Project, but since only the material from Veii has been published so far,[8] Launaro was right to finish with his project without this data set. However, he was able to use unpublished site data from the Albegna survey that gave him new insights into the developments outside the colony of Cosa.

Launaro's comparisons show that, apart from central coastal Etruria and south-eastern Italy, the numbers of the rural free population were rising in Roman Italy. In the areas around Rome and most of northern and southern Italy the numbers of both 'villas' and 'farms' were increasing between 200 BC and AD 100. This suggests that the high count interpretation is supported by archaeological evidence, which means that the overall rural population of Roman Italy must have been on the rise during this period. Naturally, the reader senses from the start that this is what was to be expected, since the low count interpretations were based mainly on the inability to believe in any substantial growth in the number of free male citizens in the Late Republican period.

A full appreciation of the method and the conclusions of the author requires some knowledge of both the historical and the archaeological arguments applied to the discussion and of Mediterranean landscape studies in general. Nevertheless, this book is essential reading for both ancient historians and classical archaeologists as it presents the fundamental arguments concerning the demographic calculations of the Roman population and the contribution of archaeology to historical debates.

Ulla Rajala

ALAN KAISER: *Roman Urban Street Networks*. Routledge Studies in Archaeology 2. Routledge, New York – London 2011. ISBN 978-0415-88657-4. XVII, 249 pp. USD 125.

Alan Kaiser's *Roman Urban Street Networks* provides a new way to study urban space in Roman cities. Within the era of the 'spatial turn' in the study of Roman archaeology and history starting from the 1990s, scholars have increasingly paid attention to streets and found them to reveal much about the surrounding society instead of being merely intermediate spaces between individual city blocks. Kaiser's contribution to this wave of interest is his method that allows the study of all cities in a similar manner – and, as he argues, even those that have not been excavated properly but known mainly from aerial photography.

Kaiser's approach is quantitative and thus enables the study of large amounts of data at once. His method borrows from urban geographers and uses concepts already previously adapted to archaeology. From space syntax analysis, for instance, he selects, very wisely, the concept of depth and proceeds to examine the depth of all streets in relation to city gates, *fora* and possible piazzas without worrying about the complex mathematical formulae that are connected to the analysis. In addition to depth, streets have other qualities that give them character. Drawing on Kevin Lynch's analysis of modern American cities and how people navigate inside them by defining paths, nodes, edges, landmarks, etc., Kaiser shows that Roman literature is also filled with descriptions of certain key elements in urban spaces. He counts the number of intersections along streets and defines the functions of buildings flanking them. This and

---

[8]   R. Cascino – H. Di Giuseppe – H. L. Patterson (eds.), *'Veii. The Historical Topography of the Ancient City': A Restudy of John Ward-Perkins's Survey* (2012).

the way these elements were grouped, he believes, gave the urbanites cultural codes on how to interpret the street. Moreover, it created directionality, which helped people navigate along certain routes to desired locations.

In order that his exercise of counting and defining becomes meaningful, Kaiser explores literary references concerning the use of urban streets. Through an abundant use of examples, he concludes that Romans used specific terms for certain types of streets in a meaningful way. The use of specific terms entailed an assumption about the physical forms of these streets as well as the activities associated with them. Thus *viae* were primary streets. They led to gates and *fora*, were long, wide and rather straight. They had the most intersections and elevated numbers of doorways opened onto them. They were evidently the busiest with most pedestrians and cart traffic, the places to be seen and to establish one's social standing. Secondary streets that can be equated with the Roman concept of *angiporta*, on the other hand, were narrower, shorter, more crooked and had less traffic. They had fewer intersections and doorways and some of them had no wheeled traffic at all. The secondary streets were places where literary sources describe immoral behaviour and they were used, in contrast to the primary streets, when one did not wish to be seen. Taken together, this means that buildings and streets initiated certain behaviour and it was culturally learned to interpret space in certain ways. What Kaiser argues, and convincingly shows in his case studies, is that the Roman concept of the proper and orderly use of space in towns existed at least through the first century BC to the fourth century AD. People had adopted certain universal ways that helped them, for example, to navigate when visiting a completely new town. However, what is interesting is that cities are not alike, and there are differences that can be traced by diligently applying Kaiser's methods.

In order to test his concept of primary and secondary streets, Kaiser analyses Pompeii and Ostia in Italy and Silchester in England. These were selected because of the extent of their excavation that has revealed the street network. The fourth case study is selected to challenge the findings of the first examples, which show, despite variations that are interesting and discussed below, certain tendencies. The city of Empúries (Ampurias) in Spain consists of two parts that have very different characters thanks to their background. The so-called Neapolis district was established as a Greek colony and existed hundreds of years before the adjacent Ciudad Romana was founded after the Roman military presence was established there during the Second Punic War. Eventually these two parts were amalgamated but kept their distinctive character. Whereas the Neapolis district conforms very little or not at all to the patterns observed elsewhere, the Roman city fits very well to the conclusions drawn from other case studies. Indeed, whereas there are no difficulties in producing maps of primary and secondary streets in Pompeii, Ostia and Silchester, this cannot be done in a meaningful way for Neapolis. Moreover, as opposed to other examples, the *agora* area of Neapolis was an integral part of the transport network – elsewhere the *forum* was either fully blocked from carts or they at least had highly restricted access. The way the urban space was organised in Neapolis was profoundly different from Pompeii, Ostia, Silchester and the Ciudad Romana.

To analyse the role of streets further, Kaiser explores the relationship between streets and buildings. He divides the building stock of cities into broad categories of residence, entertainment, administration, health-related, religion, commerce and production. By observing their relationship with streets, Kaiser is able to offer a very interesting discussion. Whereas in Pompeii the elite in particular preferred to place their dwellings along main streets, the inhabitants of Ostia preferred secluded areas for their homes. In Silchester there are no clear pat-

terns between streets and houses and in Empúries the known residences are too few to lending themselves to definite conclusions. Kaiser explains the differences as owing to the character of Pompeii and Ostia. Ostia was an important nexus in the trading network, which meant that a large number of visitors, many with large carts or wagons, passed through the city. Pompeii instead was more of a destination in its own right with limited transit traffic. Notwithstanding the differences, all these cities, including Neapolis, have something in common, namely the plethora of shops along the main street – undoubtedly for economic reasons. While differences in other aspects of commerce exist between the case study towns, the notion of the pervasiveness of retail spaces along main streets is worth further scholarly attention. The phenomenon is, as Kaiser observes, characteristically Roman and reveals some unique qualities of the Roman social and economic system.

The merits of Kaiser's work largely boil down to his meticulous method. For a Pompeianist Kaiser's results are in no way revolutionary as his conclusions are well-identified phenomena, but now instead of being intuitively recognised truths, Kaiser has given them solid grounding. More revolutionary is his argument for meaningful patterning in the city. Because scholars have failed to find clear clusters of certain types of building types, they have been inclined to think that the distribution of buildings is rather random. Kaiser instead can show patterns that are based on streets – i.e., that Romans organised space in relation to streets – something that other scholars have failed to prove. In a similar manner, Kaiser makes the street network of Ostia appear systematic rather than erratic, as has often been claimed.

Kaiser's book has further merits. He writes well, linking the chapters to a coherent whole in which all the parts play a meaningful role, and he has done his research well. The introduction that discusses the power of built spaces to regulate human behaviour is thorough. He explains his terminology clearly and reminds us that terms are too often used without thinking of their hidden implications. Although he bases his discussion largely on rather old, albeit comprehensive, presentations of the case study sites, he still covers a wide span of more recent publications. Some of the more recent widely accepted interpretations are, however, missing. In the case of Pompeii, for example, the early settlement may not have been expanded, as traditionally thought, but contracted instead (see F. Coarelli, in P. Guzzo – M. Guidobaldi [eds.], *Nuove ricerche archeologiche nell'area vesuviana, scavi 2003–2006,* Rome 2008, 173–76). Moreover, the temple of Jupiter may not have been in ruins in AD 79, as previously assumed, but the barren look of the temple may rather be due to post-eruption looting (see J. Dobbins, in J. Dobbins – P. Foss [eds.], *The World of Pompeii,* London – New York 2007, 150–83).

Regardless of these minor comments, my main criticism deals with the illustrations. As Kaiser notes (p. 59), the best way to present spatial data is maps. It is highly surprising, therefore, that the maps are of poor quality. They are not always easy to read, mainly because they are simply too small in size. Knowing that much effort has been put into making them, this neglect is even more surprising. When an entire page has been dedicated to each of the tables, one wonders why the maps did not get their own pages. This shortcoming is not compensated by the existence of an associate website with colour-coded plans of the sites in question. Despite these shortcomings, however, Kaiser's work can be warmly recommended to all scholars interested in urban planning and movement in Roman towns.

Heini Ynnilä