it is possible to use specific theories and concepts developed for one context in another. For example, some problems related to US suburbs are difficult to relate to European suburbs, because not only are the history and political system different, but the morphological characteristics of these neighbourhoods and their relation with the core city differ considerably.

This recognition of the complexity of the topic is worthy of note and is important. Apart from the contextual sensitivity, the authors highlight three other complexities to take into consideration. First, individuals and groups most often have multiple identities, which has an impact on how patterns of inclusion and exclusion may play out in cities. Secondly, some effects have a structural component while other effects emerge in a group or even on an individual level; and thirdly, these effects are intertwined. People may belong to one or many different identities or 'categories', for example women, disabled, homeless or immigrants. It is important to acknowledge such multiple identities in order to get a nuanced understanding of various social processes in urban environments.

Having said this, it would have been helpful to get some more guidance on the generalizability of different theories and ideas brought up in the book. For instance, to what extent and when are the older theories relevant for contemporary cities and are they useful for cities of different sizes? Although the condensed format of the book series limits the possibility of expanding on too many questions, this addition would have responded more strongly to the title of the book.

Overall, the topic and the scope of this book are highly relevant, and the book will most likely be a very helpful introduction for those who are interested in getting an overview of social inequalities in an urban context. The theories presented here are interlinked in different ways and, depending on the reader's interest, the book presents a palette of relevant texts and concepts and points out where to go for further studies and deeper knowledge. The chapters deal systematically with several current core concepts. It is emphasized that urban exclusion has a multiplicity of causes, which is important to remember in these days when many actors look for easy explanations and, not least, easy solutions of problems that are both comprehensive and complex. A conclusion from this book is that there is no 'silver bullet' or 'quick fix' for achieving more just cities. The fact that there may be very different conditions depending on the city, including geographical and political, indicates that what may be an efficient solution in one city or in one political situation may not be applicable or useful in another context.

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London Bridge and its houses, *c.* 1209–1761

by *Dorian Gerhold*, London Topographical Society, London, UK, 2019, 168pp. ISBN 978 0 902087 69 9.

It may seem strange in this journal to review a historical study of a single structure. However, a structure of the scale of the original London Bridge helps shape the structure and functioning of the city on both sides of the river; the minutely-documented history reveals much about both building type (for this bridge was built up with houses and other building types) and the agents and agencies responsible for its construction, maintenance and change over time; and large-scale infrastructure is under-represented in morphological research. These are all good reasons for urban morphologists to seek out this volume.[1]

This landscape-format 300 × 240 mm book is both carefully researched and well produced: the format obviously chosen to best illustrate this linear structure. The illustrations are exceptional and include high-quality reproductions, many in colour, of original views and plans, modern reconstructions, diagrams of tenancies, and so on.

This was the longest inhabited bridge in Europe, known in childrens' rhyme ('London Bridge is falling down . . .') and fable (this was *not* the bridge purchased, dismantled and shipped to Arizona in 1967). Timber used in this bridge was felled in 1187–8 and a datestone of 1192 was found in the eighteenth century. Houses and other structures were constructed on the bridge probably from an early date, and by the time of the first surviving views of the bridge, in the sixteenth century, there were three major buildings and four groups of houses. The bridge withstood several collapses and fires; the houses were removed in 1757–61 and the bridge was demolished in 1831.

Although nothing (except for river-floor archaeology and some architectural salvage) remains of the structure, this book's novel research is based

on the unusual survival of detailed documentation, including house-by-house annual rentals back to 1460 and some earlier years, and leases from the early-seventeenth century onwards. A table of measurements from 1683 covers most of the houses. These sources have been virtually unexplored before this work. The extensive set of paintings, panoramas and drawings assembled here allows some reconstruction of the bridge's changing external form, which can be linked to the detailed study of individuals, occupations and property sizes. Although houses perched on a bridge, on either side of a 15-foot roadway, are unlikely to be typical of the period's residential typology, this detail of study is likely to reflect patterns across the capital and elsewhere.

The documentation reveals room uses, including of the cellars within the bridge piers; and the depth of the houses, clearly jettied out using hammer beams and supported by unusually long piers. The large number of piers not only obstructed the flow of river and tide, but made possible the size and number of houses – fewer, larger arches would have required such large hammer beams that far fewer houses could have been built. It is also clear that here, as in more normal plot layouts, processes of plot amalgamation occurred between 1358 and 1633; there was clearance of buildings that encroached on the military zone between the gatehouse and drawbridge tower, but more encroachment as the fortification function waned. However, the 1358 plots averaged between 10.5 and 11 feet wide, significantly narrower than the burgages normally seen on land; although in the prime retail location of 1320s Cheapside, shops were typically only 6 to 7 feet wide. In the 1400s the houses were largely occupied by tailors, haberdashers, girdlers and related trades.

By the seventeenth century houses had grown upwards and some even downwards ('hanging cellars' over the river channels). While brick chimneys were built, their weight made the provision of fireplaces for rooms above the roadway difficult. After a fire, new buildings of 1645–9 were 'revolutionary' because they formed a single regular rectangular block, without the numerous projections of their predecessors. The bridge was responding to changing architectural fashion, in fact Inigo Jones had been a member of the commission appointed to make recommendations for the fire-damaged area. However, these buildings themselves were destroyed in the Great Fire of 1666, replaced by temporary 'sheds' to allow businesses to function. There had been a surprising continuation of functions to the mid-1600s: hatters, hosiers, shoemakers, glovers and drapers were common. Despite the continuity of function, leases demonstrate that families moved frequently, with many remaining only briefly on the bridge.

The records give ample evidence of key actors, though these are rarely the tenants. The bridge was managed by 'Bridge House', headed by two wardens but under the supervision of the City. Its records form the major part of this study. We even know the cost of letting down the portcullis against Sir Thomas Fairfax's army during the Civil War! As a combination of landlord and manager its influence on these properties is profound and of long duration. For most of the bridge's life it was Bridge House itself that carried out new construction and repairs, and their payments indicate construction methods, materials and exact costs. Other actors had little involvement, although King Charles I did attempt to have all of the properties cleared from the bridge, not only to assist what today would be called the free flow of traffic, but 'in regard of the . . . uniformitie and beautie that wolde be caused thereby' (p. 54), though, as with other attempted interventions, this came to nothing.

The main text concludes with the 'great rebuilding' following a fire in 1725 when, again, a uniform plan was proposed (by the architect George Dance). By the 1750s, though, many properties were in poor condition and there were substantial pressures to remove obstacles to traffic flow. An Act of Parliament of 1756 empowered the City to purchase all of the bridge properties, demolitions began in 1756–7, and the cleared bridge was widened to 45 ft.

The book concludes with a detailed property-by-property survey of the bridge houses and a series of detailed appendices discussing, for example, the reliability of views of the bridge, the 1664–6 hearth tax as a data source, rents, and the topography and properties at the northern end of the bridge.

Overall this is an extremely high-quality production, full of detail and interest; it allows the reader to explore in exceptional detail a microcosm of the capital city over an extended period. The urban morphologist will see building size, internal structure, uses and materials charted and even costed over this period; with comments on the construction of the bridge itself, the relationship of the bridge and its management to wider trends and issues in the capital, and overall an explanation of its change and continuity. This is an excellent study in micromorphology as well as in urban history.

Note

1. This volume is published for LTS members, but the Society may have some copies available for sale to non-members: see https://londontopsoc.org/

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Encyclopaedic approaches to urban morphology

Two authoritative overviews of urban morphology have recently been published: that by Alain Chiaradia appears in *The Wiley Blackwell Encyclopedia of Urban and Regional Studies* (Chiaradia, 2019) and that by Terry Slater is updated for the second edition of Elsevier's *International Encyclopedia of Human Geography* (Slater, 2020). Chiaradia explores the history of the idea, focusing on the three European 'schools' (Italian, British and French), but noting criticisms that they largely deal with historic cities, have a qualitative bias, 'and that their approach is inadequate for understanding contemporary urban fabrics'. Brief discussion of North American and Chinese studies does not label them as 'schools' – the former characterized as not engaging much with the relationship between urban form and building type because of the common planned grid layouts, and the latter 'has become an important subject' since 1952. He introduces Durkheim, Lynch and Gehl in a discussion of perception and behaviour related to urban form. Space syntax is described as making 'a break in urban morphology research methodology', meaning a move towards quantitative analysis.

The final page of this six-page overview focuses on 'urban morphology challenges: the centrality of form, the diversity of viewpoints'. His first challenge is a theoretical one, relating to where urban morphology is placed within the intellectual landscape. He identifies one response as a Lefebvre-like classification: 'urban morphology deals with a threefold reality: perceived, lived, and conceived'. His second challenge relates to the ambiguity of the concept: it is both phenomenological and constructivist. It now needs, he suggests, to develop a quantitative ontology, the basis for an objective theory of urban form. The final challenge 'is to provide a unified general approach to urban morphology that can be used from the descriptive/explanatory through the prescriptive/normative'.

Slater also explores the central European intellectual roots of the subject, noting Leighly's 1928 usage of the term 'urban morphology'. Unsurprisingly perhaps, he focuses on the historico-geographical approach, though noting that M. R. G. Conzen's postwar research was both out of place and out of time given the Christaller-inspired developments in anglophone urban geography. Discussion of the key concepts of urban fringe belts and the burgage cycle lead to a section on the transformation of historic towns. Recent work on agents and agency is mentioned, with examples ranging from Renaissance Italy to late-twentieth century cities. Alternative conceptual approaches are represented by the Italian typo-morphological work and the concept of urban tissue, with the translation of key texts and Kropf's work highlighted as important steps in synthesizing the Italian and historico-geographical approaches. A final section explores the cartographical sources so necessary for any detailed work on urban form, noting though that 'the concepts and terminology of historical urban morphology rarely find a place' in historical urban atlases.

Both of these encyclopaedia entries have strengths and weaknesses. Chiaradia is broad-brush, theoretically-based and issues challenges; Slater is more narrowly focused on the historico-geographical approach, but presents a much deeper study. Readers of *Urban Morphology* should probably read both perspectives!

References

Chiaradia, A. J. F. (2019) 'Urban morphology/urban form', in Orum, A. (ed.) *The Wiley Blackwell Encyclopedia of Urban and Regional Studies* (Wiley, Hoboken, NJ).

Slater, T. R. (2020) 'Urban morphologies', in Kobayashi, A. (ed.) *International Encyclopedia of Human Geography* 2nd edn vol. 14 (Elsevier, Amsterdam) 69–76.