

REVIEW ARTICLE

Cities and design rules: an architect's approach

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Alex Lehnerer (2009) *Grand urban rules* (010 Publishers, Rotterdam, The Netherlands, 272pp. ISBN 978-9-0645-0666-6)

Urban morphology provides a well established framework for the study of historical and existing urban forms. However, its impact on the transformation of cities could be strengthened (Oliveira, 2011). Within morphological studies, analyses of the design rules that influence cities, districts, and buildings are a fundamental element. The book *Grand urban rules* by architect Alex Lehnerer provides a new look at these rules and offers insights into ways that could help to bring the field of urban morphology closer to the practice of urban design and planning. By moving away from the common approach of studying urban form in the context of a specific place, Lehnerer provides an overview of different rules that are defined in specific places. In so doing he reconsiders design rules as tools for various urban situations. With this shift, the nature, motivation and performance of urban rules come to the foreground and can be evaluated.

The selected rules presented in *Grand urban rules* are primarily taken from cities in the United States and complemented by a small number of examples from Canada, Europe, and Hong Kong. The book is timely as it appears at a moment of renewed interest in design guidelines and building regulations within non-Western cities. After a period of breathtaking urban growth, and the world financial crisis of 2008-9, cities and their governments in many parts of the world, for instance in China, have become increasingly aware of the drawbacks of uncontrolled urban development. With the shift from industrial fabrication to tourism, service and creative

industries, the quality of urban environments has become an issue of environmental and economic importance. Accordingly, rules are being reconsidered so as to better regulate densities and heritage preservation and improve generally the urban environment.

The increasingly important role played by large private property developments within China's 'socialist market economy' raises the question of how to renegotiate the relationship between state institutions, the general public, and the private sector within frameworks of urban design/development. In Hong Kong and Singapore, places that are often seen as models for other Asian cities, new guidelines have become apparent. Hong Kong has just confirmed a new Guideline on Public Open Space in Private Developments Design and Management in response to challenges arising from the increased privatization of public space (HKSAR Development Bureau, 2011). The new guideline has been strongly influenced by lessons from New York. It is evident too that in the study of the Pearl River Estuary, which includes Guangzhou, Dongguan, Shenzhen, Zhongshan, and Zhuhai as well as Macau and Hong Kong, efforts have been made to examine the planning approaches from, for example, the San Francisco and Vancouver Bay Areas, in order to find ways to increase livability in the entire Pearl River Delta Region. With the growing impact of global capital, rising car ownership and the general spread of Western lifestyles, Western urbanization tendencies are felt in South-East Asia. In this milieu, Lehnerer's study which

focuses on the rules of Western cities is published at a convenient time.

Previous studies on urban rules

Urban rules have long been a subject of study. In the nineteenth century, Ildefons Cerdà scrutinized the rules of various cities for his General Theory of Urbanization when he was making his Barcelona expansion plan. His study was based on a clear assessment of the existing spatial and social conditions of Barcelona and of the challenges arising from industrialization, mass mobility, and migration (Soria y Puig, 1999).

The last wave of studies of urban rules was around the turn of the millennium. It included John Punter's extensive review of design policies and guidance in America's West Coast cities (Punter, 1999, 2003) and Jerold S. Kayden's study of privately owned public spaces in New York (Kayden, 2000). Here investigations of the effects of the Floor Area Ratio, the bonus system of 1961, and the amendments of the guidelines in 1975, in response to William H. Whyte's seminal critique (Whyte, 1980), are put forward. At the same time, Howard Davis devotes a chapter in *The culture of building* to regulations (Davis, 1999). He critiques the rules of American cities, pointing out that because there was a shift from 'implicit' to 'explicit' rules, any relationship with design was eroded. He contrasts American rules with those of Tunis, demonstrating how in this city a small set of rules could generate a consistent urban form, and how each rule could be checked and adjusted in light of local conditions. He uses London's ancient lights doctrine as an example of a rule with a very clear intention: a policy forbidding any new building to block the light that already falls onto an existing window. This rule remained in use in the United States after independence; but it was abolished in 1838 when a judge in a court case decided it would prevent economic growth by limiting the maximum use of land for building and that it would be unfair if one person could have control over the land of his neighbour (Davis,

1999, pp. 209-10). According to Davis the emphasis shifted to secure maximum economic exploitation of private properties, which today includes virtual envelopes and 'transferable air rights'. In addition, the main purpose of building guidelines in the United States became the prevention of liability for all kinds of potential injuries. In his erudite study, Davis contrasts the qualities of traditional building cultures with the development of American cities from the nineteenth century to the present.

In the architectural discourse to which Lehnerer's *Grand urban rules* relates, architect Steven Holl began to examine, in the late 1970s, the New York building codes as an inspiration for his projects (Holl, 1980). Similarly, Rem Koolhaas and Adrian Geuze began to consider urban rules as tools to influence contemporary urban landscapes. Their approach was labelled 'dirty realism' (Levaifre, 1989), and was thought to offer an alternative way at a time when confidence in modernist planning and design was eroded, and many Western architects were pessimistic about their opportunity to influence what they saw as an increasingly problematic urban condition (Martin, 2010). The 'dirty realists' shared a general interest in the typological research by the Italian Aldo Rossi, which was partly based on Saverio Muratori's earlier studies, but searched for a different way to influence planning practice and saw the use of urban rules as a possible means.

Lehnerer's research follows a similar direction. It was developed with Kees Christiaanse at ETH Zurich. Christiaanse, a former partner in Rem Koolhaas's OMA, continues to explore similar approaches (for example, in Hamburg's HafenCity). In his 'remote control' postscript to *Grand urban rules*, Christiaanse relates the seemingly prosaic theme of rules to Koolhaas's fascination for the American grid. He interprets it as a 'freedom principle' which quickly lost its generic character and could transform into the *Delirious New York* famously described by Koolhaas (Christiaanse, 2009; Koolhaas, 1994). After Koolhaas's New York study in the 1970s, Lehnerer travelled from Europe to the United States so as to

‘collect’ rules that steer the form of the American city.

Grand urban rules

Lehnerer organizes *Grand urban rules* according to a set of filters that highlight various aspects of design rules. The chapter titles are: ‘The city of Averuni and its code; Rules as tools – a token of affection; The tightrope walk of exercising control over private property’; ‘Power is nothing without control’; ‘Codified aesthetics’; ‘Connected isolation – neighborhood’; ‘Codes, conventions and maxims’: ‘Official and informal regimes, rules of place in 1960s New York’; ‘Within or without’; ‘Differences and consistency’; ‘Designed variation’; and ‘Synthesis – a designed conclusion’. In total, he introduces 115 urban rules and presents them with a summary of their history and explanatory diagrams. Each rule is classified according to category, motivation, kind, domain, and provenance.

Lehnerer begins his argument with the main purpose of design rules: the organization of the relationship between public and private interests. He contrasts Adam Smith’s famous argument of the ‘invisible hand’ guiding private interests toward a common good, with Garret Hardin’s argument of the general tendency toward exploitation. Agreeing with the latter, Lehnerer contends that rules are a necessity within urban society.

He addresses the question of how public planning goals can be realized in a context in which private property rights are strongly protected. For Lehnerer, the failure of the urban visions of the twentieth century was related to the absence of practical instruments that induced private owners to allow a city to be reshaped. As an example of rules that do not restrict the freedom of the individual but open up new possibilities he quotes Jane Jacobs’s four rules: a street or district must serve several primary functions; blocks must be short; buildings must vary in age, condition and use; and population must be dense.

The notion of ‘public interests’ requires a

more critical assessment, and Lehnerer presents examples highlighting entanglements of the public and private sectors. He considers the introduction of the 1916 New York Zoning Resolution in conjunction with a general critique of the construction of the Equitable Building which took the light of its surroundings. Lehnerer notes that it was those wealthy property owners, organized by the Fifth Avenue Association, who mainly pushed for the implementation of the new rule by using the notion of ‘public interest’ to protect the values of their properties which they feared would be affected by the new construction. He also shows how the relationship between motivation and the effect of an urban rule can vary. For instance, rules can lead to specific building ‘styles’ or be inspired by the particular ‘style’ of an existing building. The 1916 Zoning Resolution, described by Hugh Ferriss in *The metropolis of tomorrow* (1929), created the particular ‘style’ of New Yorker high-rise towers; while the Lever and Seagram Buildings inspired the introduction of the Floor Area Ratio system. This system was implemented in 1961, after architectural critic Ada Louise Huxtable had praised its approach and promoted it as the model for the revision of the 1916 Zoning Resolution.

Despite good intentions, the implementation of the Floor Area Ratio rule did not have favourable effects as soon many large and uninviting plazas appeared in New York. The change from the Set Back to the Floor Area Ratio rule weakened the relationship between street and buildings. After the problem was realized in the 1970s, additional rules were implemented to re-create ‘street-wall continuity’.

In his discussion of design rules, Lehnerer reassesses seminal arguments within urban design debates, and gives them a new interpretation. One example he uses is bill boards, such as those famously celebrated by Robert Venturi for their straightforward communication. However, here we learn that they are not so much examples of direct expression, but rather the result of Las Vegas’s 70-page Zoning Code Sign Standard Chapter 19.14.

Lehnerer compiles a collection of a wide range of rules for particular goals. He identifies, for instance, 79 rules related to the management of density. The range of alternatives allows calibrating interventions better for specific local conditions. This process of calibrating, however, is shown to not be complete when the rule is implemented. It needs to be reassessed, and this is necessary even when rules fully achieve their goals, as they might over time result in 'too much of the same' (for example, unduly high density, or too much open space). A key point in the calibration process is the definition of thresholds. A simple example is the definition of a required floor area ratio: too low and it reduces developers' interest; too high, and the city loses bargaining power for public amenities (for example, for open spaces, escalator connections, or community facilities). However, since property markets fluctuate, the definition of the right threshold becomes a sophisticated art. Also for the management of the aesthetic qualities of cities, a range of alternatives is discussed, such as the protection of ridge lines in Hong Kong, the view axes and building heights in Vancouver, the backdrop protection in London, and the three-dimensional floor-ratio envelope in Seattle.

Well informed readers may already know most rules presented by Lehnerer. However, in *Grand urban rules* they will find them presented and discussed in one easily accessible format. Lehnerer's presentation of such a range of alternatives is a useful argument against the one-fits-all approach and helps differentiation between various generalizations about the American city. However, the book is not concerned only with successful examples of design rules. It includes cases in which one simple rule can bring a great change where, for instance, the number of required parking spaces is able to undermine an entire urban fabric and its open space. A case in point is Los Angeles.

The book concludes with a discussion about how rules can be used proactively in design processes to develop variations that can be evaluated at multiple stages. This design

approach has been developed by German design theorist Horst Rittel who maintains the same argument that rules do not need to restrict creativity but in fact can facilitate the creation of variations.

Further considerations

Lehnerer presents us with a wide spectrum of rules that have the potential to steer the direction of urban development. However, a weakness of his book is that it avoids a more explicit engagement with the debate on sustainable, socially just, and livable cities. A certain reluctance to use the term 'sustainability' is understandable as it has become overused, but nevertheless it would benefit the study to develop more precise evaluation criteria. In this context, it might be useful to refer also to standards established by, for example, LEED and HKBEAM. A certain lack of rigorous criticism becomes apparent when the book is compared with the more critical study of, say, Howard Davis. However, the compilation and overview of rules, with the suspension of a final judgment, offers us an opportunity to learn from the range of variations and makes possible the creation of new combinations for specific goals. Nevertheless in a study in which the focus is largely on American cities, the experiences gained in Portland should be included as they demonstrate how clear and simple benchmarks (for example, priority of walking and cycling) helped achieve measurable improvements in the quality of urban life. A further examination of Seattle could also show links between the city's inventive rules, as discussed in the book, and the local ecological debate since the 1960s (Sanders, 2010). In addition, the relationship between *urban rules* and *design reviews* should be addressed. Lehnerer criticizes most attempts to implement rules regarding aesthetic qualities. Design reviews offer a more practical alternative to such fixed rules, and further studies should now extend to rapidly changing non-Western cities and their experiences. In Hong Kong such studies have started to take place (Shelton *et.al.*, 2011) and

could be linked with the findings of *Grand urban rules*.

The relevance of the subject of the book lies especially in its significance for those cities that are experiencing increased Western influence and want to develop ways to react to it. *Grand urban rules* offers a counter argument to the one-fits-all approach and makes understandable why it is not likely to work. Instead, it presents a differentiated approach based on multiple options, readjusted to local conditions, and reassessed over time. This approach also speaks against the simple copying in one particular place of the rules developed in another. The research for the book, which was jointly developed with Ludger Hovestadt at ETH Zurich, has the potential to be explored further with the tools of parametric design, and with the option to simulate and evaluate effects for urban planning and design. The field of urban morphology, with its rich knowledge about the evolution of cities in various ages and in different urban cultures, could add most valuable insights into such a catalogue of rules and help develop rigorous scientific criteria for their evaluation. The linking of specific case studies and the evaluation of rules would help to bridge the gap between academic studies and urban planning and design practice.

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Urban coding and planning

Urban codes have a major influence on urban form. They are the subject of a new book which investigates the nature and scope of coding, its purposes, the kinds of built environments associated with it, and its relationship to urban

planning. Edited by Stephen Marshall, *Urban coding and planning* (Psychology Press, London, 2011) brings together historical and continuing traditions of coding from many different parts of the world.