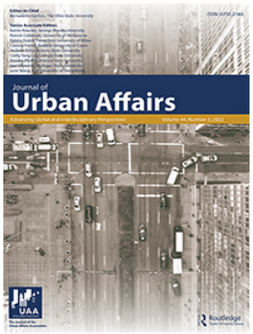

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Smart cities in the post-algorithmic era: Integrating technologies, platforms and governance, edited by Nicos Komninos and Christina Kakderi

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text for a variety of courses in the fields of geography and urban studies. It is truly a valuable "handbook" of displacement for many fields of study.

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Smart cities in the post-algorithmic era: Integrating technologies, platforms and governance, edited by Nicos Komninos and Christina Kakderi, Northampton, MA, Edward Elgar Publishing, 2019

This book is a compilation of 13 essays on the emergence and evolution of the "smart city" over the last 20 years. The focus is on the experience among European nations and cities; the editors and most of the authors hail from European and UK universities and countries, although two (Carlo Ratti and Fabio Duarte) also lead the Senseable City Laboratory at MIT. This distinction is important insofar as the European Commission and nations have been actively engaged in smart city initiatives since the very beginning of the 21st century, and have rich and diverse experiences in the field. As one chapter observes, "at least 240 European cities with populations of over 100,000 are committed to the pursuit of smart city objectives," though it also notes that the smart city concept "remains contested, with many of its aspects largely unexplored" (p. 217). The book is presented in three sections that address a range of issues relevant to the current state of smart cities including technology adoption, data integration and policy, technology governance, and social impact, among others.

An introductory essay explains the basic argument for a "post-algorithmic" understanding of smart city evolution and goals and also provides a succinct summary of each of the succeeding chapters. The three individual sections are titled, respectively, "Smart Cities, Algorithmic Logic, and the Quest for Intelligence," "Smart Cities at the Crossroads of IoT, Social Media and Data Science," and "Smart Cities, Participatory Governance, and Digital Platforms." Each of the sections provides four chapters from separate authors and institutions that delve more deeply into the basic concepts.

Within this organizational structure, the book provides a comprehensive overview of most of the challenges—and some of the approaches and solutions—that have characterized the smart city movement over the last 2 decades. The 12 essays collectively address the more "traditional" challenges of smart cities, including: conceptual foundations and research (Chapter 2: Mora, Reid, Algelidou); citizen-centric, bottom-up design and governance models (Chapter 3: Attroiko); cloud computing, sensor networks, IoT, and data analytics (Chapters 6: Loscri, Mitton, Petrolo; and Chapter 7: Vakali, Moustaka); and the evolution of the "Vision Zero" concept as a specific smart city goal (Chapter 13: Kakderi). Chapter 10 (Angelidou and Mora) offers a list of recent case studies in successful implementation of smart city technologies and systems based on concepts of spatial planning (all are European cities).

The authors take an expansive view of what makes a city smart, emphasizing in the Introduction that "the promise of smart cities is that they can address more effectively complex contemporary problems of growth and sustainability and provide more intelligent systems of decision-making and innovation" (p. 1). The title itself establishes an interesting perspective, given that the "post-algorithmic era" is more an aspiration than a reality at this point. The introductory chapter explains that the algorithmic logic that is the foundation for the collaboration technologies driving city intelligence (digital platforms, IoT [Internet of Things] sensor systems, social media, blockchain,

artificial intelligence, data science, etc.) is more effective if combined with other sources such as human intelligence and intuition, institutional knowledge and experience, creativity, and innovation. In this sense, the post-algorithmic era is only beginning to emerge with the recognition that smart technologies are a means to enhancing quality of life for a city's citizens, and not an end in themselves.

And yet, the publication date of 2019 serves to emphasize exactly how much change in the "smart city" community and movement has taken place in the last 2 years. Chapter 11 (Ozdemir, Kourtit, Nijkamp) emphasizes that the concept of a smart city has been a buzzword in urban planning for a long time, almost always in the context of technological innovation. Yet the corollary human and social dimensions that make cities not only "smart" but livable in the broadest sense must address such issues as poverty, social discrimination, socioeconomic inequality, accessibility to physical and informational infrastructure, participatory governance, and a host of other issues that to date have had little attention within the smart cities discussion, particularly as regards the potential technological contribution to the solutions or, conversely, the potential unintended consequences that technological innovation can impose.

In the last several years, the dialogue within the smart cities landscape has begun to shift to include the non-technical dimensions of urbanization and the broader challenges of integrating social, built, and natural environments within a more holistic, "post-algorithmic" approach to urban design and development. Future smart city research and development are likely to include a more robust discussion of human factors, equity and social justice, and the potential for smart city technologies to contribute to solving social problems, as well as to enhancing communications and connectedness, making transportation and logistics systems more efficient, and optimizing operations of city infrastructures.

In this regard, *Smart Cities in the Post-Algorithmic Era* makes an important contribution to the field of smart cities and the study of urban design and planning and its evolution, and is perhaps a leading indicator of where the smart city movement is headed. While providing a catalog of chapters dealing with most of the "traditional" aspects of smart city technologies and systems, it offers a few chapters and references to the emerging challenges that have yet to be taken up in the majority of smart city endeavors: i.e., those having to do with equitability of access to the intelligent systems and the distribution of the benefits of technologies that improve the quality of life for the urban environment and its full range of citizens. The next edition of this book—and the ones to follow this lead—should provide a considerable enhancement to the discussion of what makes a smart city smart.

In summary, this book provides a very broad perspective on the evolution of the smart city movement in Europe and the UK, and includes chapters that deal with many of the most important dimensions of smart city design and technology integration. It is a useful technical reference for practitioners, technologists, city or agency officials, or teachers (at the baccalaureate level and above) who want to broaden their understanding of the range of issues that are involved in smart city development. However, the book is principally descriptive in nature, and does not endeavor to provide recommendations or guidelines to "best practices" that can aid in the implementation of smart city programs or policies. For that, the bibliographies included in each of the 13 chapters can serve as a good reference guide for other sources.

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