Urban Complexity and Planning

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Urban Complexity and Planning: Theories and Computer Simulations
Shih-Kung Lai and Haoying Han
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In ‘Urban Complexity and Planning: Theories and Computer Simulations’ Shih-Kung Lai and Haoying Han present a ground-breaking perspective of the complexity that characterizes planning. In the last two decades, the relation between planning and complexity has been discussed, from a variety of perspectives, although with one point in common, in the sense that they all tended to consider that planning could not cope with complexity since it was not possible to get a complete understanding of such complex systems. Lai and Han in this book challenge this long held view on how planning is related with complexity, linking the idea of the city as a system with planning. This simple fact would recommend this book for students, researchers and other professionals working in the field of planning. Two forewords, one by Michael Batty and other by Lewis D. Hopkins, and a Preface by the authors, provide an informed overview of the contents of this book and of its actual contribution to the planning literature.

Contrary to the prevailing and long held view of planning as an external regulatory mechanism of complex systems, for example the city, Lai and Han adopt a different perspective, seeing planning as an intrinsic and inbuilt attribute of any system and not a separate set of procedures and institutions. This is perhaps, as Lewis D. Hopkins and Michael Batty suggest, in the respective forewords, the main contribution of this book to the literature on complexity and planning. In fact, as the history of urban planning in the last century and half shows repeatedly, planning has always been seen as a separate activity, placed above the real and concrete functioning of the city, and whose aim is to regulate the city from an external position, and never seen as part of its functioning. This view, proposed by the authors, on how planning is related to complex systems, one that avoids the dichotomy between cities and planning, different from the prevailing perspective, is what distinguishes this book. The book does not deal with complexity in the cities separated from complexity in planning as is usual to find in the literature but attempts to look at both simultaneously.
Lai and Han apply the organizational model called ‘garbage-can model’ (GCM) and provide illustrations of how it could be applied to cities and to its different facets, and how planning can be inserted in the ideas or visions about how cities function. They argue that cities as complex systems require new forms of comprehensible representations, different from those used traditionally, proposing instead computer simulations as the tool to understand how cities function.

The book has 14 chapters and introduces a series of computer simulations that address the characteristics of complex systems in urban and regional development. As the author of one of the forewords suggests, this is a book different from what we are more familiar with, both in the conventional planning literature and in the complexity science literature, and certainly not an easy book to read. It opens new windows on planning and design and provides new tools that will surely be helpful for all those, theorists and practitioners, working in the broad field of urban and regional planning, and particularly in the field of Urban e-Planning.