

BOOK REVIEW

Roman Urban Street Networks: Streets and the Organization of Space in Four Cities. By Alan KAISER. Routledge Studies in Archaeology, 2. New York and Abingdon: Routledge, 2011. Pp. xvii + 249. Hardcover, \$125.00/£80.00. ISBN 978-0-415-88657-4.

The bulk of Kaiser's book focuses on four well-known ancient cities, Pompeii, Ostia, Silchester, and Empúries, in order to provide an innovative consideration of their urban street networks.¹ While interest in Roman thoroughfares and traffic movements has been growing in recent years (see the work of Ray Laurence and David Newsome, *Rome, Ostia, Pompeii: Movement and Space* (Oxford, 2011)), Kaiser claims to have made the first analysis of Roman streets to combine archaeological and philological evidence (xv).

Kaiser's quantitative methodology for assessing the organization of street space derives from the world of urban geography. Concepts such as "access analysis" and "space syntax" (see Bill Hillier and Julienne Hanson, *The Social Logic of Space* (Cambridge, 1984)), provide a way to study accessibility and connectivity across a Roman city. While Kaiser's study largely confirms older suppositions about the organization of space and street networks, his data create a conversation among these four cities through the comparisons drawn between and among them that is the most valuable feature of the book.

The introduction and the first two chapters lay out the historiography and methodology for the rest of the book. Kevin Lynch's five elements of an urban network—"paths," "nodes," "edges," "landmarks," and "districts" (Kevin Lynch, *Image of the City* (Cambridge, Mass., 1960))—serve as the basis for Kaiser's argument that the Romans came to understand their cities through "paths" (streets) leading from one type of urban environment to another.

Chapter 1, "Textual Evidence for Roman Perceptions of Streets and Plazas," shows that the Latin names for urban thoroughfares were more culturally

¹ I wish to express my gratitude to Jeremy Harnett (Wabash College) both for his earlier review of Kaiser's book (*BMCR* 2011.12.57) and for the references he included in his review, all of which greatly helped me understand the quantitative complexities of Kaiser's work for my own analysis of them.

charged than today's words for streets, such as alley and boulevard (45). Modern names of streets are based more on physical characteristics, whereas the Romans tended to divide streets into two types: main roads (*via* and *platea*) and side streets (*angiportum* and *semita*). The Romans used main streets for social displays and categorized them accordingly.

Kaiser applies precise numeric data to streets in his second chapter "Defining and Analyzing Street Networks in the Archaeological Record," in order to help us distinguish more clearly the differences between "main streets" and "side streets." The first index he uses for a street is its "depth" from outside the city in terms of how many other streets or squares one must pass through to move from the city's edge to the street under consideration (53). A street leading directly from a city gate would have a depth of one. Depth from the forum is his second index, and this involves counting the number of streets away from the forum (54). The number of intersections a street shares with other streets serves as Kaiser's third index for determining "how well a particular street integrates or segregates the streets of the city" (56). Finally, Kaiser's fourth index undertakes, to the degree the archaeological evidence allows, to assess wheeled traffic on the street. In a somewhat complex methodology, he compares the number of private residences and commercial buildings along streets in order to hypothesize the distribution of different types of traffic throughout a given city. To give one example of how this data plays out in terms of how he argues that streets can knit cities together: at Pompeii we find that shops are disproportionately concentrated on streets with a lower depth from the city gates.

Each of the subsequent four chapters investigates a single city and puts Kaiser's analysis to the test. Pompeii (Chapter 3) Ostia (Chapter 4), Silchester (Chapter 5), and Empúries (Chapter 6) all have a majority of their intramural area exposed through excavation. Kaiser proceeds formulaically as he outlines historical background, layout, and topography for each city; discusses the structure of the city's streets; and then assesses how well we can identify uses of buildings along the streets from the archaeological record. The book includes extensive tables and plans that attempt to represent the various uses of urban spaces. An online supplement offers even more data for the interested reader: <http://faculty.evansville.edu/ak58/streets/>.

The concluding Chapter 7, "Streets, Space, and Roman Urbanism," argues that the example of Neapolis/Ciudad Romana illustrates the potential for applying the book's methodology to urban sites that are only partially excavated. The organization of space at Neapolis differed markedly from the other case studies,

since the role of its agora was an integral space through which the traffic moved. Kaiser hypothesizes that this phenomenon resulted from Neapolis' Greek heritage, a point strengthened when he compares Neapolis to its immediate neighbor, Ciudad Romana, whose sparse remains nevertheless echo the previous case studies. Problems with statistical data are too often just overlooked, which weakens the overall argument of the book. The rigorous statistical analysis throughout the book might have yielded more results if used to explore tensions between the urban ideals laid out in texts and the realities played out on the ground.

Nevertheless, Kaiser's strongest contributions come from his comparative analyses of Roman cities. Individual chapters will help scholars specializing in each city, but the book as a whole reveals urban dynamics that might otherwise have gone unnoticed. Kaiser brings a new and scientific approach to these cities and offers other scholars of Roman urbanism a strong set of tools for exploring other street networks and the placement of buildings along them. It is unfortunate that the book is so expensive and so completely bereft of photographic images of these cities. Kaiser's approach, however, gives us new perspectives on Roman urbanism, even if some angles he pursues must remain elusive. He convincingly sheds light on many problems that can arise when modern assumptions are used to explain anything in the Roman city.

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