Facets of Roman Urbanism in Anatolia

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When Rome got involved in the struggles for power in the Eastern Mediterranean during the third and second centuries BCE, it found an area settled with many cities. Once Rome had obtained the former Attalid Kingdom in Western Anatolia from Attalos III in 133 BCE, it was quick to start exploiting this area through the *publicani*. Anatolia was home to magnificent cities such as Miletos, Priene, Nikomedeia, Kyzikos, Halikarnassos, Ephesos and Pergamon when the Romans arrived. However, in other areas such as Pontos, Rome was influential in the (re)foundation cities.[1] And under the Roman Empire, Asia Minor was one of the most densely settled parts of the Roman East.

In this chapter, I will discuss the spatial distribution of cities and their size in Anatolia during the second and early third century CE, at the height of the Roman Empire. But apart from outlining the general urban geography of this area, explanatory vistas for the observed patterns are explored. For the sake of brevity, in all these parts the focus will lie on those settlements, which are considered cities by virtue of their civic autonomy during the second and third century CE. For Anatolia, the patterns in the distribution of self-governing cities and the sizes of these places are tested against four interpretative frameworks: the distribution of natural resources and natural setting, the connectivity between cities, the function of self-governing cities as markets, and the historical path-dependency of the Roman urban pattern on the Classical and Hellenistic patterns. These four themes are used as a primary explanatory system for the complex phenomenon of urbanism in Anatolia. From this, general interpretations on the economic functioning of cities in Anatolia are drawn.[2]

The sources for the research on these Anatolian cities comprise, in the first place, of archaeological and historical analyses already present in academic literature, and a combination as well as evaluation of these sources. Yet, the primary sources are just as important and as many of them as possible have been collected. For the civic status of places, these include epigraphy, numismatics, and other historical texts, such as Strabo's Geography or Pliny's Natural History. Historical accounts have also been useful for the research on the physical attributes of cities, as they sometimes mention their size, presence of monuments, and so on. Yet, archaeological reports, aerial photography, and historic maps, illustrations, and descriptions form the most important source on the physical city in the majority of cases. Naturally, gazetteers on specific types of monuments are highly useful, but unfortunately rarely complete.[3] Some cities are only roughly located based on historical descriptions and inference. In many cases, the sites have been identified with historically attested cities, but, for Asia Minor particularly, these are not always (well) researched.[4] For cities with many standing ruins, but which saw limited excavation, a superficial appreciation has provided a good insight in their monumentality (fig. 1).

With the exception of Galen for the city of Pergamon, no numeric ancient references on population levels in cities are known for the Roman East.[5] Therefore, the area of the

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Fig. 1: The agora of Adada in Pisidia.

site of an ancient city is the best indicator for its size, but often there is not a good idea about the exact physical outline of a city.[6] Aerial photography, combined with both ancient and modern descriptions of the site has been helpful. The Hellenistic/Medieval city-walls of Trapezous were mapped during the late 19th and early 20th century and are clearly visible on Google Earth, revealing a walled area of c. 23 ha.[7] Even published figures can be conflicting. For example, Perge, situated on the Pamphylian plain, is clearly visible from the air, with citywall, orthogonal grid and spectacle buildings in the south clearly demarcating the ancient city. From satellite imagery georeferenced in GIS, measurements result in 63 ha, including the extramural theatre and stadion, or 57 ha without these buildings.[8]

The Pattern of Urbanism in the Anatolia

Clearly, the landscape of Anatolia must have been an important factor on shaping the spatial distribution of cities in Antiquity (fig. 2). Its landscape consisted of rugged mountain ranges running parallel to the Mediterranean and Black Sea coastline, while rivers cut through the western landscapes, forming rich valleys, before reaching the irregular Aegean coast. On the Southern coast, the Pamphylian and Cilician plains form fertile areas, while the Central Plateau is relatively flat and high. The concentrations of autonomous cities on the

Fig. 2: The topography of Anatolia. The dotted light grey lines demarcate the boundaries of the major geographical zones.

Cilician plain, the Pamphylian and Lycian coasts, Pisidia and Western Anatolia clearly stand out (fig. 3). With most of the cities situated in the provinces of Asia and Pisidia, Lycia et Pamphylia, they stand in sharp contrast with Galatia and Cappadocia / the Central Plateau and Bithynia et Pontus or the Black Sea Coastlands. In the West, particularly the rivervalleys of the Maiandros and Hermos are favoured. And although the Troad is less densely settled with autonomous cities, along the Dardanelles we find a clear concentration.

This pattern is, to an extent, also found in the size distribution of cities as well (fig. 4). Out of the c. 443 self-governing cities (of which 428 could be located), 169 could be measured, coming to about 38.2 % of the total. Of these, over 60 % were less than 40 ha and only 16 % would be large or very large, with a mere 2.9 % being larger than 160 ha (Table 1). With an average of c. 45.2 ha for self-governing cities (range: 1.5–250 ha), it is clear that cities tended to be mostly small settlements. The largest cities are situated in Western Anatolia. Nikomedeia (184 ha), Nikaia (137 ha) and Herakleia Pontika (80 ha) stand relatively isolated in Bithynia et Pontus. In the Troad large cities include Kyzikos (158 ha), the colony of Parion (114 ha) and the large port of Alexandreia Troas (250 ha walled, probably the built-up area was much smaller).[9] Towards the core of Asia, the

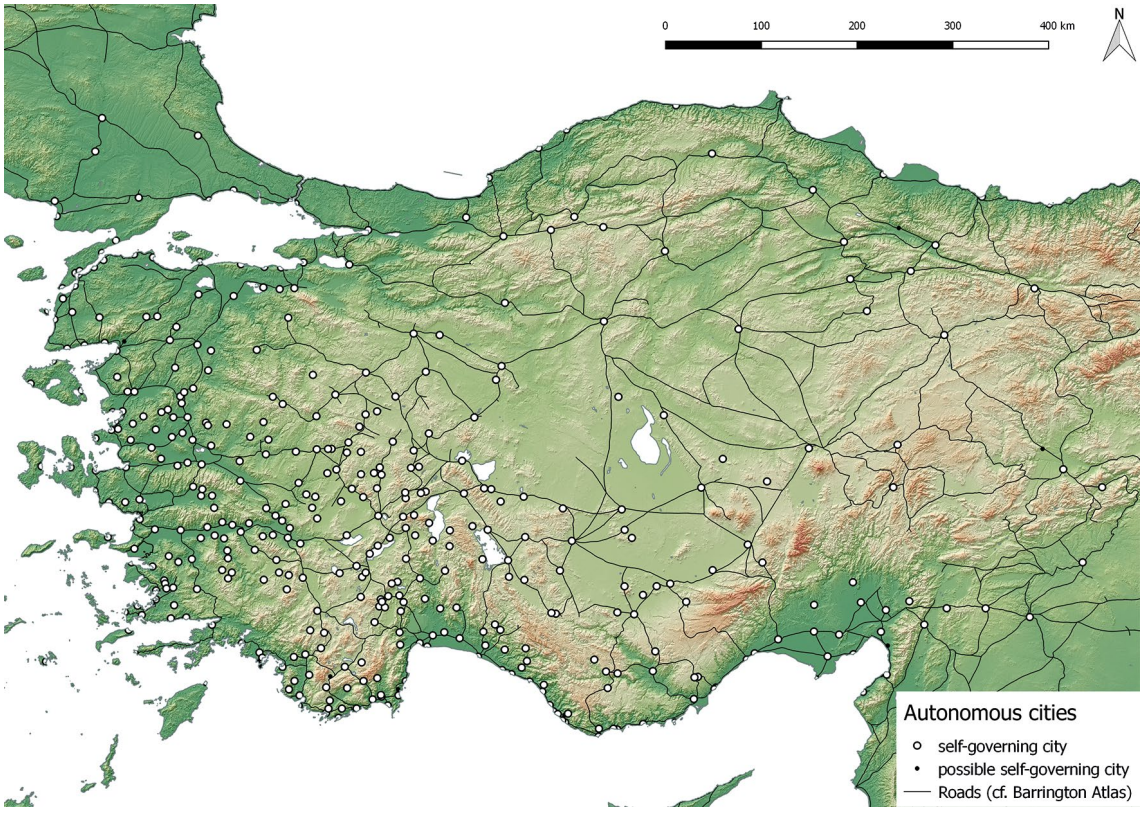

Fig. 3: Distribution of settlements with civic autonomy during the Roman Empire in Asia Minor.

largest cities are Pergamon (190 ha), Ephesos (185 ha) and Smyrna (193 ha). The high density of self-governing cities in this area is clearly accompanied by the presence of large cities. Lycia, Pamphylia and Pisidia have high concentrations of relatively small self-governing cities, of which Attaleia is the largest (83 ha). The relatively rugged and fragmented political and physical landscape of this region led to the formation of many small settlement chambers. With the scarcity of wide fertile plains, large cities may not have been able to take form. Cilicia has three large cities (Anazarbos, Magarsos, Seleukeia Tracheia) and few medium-sized ones. Moving inland, three large cities, Ancyra, Ikonion and Tauion, stand in isolation as does Sinope on the Black Sea Coast. Samosata on the *limes* formed a large city as well.

Explaning the Urban Pattern

Climatological data illuminate the pattern of cities only partially (fig. 5). Although these modern data do not necessarily reflect the ancient situation, the overall variation in

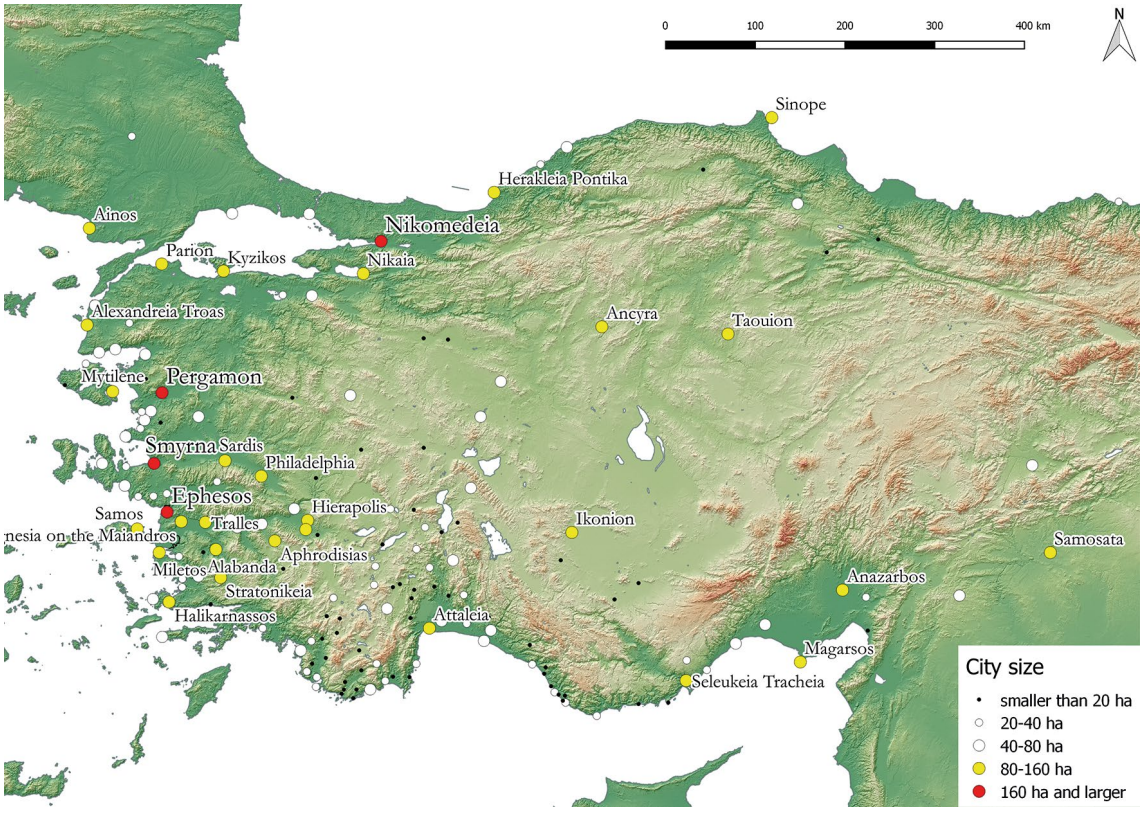

Fig. 4: Distribution of city size in Asia Minor.

Size category (in hectares)	No. of self-governing cities
Total	169
> 160 ha	4 (2.9 %)
81–160 ha	24 (14.2 %)
41–80 ha	38 (22.5 %)
21–40 ha	42 (24.7 %)
< 20 ha	61 (35.9 %)

Table 1: City size per size category.

climate of a dry climate on the Central Plateau with hot summers and severe winters seems reflected in past and present.[10] Dense concentrations of self-governing cities are found in the semi-dry to semi-humid climatological zones, while very humid parts are not densely settled. However, large parts of Cappadocia (with the same rainfall patterns) are not densily settled.

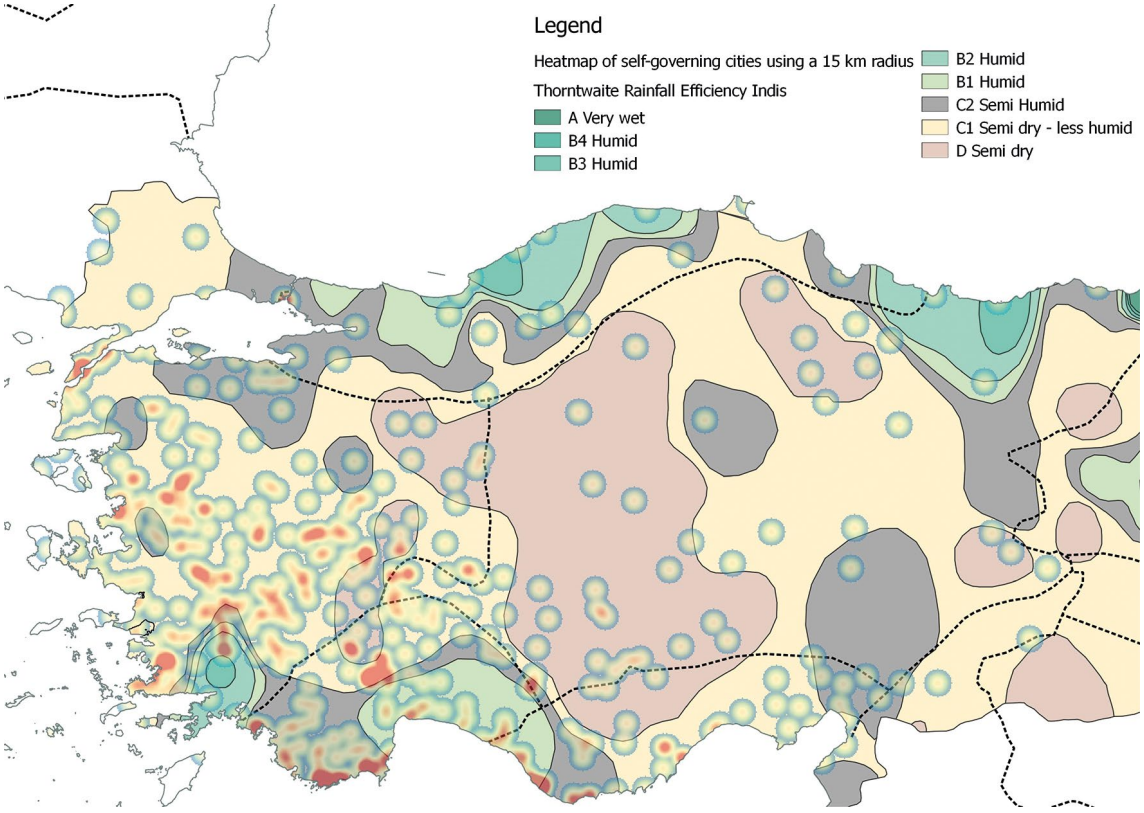

Fig. 5: City distribution plotted on climatological map. The dotted lines demarcate the second century CE provincial boundaries.

The distribution of natural resources affected the urban pattern as well. Although there is plenty of evidence from ancient descriptions and archaeological finds of the exploitation of a wide array of natural resources (timber, marble, etc.), the foundation of a city's economy must have been its agriculture. Agricultural potential has been shown to be a good predictor for urbanization during the Ottoman period.[11] Unfortunately, no quantified information on the performance of agriculture in Roman Anatolia exists. However, the evidence for the import of staples from outside Anatolia is rare and only associated with exceptional shortages for large cities.[12] Most cities were supplied from their own territory or from territories in the vicinity. Therefore, agricultural potential of the landscape must have impacted not only the density of the urban pattern, but probably also the size of cities. Apart from ancient references to agricultural fertility, one of the earliest sets of quantified data are the agricultural censuses that were conducted in the 1920s at the beginning of the Turkish Republic. These are obviously affected by the historical context, and particularly the divergent development of the railroads impacted the intensity of agricultural production. The rampant presence of malaria on the Mediterranean coast hampered urban and agricultural development until the 1950s.

Despite all those limitations, the agricultural census provides a very useful comparative tool for the interpretation of the semi/pre-modern agricultural setting of Anatolia. The highest grain production in 1927, shows high yields in Western Anatolia, European Turkey and the Cilician plain, while also presenting relatively high yields in Cappadocia, with Galatia having lower figures.[13] At the same time, when the inventories of livestock are taken into account, the Central Plateau has relatively low concentrations of livestock (the area is large) yet the numbers of animals that were registered are high. The highest number of animals are registered in the districts of Konya, followed by Ankara and they mostly consist of goats and sheep.[14] Studies of Ottoman Anatolia also reflect this pattern and the high agricultural potential of Western Anatolia can be correlated with density of self-governing cities in the Roman period.[15]

Agricultural potential is, to some extent, a structural determinant, as it is formed by the landscape and climate. Connectivity too, is at least in part a structural determinant. The presence of sealanes, valleys and mountains all influence the ease with which one can travel. In Anatolia during the Roman Empire, sealanes as well as roads and paths facilitated transport, while river shipping is not attested. The proximity to the coast and the availability of harbours clearly impacted the distribution of cities: of the 428 (plus 13 possible) located self-governing cities, 140 are situated less than 15 km from the coast. Nearly a third of the cities is situated very close to the coast and the largest cities are all at or in close vicinity of the coast. Pergamon was located furthest away at some 24 km from the coast, however, this city had access to the sea via the large port of Elaia. Of the 18 large (80–160 ha) cities, 6 (33 %) are located less than 30 km from the coast and only very few are situated deep inland (Samosata, Taouion, Ikonion and Ancyra). Of the 31 medium-sized cities (40–80 ha), 19 (61 %) are located less than 30 km from the coast.

However, we must be careful not to overemphasize the impact on connectivity by the presence of the sealanes *vis a vis* the road system. The Roman road network was set up to connect cities, making the correlation between the distribution of cities and the presence of roads less meaningful.[16] The road system clearly shows the relationship between self-governing cities and the presence of roads, whereby the roads connected up with individual or clusters of self-governing cities. The roads were constructed for military and administrative transport. For example, an inscription found near modern Burdur contains an edict of the provincial governor, Sextus Sotidius Strabo, regulating the transport services the people of the city of Sagalassos were obliged to provide to officials.[17] It seems a safe assumption, however, that once the local inhabitants had fulfilled their obligations, they would have carried some goods and people back on the return journey. The administrative and military function of the roads therefore probably drove the distribution of goods outside the official framework as well.

Transhumance probably also played a role in the movement of goods over land in Antiquity.[18] The ethnographically attested routes for South-Western Anatolia connect the Pamphylian plain straight through Pisidia with Lykaonia and Southern Galatia. Despite the fact that there were few self-governing cities in these latter areas during the

Geographic region	No. of self-governing cities	Average distance (in km)	Minimum distance (in km)	Maximum distance (in km)
Western Anatolia	177	17.4	3.4	64.0
European Turkey	14	42.9	2.5	119.4
Black Sea Coastlands	20	70.1	21.3	181.9
Southern Coastlands	153	18.1	1.9	151.3
Central Plateau	48	44.8	11.3	130.6

Table 2: Distances between self-governing cities using a nearest neighbour analysis (linear ($N^*k \times 3$) with $k = 2$).

Empire, many estates have been attested here. Furthermore, a few of the owners of these estates were originally from or were based at Pamphylian cities. Examples include M. Plancius Varus of Perge, M. Calpurnius Rufus of Attaleia and Sextus Flaccus of Attaleia.[19] The ethnographic evidence makes scenarios whereby caravans or transhumant groups connected the Central Plateau to the Pamphylian coast plausible. Either they transported goods, or they transported animals raised in the Central Plateau. This puts some nuance on the impact of the proximity of sealanes on the shape of the urban pattern, despite the fact that they obviously were an important factor.

Another aspect in the formation of the pattern of autonomous cities may be their function as market centres. There are different catchment areas from market towns for different types of markets and fairs. However, for short cycle markets, archaeologists as well as historians who borrowed from Central Place Theory, have often used a catchment area of 3 hours walking, or 15 km on a flat plane from a market centre.[20] Using this information, a nearest neighbour analysis gives an insight of the extent to which the pattern of self-governing cities could have functioned as a system of markets (Table 2). The average distances between cities in European Turkey, the Central Plateau and particularly the Black Sea Coastlands, is simply too large to cover the entire area within a 3 hour range. Put simply, an average of 40 km or more would constitute a trip of at least 8 hours or more one way. These figures stand in contrast with Western Anatolia and the Southern Coastlands, where, with average distances under 20 km, self-governing cities could in many cases form networks of short cycle markets. The distances from this analysis (i.e. as the crow flies) are less realistic in landscapes with a hilly or mountainous profile. Yet, we may also note that markets are

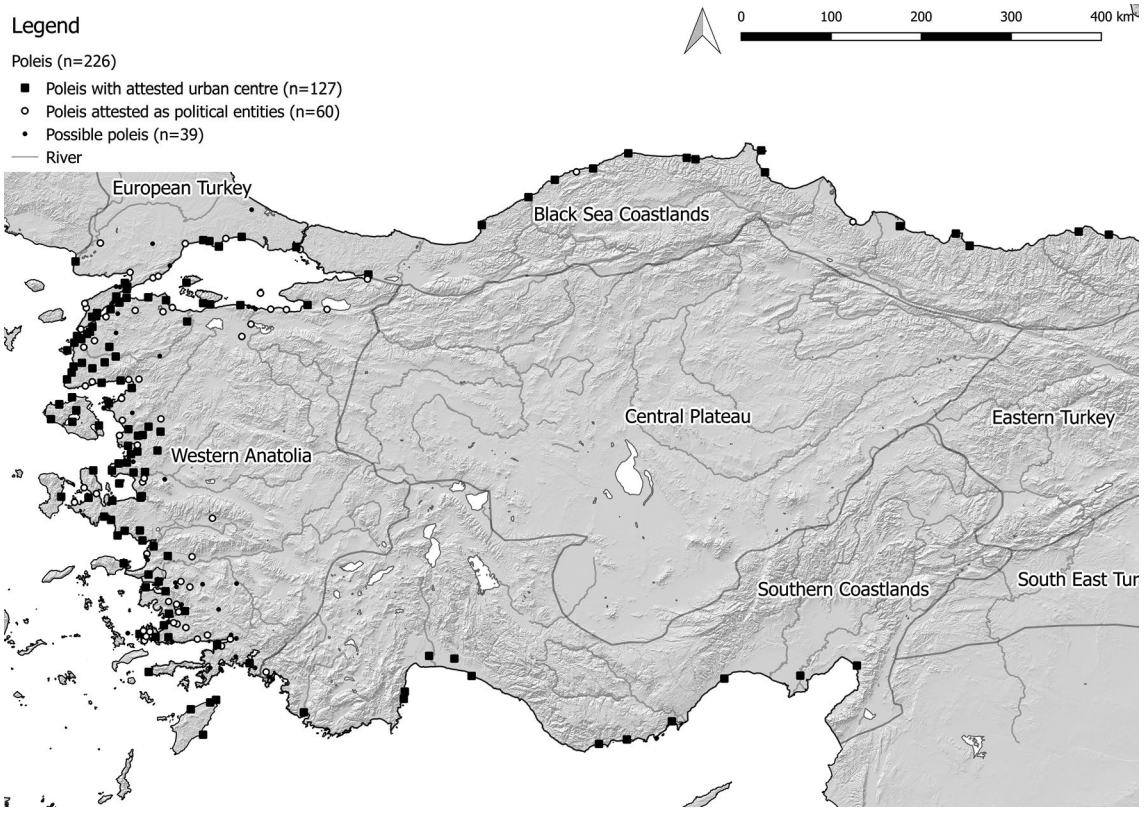

Fig. 6: The urban pattern of Anatolia during Classical times, based on Hansen – Nielsen 2004. Note that for figures 6–8, the light grey lines represent rivers, while the thick dark grey lines demarcate the boundaries of different geographical zones.

attested at villages as well and we may assume that settlements without civic autonomy (secondary agglomerations) fulfilled an important role as market places in sparsely settled areas.

Historical path-dependency clearly impacted the formation of the urban pattern of Anatolia during the Roman Empire. When Rome acquired the Attalid Kingdom in 133 BCE in Western Anatolia, the area was already filled with cities and villages. Cities established under the Hellenistic and in earlier times would continue to exist into Imperial times and some cities already saw extensive monumentalization during Classical and especially Hellenistic times.

A reconstruction of the Classical urban pattern, which is based on the Inventory of Classical Poleis shows a focus of early poleis on the coasts, particularly the Aegean coast (fig. 6).[21] For the Hellenistic period, a tentative reconstruction was created based on a variety of works.[22] The reconstruction shows an expansion of the distribution of cities inland, which is mostly the result of cities and settlements being founded or refounded by Hellenistic dynasties, especially the Attalid and Seleucid dynasties (fig. 7). These new

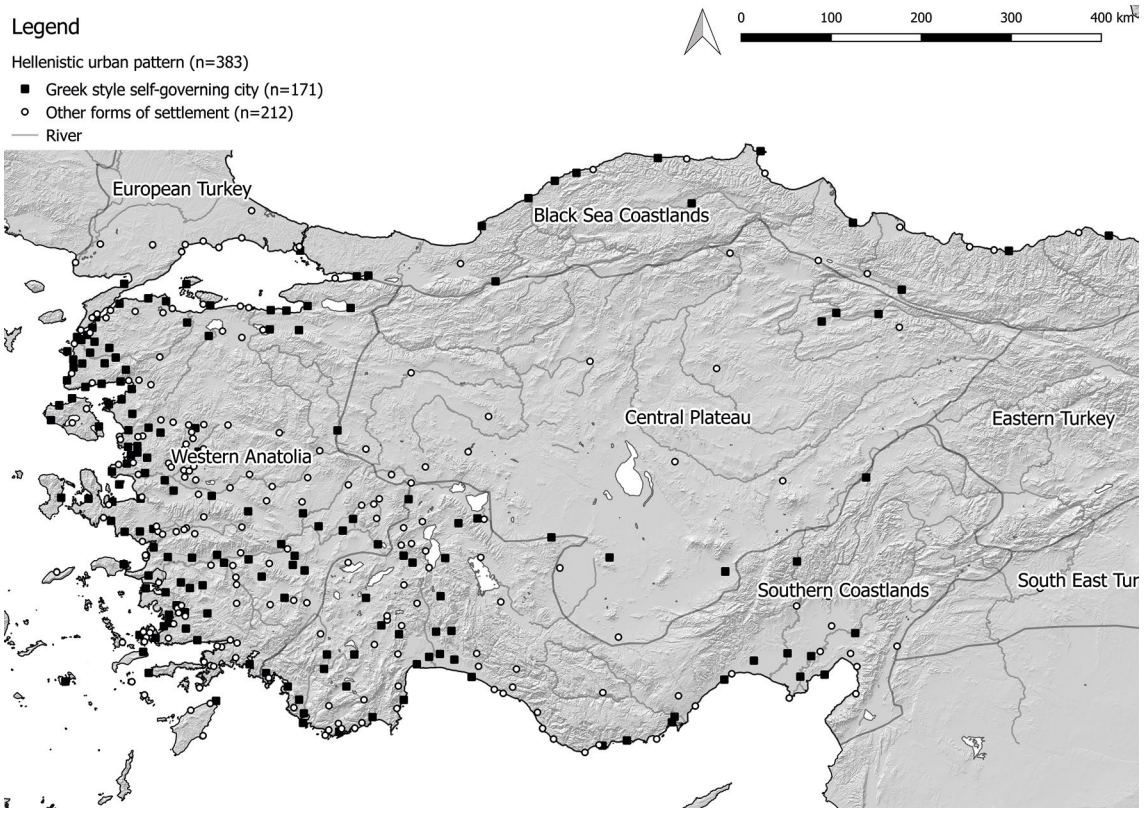

Fig. 7: The urban pattern of Anatolia during Hellenistic times. This tentative reconstruction is based on Head et al. 1911, Cohen 1995, Schuler 1998 and many others. Other forms of settlement include towns, villages and colonial foundations.

foundations were mostly aimed at areas with fertile land, such as the river valleys of Western Anatolia and the coastal plains of Pamphylia and Cilicia.[23] The pattern of the Roman Empire clearly is a further expansion and intensification of settlement of the Hellenistic pattern (fig. 8).

Summary

Clearly, there was much regional variation in the density of settlement and city size in the Roman East at large and even within Asia Minor itself. The factors that possibly influenced this pattern in Anatolia, from climate to historical path-dependency, each only form a part of the explanation of the phenomenon of urbanism. Naturally, particular events and contexts acted on the fate of cities. Cities could rely on their own or neighbouring territories for their food supply, although possibilities for exchange were clearly present and the distribution of ceramics and other products shows that movement of goods took place.[24] The concentration of villa estates on the Central Plateau suggests interregional exchange within

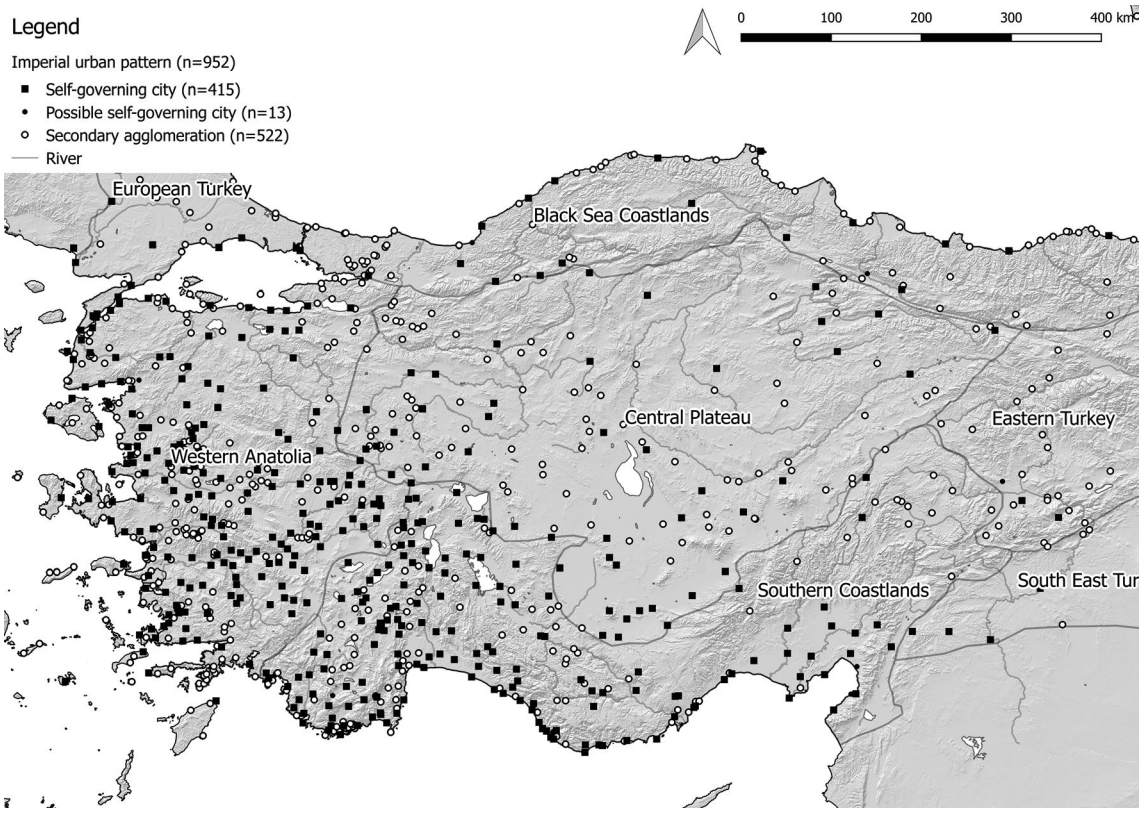

Fig. 8: The urban pattern of Anatolia during Imperial times.

Anatolia itself as well. It is likely that the uneven distribution of natural resources caused exchange, and it is not unthinkable that it is this exchange, albeit perhaps nowhere the brunt of a city's economy, could generate the income that enabled the city councils to engage in programs of (sometimes extensive) monumentalization. Connectivity, landscape, climate, agricultural potential and historical context not only each explain part of the puzzle that is Roman urbanism in Anatolia, but they also relate to each other. Hellenistic foundation policies clearly were related to the agricultural potential of the land, while a higher potential of connectivity and fertility increased the possibilities of a city to engage in the exchange of goods. The factors discussed here, albeit brief, already demonstrate the underlying complexity of settlement patterns in Roman Anatolia.

Notes

[1] See Bekker-Nielsen in this book.

[2] The primary data used in this paper and a fuller analysis are published in Willet 2020.

[3] E.g. Isler 2017; Sear 2006; McNicoll 1997; Broughton 1938 and Jones 1971 still are wonderful sources of information.

[4] Eg. Alia in Phrygia; Aulock 1980, 47; Drew-Bear 1980, 951; Belke – Mersich 1990, 181.
[5] Galen, *De Propriorum Animi Dignotione et Curatione* 9 (Kühn 5.49 = Corpus Medicorum Graecorum 5.4.1.1.33); Beloch 1886, 236.
[6] E.g. Humann – Puchstein 1890, 23 merely describe the site of the city of Midaion in Phrygia as "*200 Schritt lang, 80 Schritt breit und an 15 m hoch*". More recent descriptions are not available.
[7] Miller 1968, 10; Lynch 1901; Marek 1993, 62.
[8] Published figures for Perge range from 26 ha (Hanson 2011, 255) to 55 ha (Hellenkemper – Hild 2004, 193).
[9] Ricl 1997, 1; Schwertheim 2006, 12 fig. 1; Strabo 13.1.26.
[10] Eastwood et al. 1998; Haldon et al. 2014; Haldon 2016.
[11] Faroqhi 1990, 147–148.
[12] Ephesos: Wörrle 1971; Tralleis: Pap. Amer. School I.108. nr. 10; CIG 2927; 2930F.
[13] Stratil-Sauer 1933, fig. 6.
[14] Riza 1935, 93–94.
[15] Faroqhi 1984; 1990.
[16] French 1980.
[17] Mitchell 1976, 109.
[18] De Planhol 1959.
[19] Mitchell 1993, 151–161.
[20] De Ligt 1993, 15; 78; Bintliff 2002, 218; Koder 2006, 173–174.
[21] Hansen – Nielsen 2004.
[22] Notably Cohen 1995, Schuler 1997 and Head et al. 1911.
[23] Sartre 2001, 129; Aperghis 2004, 30–32.
[24] Willet 2018.

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