that his father had been a butcher, who peddled his wares himself, and that he had employed this very son about the menial tasks associated with that calling. See also K. Dross-Krüpe, this volume.
- 7 See for example E. Seland, "The organisation of the Palmyrene caravan trade," *Ancient West and East* 13 (2014), 197–211.
- 8 M. Gawlikowski, "Palmyra as a Trading Centre," *Iraq* 56 (1994), 27–33; M. Gawlikowski, "Palmyra and its Caravan Trade," *Annales archéologiques arabes syriennes* 42 (1996), 139–144.
- 9 D. Coulon and D. Valérian, "Introduction" in *Espaces et réseaux en Méditerranée médiévale, II, La formation des réseaux*, ed. D. Coulon, C. Picard and D. Valérian (Paris: Bouchene, 2010), 7, defined networks in the broadest and simplest sense as 'a group of distinct elements (whether individuals or institutions or points in space) more or less

- joined by activities, common objectives or group), which could create hierarchies or structure itself into a system of organised relations' (transl. Author's own).
- 10 Their modern location further inland is due to the siltation of the Euphrates over time.
- 11 IGLS XVII,59. See J.-B. Yon, Inscriptions grecques et latines de la Syrie. Volume XVII, fascicule 1, Palmyre, Bibliothèque archéologique et historique (BAH) 195 (Beyrouth: IFAPO, 2012), 71–72.
- 12 Herodotus, *Histories* 1.194.
- 13 C. Delplace and J. Dentzer-Feydy, *L'agora de Palmyre* (Bordeaux: Ausonius, 2005), VI.04, for a Palmyrene satrap in 131 AD on the island also honoured at Palmyra.
- 14 Inv. X.91 and 95. J. Cantineau, "Tadmorea," *Syria* 14 (1933), 187; Gawlikowski "Palmyra as a Trading Centre," n. 24; Bin Seray, "Spasinou Charax and its Commercial Relations with the East through the Arabian Gulf". Delplace and Dentzer-Feydy, *L'agora de Palmyre*, VI.14, for the inscription reinterpreted as 'Kushan' (rather than 'Choumanes').
- 15 Bin Seray "Spasinou Charax and its Commercial Relations with the East through the Arabian Gulf"; G. K. Young, Rome's Eastern Trade: International Commerce and Imperial Policy, 31 BC-AD 305 (London: Routledge, 2001), 128.
- 16 T. Terpstra, *Trading Communities in the Roman World* (PhD thesis, Columbia University, New York, 2011), 103–105, 254, with further bibliographical references. See also T. Terpstra, *Trading Communities in the Roman World. A Micro-Economic and Institutional Perspective* (Leiden; Boston: Brill, 2013), 152–160 for Palmyrenes in Rome. Terpstra has also convincingly argued that the Nabataean mercantile network, for example, can be traced along the Aegean and in Italy, but also remains cautious in the case of Palmyrenes.
- 17 L. Dirven, "The Nature of the Trade between Palmyra and Dura-Europos," *ARAM* 8 (1996), 50 and n. 55. A container found with Palmyrene script in Qana, on the Arabian Gulf, mentions Achaea, and it has been suggested that it alludes to potential connections between Palmyrene merchants and a network of merchants in Achaea, Greece: see R. McLaughlin, *Rome and the Distant East* (London: Bloomsbury, 2010), 105. I have not been able to verify this, but the fact that we know of a trader going to Spasinou Charax named Zabdibol, son of Aachei (Delplace and Dentzer-Feydy, *L'agora de Palmyre*, VI.01) might suggest an alternative explanation, namely that Achaea is simply a Palmyrene personal name.
- 18 S. M. Savage, "The Cults of Ancient Trastevere," *Memoirs of the American Academy in Rome* 17 (1940), 53–54. These consist of a bilingual Flavian altar dedicated to *Sol sanctissimus* (Latin)/Malakbel and gods of Palmyra (Palmyrene) (*CIL* 6.710 = 30817); a second-century AD relief and bilingual dedication to Bel, Yaribol and Astarte (*IG* 14.972); and a relief and bilingual dedication, dated to 235 AD, dedicated to Aglibol and Malachbel (*IG* 14.971). The cessation of dedications here in the third century AD was caused by the foundation of Aurelian's sanctuary of Sol (Savage, "Cults of Ancient Trastevere," 54).
- 19 Savage, "Cults of Ancient Trastevere," 53; see also G. W. Houston, "The Altar from Rome with Inscriptions to Sol and Malakbel," *Syria* 67 (1990), 189–193.
- 20 E. L. G. Will, Les Palmyréniens: la Venise des sables (ler siècle avant-IIIème siècle après J.-C.) (Paris: Armand Colin, 1992), 83–84.
- 21 H. Seyrig, "Le prétendu founduq des Palmyréniens à Coptos," Syria 49 (1972), 120–125. I.Portes 103.
- 22 Translation adapted from Young, *Rome's Eastern Trade: International Commerce and Imperial Policy*, 80, with the main exception that naukleroi should be translated as ship owners and not merchants.
- 23 J. F. Healey "Palmyra and the Arabian Gulf Trade," ARAM 8 (1996), 35.
- 24 SEG 34.1593= I.Portes 103. J. Bingen, "Une dédicace de marchands Palmyréniens à Coptos," Chroniques d'Égypte 59 (1984), 355–358. Young, Rome's Eastern Trade, 80–81.
- The presence of Palmyrenes at Berenike on the Red Sea is well known through the discovery of a temple with the statue base of Hierobol, as well as Palmyrene dedications, but they are all associated with the military: OGIS 639; Steve Sidebotham, Berenike and the Ancient Maritime Spice Route (Berkeley, CA; London: University of California Press, 2011), 65–66. The first inscription, dated to AD 215, was dedicated by Palmyrene archers, while the second inscription was dedicated by the prefect and the second-in-command of the Ala Thracum Herculiana, a cavalry division which had been stationed at Palmyra until c. AD 185, at which point it was transferred to Koptos. Several dedications are also known from the Eastern Desert of Egypt, such as the one at the fort at Didymoi from the early third century AD (H. Cuvigny, Didymoi. Une garnison romaine dans le désert Oriental d'Égypte. Volume 2, Les textes. (Cairo: Institut français d'archéologie orientale, 2012), 47–50: I.did.5).
- 26 CIS II.3190. The last two lines have been suggested as a reference to a caravan (sunodia) coming to Denderah.
- 27 Young and McLaughlin both cite *naukleroi* for this inscription (Young, *Rome's Eastern Trade*, 81; McLaughlin, *Rome and the Distant East*, 105), but the original text does not mention this; it must be a conflation or confusion with the inscription from Koptos mentioned above (SEG 34.1593= I.Portes 103).
- 28 John Cooper, pers. comm.