

## BOOK REVIEW:

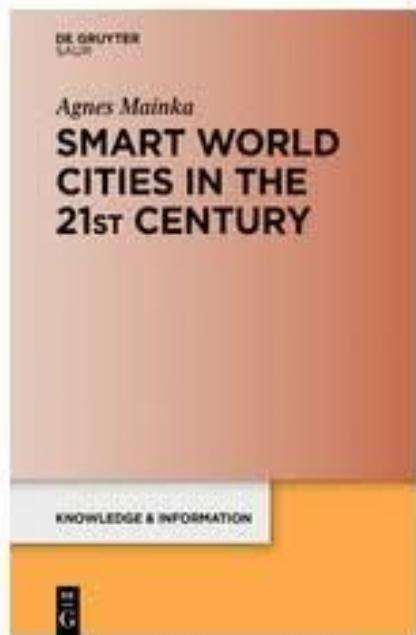
### SMART WORLD CITIES IN THE 21st CENTURY

by Agnes MAINKA

**Stefan Gabriel BURCEA**

Bucharest University of Economic Studies, Mihail Moxa 5-7, Bucharest, Romania  
*stefan.burcea@gmail.com*

Agnes Mainka is a lecturer at the Department of Information Science, Heinrich Heine University Dusseldorf, Germany. Her research interests include topics like smart cities, knowledge society, library services, e-government and social media. She is committee member and reviewer of diverse journals and conferences. Since 2017 she is a PhD in Information Science. Her entire activity demonstrates a special focus for analyzing the fusion of citizens, urban places and ICT in the innovation context. Furthermore, she is a member of the Open Knowledge Foundation and also a board member of OKNRW Institute, an association that facilitates the cooperation between government and society in Germany.



"Smart World Cities in the 21st Century" was published in 2018 under the "Knowledge & Information" collection in De Gruyter. The book is a fantastic incursion into the smart cities topics of 21st century. It contains 7 sections representing various stages of the author's research results about the smart world cities. First, it presents a series of conceptual differences on terms such as "digital city", "smart city", "creative city", "knowledge city" and "world/global city", concluding that an adopted concept like "informational world city" in this research can synthesize the various characteristics of these types of

SMART WORLD CITIES IN THE 21st CENTURY

cities and their associated infrastructures. Further, the author presents the factors that influence the degree of "informativeness" of a city, referring to infrastructures, labor market, corporate structure, locational factors, political willingness and world city ("cityness"). The correlations between these factors are briefly analyzed; the following chapters contain more details about these relevant aspects which prove to be the basic pillars of the research.

The author carries out a brief introduction to the prospects of city development within the knowledge society, focusing on innovation and economic development as triggering factors for the emergence of the knowledge society. Information, knowledge and networks are the basis of today's development of society; on the other hand, the smart society is based on innovation, information and communication, where the author concludes that knowledge is undoubtedly the most important factor of society.

In the third chapter the author carries out a complex analysis of the "indicators" on which the cities can be evaluated in the knowledge society. For those indicators that are not commonly used to measure the knowledge society at city level, the author formulates a number of research assumptions in order to increase the research breadth and to integrate all aspects considered relevant. Details about 3 relevant issues such as infrastructure (ICT infrastructure and cognitive infrastructure), political will and world city are presented, along with a set of 13 hypotheses based on the literature investigated.

In order to increase the relevance and the interdisciplinary character of the research, the author uses different methods of investigation from information science and social science. Therefore, the research methodology extensively presented in the fourth chapter contains an interesting combination of literature review, online research, field study, statistical data analysis and expert interviews. The grounded theory is the basic research method used; this allowed author to combine several complementary quantitative and qualitative methods in order to obtain fruitful research results. The fourth chapter ends with a review of the main limits of the results: lack of data needed to verify hypotheses, the unavailability of city data or for the same period, limiting examples of projects to those specified by interviewed experts, language barriers during the interviews and the limitation of the investigated cities to those that are recognized in literature as being creative, knowledge, smart or digital city.

In the next phase of the research the author identifies prototypical informational cities spread around the globe. Urban studies published on Web of Science, Scopus and Google Scholar have been the main documentary source utilized in the identification process. These allowed the author to assess whether a city fulfills the following two conditions to be included in the research: (1) the investigated city has to be identified as a world city according to the flow theory and (2) the city has to have been investigated as knowledge, creative, digital or smart city. Therefore, 31 cities from Europe (eg. Amsterdam, Berlin,

SMART WORLD CITIES IN THE 21st CENTURY

Helsinki, London, Paris Vienna), USA (eg. Chicago, Los Angeles, New York), Canada (Montreal, Toronto, Vancouver), Australia (Melbourne, Sydney), Asia (eg. Beijing, Seoul, Shanghai, Tokyo) and Latin America (Sao Paulo) were included in the research as knowledge cities; 29 of them were rated as creative cities, 23 were considered smart cities and 29 were defined as digital cities in the identification process. To explore main differences between investigated cities the author grouped the 31 cities into two categories: digital and smart cities and creative and knowledge cities. Digital and smart cities have been analyzed in terms of ICT infrastructure, ICT networks, strategic master plan, economics and labor, sustainability and computer and mobile applications. Then, creative cities were evaluated through aspects such as historical development, economic transformation, strategic master plan, face-to-face facilities, knowledge output, knowledge economy, labor market and creative milieu. The conclusion of the author is that in the last years each type of city has been extensively analyzed in the literature from the perspective of ICT implementation. Therefore, it is recommended that each city be investigated to identify development prospects in the twenty-first century.

Chapter 6 is an impressive "collection" of data, statistics, examples, projects and case studies from different cities, that the author carefully uses to interpret and evaluate the research hypotheses previously formulated. The chapter is structured according to the three basic aspects of the informational city analysis: infrastructure (ICT infrastructure and cognitive infrastructure), political will and world city.

The conclusions summarize the main research results for each hypothesis and reveal whether were supported by the data or whether they have to be reconsidered. The final conclusion illustrating the essential features of a prototypical informational world city in terms of sustainability and connectivity.

The work is accompanied by a series of annexes, of which the most interesting is the one in which the author synthesizes the literature consulted, categorizing the bibliographic sources depending on the specificity of the investigated cities: world cities, knowledge cities, creative cities, digital cities and smart cities. This appendix is a real help for young researchers interested in the topic.

"Smart World Cities in the 21st Century" by Agnes Mainka proves to be a comprehensive research on digital and cognitive infrastructure of 31 smart cities around the globe, with many examples, arguments and studies which demonstrate their integration into the knowledge society demands.