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Preface

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Preface

If there is one thing that this *Handbook on Planning and Complexity* makes clear, it is that the planning debate is very much alive and susceptible to new ideas. Following a period of several decades in which the communicative argument was dominant within the theoretical debate on planning, various new lines of reasoning are now being explored and one of them is the relationship between planning and complexity. While planning was still searching for new inspiration beyond the communicative paradigm, systems theory had already found new inspiration by addressing time and non-linearity. This led to a new kind of system, the complex adaptive system, which shows potentiality to transform in time, based on an interdependency between the system's robustness and flexibility. This complex adaptive system manages to persist, even in periods of turmoil and turbulence, because it has the possibility of self-organizing internally while having the capacity to adapt to external circumstances and to find a new and better fit with its environment. Cities show characteristics of such a complex adaptive system. It is therefore not at all odd that urban and spatial planners show an interest in complexity as a new domain of understanding.

'Cities, and social systems generally, have long been recognized as having basic, non-linear, dynamic properties in which the decisions of human actors play an essential role', is what Robert W. Crosby, system theorist, remarked with his opening line in *Cities and Regions as Nonlinear Decision Systems* (AAAS Selected Symposia Series, Westview Press, Boulder (USA)). This volume, edited by Crosby, was put together in 1983 and based on an advanced science meeting that was held in 1981 and that was made possible thanks to sponsorship by – among others – the Institute of Electrical and Electronics Engineers. This tells us a lot about the route that complexity and planning had to take, far away from the mainstream planning debates. It was people other than planners who had faith in the complexity enterprise within the urban landscape: 'the manner in which sociocultural systems have succeeded, or failed, in creating and maintaining the means of their own survival, throughout history and prehistory, is a source of invaluable information on which we may draw'. These are the words of Robert Herman, a physicist, and Ilya Prigogine, a chemist, expressed in their foreword to the volume mentioned earlier.

Herman and Prigogine stressed the need for further research: 'The question of "control" and "intervention" in such situations requires an understanding of these systems to a far deeper extent than is now the case.' It was the spatial modellers who were susceptible to this mission on non-linearity, with scholars such as Peter Allen and Michael Batty being among the pioneers. Batty observed: 'our understanding of cities has not kept pace with our desire to implement effective, yet invisible, unselfconscious styles of planning. This is beginning to change but it requires a dramatic shift in the way we think about cities.' His contribution to making this shift happen was a lifelong career in non-linear modelling which he considered 'necessary to inform decision-making, for it is a consequence of the complexity approach that appropriate models should provide "information" rather than "solutions", should "inform" rather than "solve"' (Batty, M. (2005) *Cities and Complexity*, The MIT Press, Cambridge (US) (2005): xx).

While modellers were progressing in their understanding of a world that is inherently non-linear, 'the interpretation of experimental results in terms of a set of theoretical ideas is not always a straightforward matter' (Mullin, T. (1993) *The Nature of Chaos*, Oxford University Press, Oxford: 1). Theoretical reasoning about non-linear developments within the urban environment remained minimal throughout the 1990s, with planning strongly committed to the communicative turn. In 2005, a serious effort was made to come to discussions about the theoretical consequences of complexity thinking within the planning domain. In the preface to their volume *A Planner's Encounter with Complexity*, De Roo and Silva referred to this occasion where they 'proposed a Working Group on Complexity and Planning within the Association of European Schools of Planning' (De Roo, G., Silva, E.A. (eds) (2010) *A Planner's Encounter with Complexity*, Ashgate/Routledge, Farnham/London). This first meeting of the Working Group 'was attended by 15 people, some of whom were very much at the forefront of the planning theory debate. Most likely, their presence was crucial to seeing the issue not as a curiosity or a freak show, but as a challenge in support of planning theory and practice.' The Complexity and Planning Working Group has been meeting regularly since then, with a membership that has grown to more than two hundred. The Working Group made a great effort to continue searching for synergy between theorists and modellers. Since then, several books, special issues and papers have been produced on the issue of planning and complexity. The Working Group on Complexity and Planning has proven to be a major source of inspiration.

This *Handbook on Planning and Complexity* is the obvious consequence of the developments outlined above, in which complexity is gradually becoming intertwined with planning. It goes without saying that in the course of time various steps have been taken that have led to a coherent story to which more and more scholars are attracted. These steps are the result of joint choices and efforts, in particular by those who were willing and able to think outside the box and saw the importance of 'non-linear' concepts and ideas, which do not immediately fit into the mainstream debate. Without the discussions that took place within the Working Group on Complexity and Planning, this book would not have been able to present the far-reaching viewpoints and proposals which have now been worked out by the various authors in their individual chapters.

This *Handbook on Planning and Complexity* incorporates both theoretical reasoning and innovations in modelling, which is in the spirit of the Working Group on Complexity and Planning. While previous books produced by members of the Working Group explored the possibilities of the complexity argument within the reasoning about planning and discussed theoretical consequences that resulted from the merging of planning and complexity, this *Handbook on Planning and Complexity* pushes the debate further. It no longer explores the possibilities and consequences of the complexity argument within the planning domain, it takes them as a given. The *Handbook on Planning and Complexity* builds on the notion that complexity is relevant to planning and that planning is relevant to the complexity sciences because of its awareness of situational circumstances and the relevance of intersubjective interaction. Consequently, the *Handbook on Planning and Complexity* addresses trajectories within the mainstream debate on planning and identifies possible routes for these trajectories to take towards the future with reference to non-linearity and dynamic change. Based on the argument that it is better to be prepared for the future, the *Handbook on Planning and Complexity* has identified research questions that are likely to become relevant in the debate on planning and complexity.

This *Handbook on Planning and Complexity* was edited by us, scholars from the University of Groningen. Since its foundation in 2005, scholars from that same University have coordinated the Working Group on Complexity and Planning. The University has its 'Groningen Centre for Social Complexity Studies', as well as a substantial group of planning scholars with theoretical and modelling interests in non-linear spatial development and its institutional consequences. Apparently Groningen is an inspiring environment for the debate on planning and complexity.

We sincerely thank our wonderful and knowledgeable team of authors, who have made an enormous effort to address the issue of planning and complexity in different ways. Also, a big thank you to our publisher Katy Crossan at Edward Elgar Publishing, who not only invited us to start this enterprise, but retained confidence in the project as time went on and remained both patient and expectant. Finally, we express the hope that this book will be an important source of inspiration for scholars and will lead to further discussions and debate, not only within the Working Group on Complexity and Planning, but also within the complexity sciences and the discipline of planning.

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