
Reviewed by Steven Jige Quan, Georgia Institute of Technology

The quest of understanding cities never ends. Mumford’s question “What is the city?...what functions does it perform...?” (Mumford, 1961) more than 50 years ago still echoes in the field of urban studies. But in this era of pervasive computing and digital revolution, enormous amounts of data opens a new window for researchers to look into urban structures with unprecedented details and accuracy. Smart buscard information, twitter data, mobile phone calling and texting records, to name only a few, in spite of the individual information security concerns, began to emerge in the urban studies as empirical evidences, forming a new field called the “urban computing” or the “new media urbanism” (Kindberg, Chalmers, & Paulos., 2007; McCullough, 2007). However, most of the pioneers in this field still apply conventional urban theories to the new big pool of data, without reflecting how urban theories could advance under new situations.

This is where Michael Batty’s book The New Science of Cities could play an important role by pointing out the direction for future urban studies. In his book, Batty summarized that the science of cities went through the old times when the cities were considered as “systems” with the image of a “machine” and later of an “organism”. He suggested that in the present world “now dominated by communications and … where most people will be living in cities by the end of this century, it is high time we changed our focus from locations to interactions”, which he called “a new paradigm” (p.15).

In such new paradigm, according to Batty, three principles are important. First, it is relations or networks between places and spaces, rather than the place and space that lie at the basis of this new science. Second, the components and the processes of cities scale, which are often ordered hierarchically and in some sense self-similar. Third, the prediction rather than the observation of flows and networks are needed for better understanding cities.

Based on the three principles, the book develops the new science in three parts. The first part introduces the prerequisites and set foundations including interactions and scaling in cities.
as complex systems. The second part uses the principles to examine cities in terms of their sizes, hierarchies, flows and nodes, forms and structure of networks, and thus forms the science of cities. The third part focuses on applying the network models to decision making processes to establish the science of design.

Throughout the three parts, this book makes two critical contributions to the field of urban studies: changing the world view in urban studies, which characterizes the paradigm shifting according to Kuhn (1962); and based on the new world view set a framework to connect and integrate different related fields.

The view of cities sets the basis on which analytic researches could rely. Although current different related fields of urban studies have their diverse views of cities in terms of forms and activities, those views have general common characteristics and assumptions, which lead to difficulties in applying theories to real world, as well as the inconsistencies and gaps among these fields. By discussions of equations and empirical studies, Batty tries to propose and demonstrate a fundamental shifting of the view of cities to deal with those difficulties and inconsistencies, with at least the following five aspects.

First, a shift from the view of cities as locations to interactions. Batty reminds the danger of manipulating patterns of locations that “simply miss the point of why cities exist in the first place” – to relate (p. 15). Therefore Batty argues that interactions and networks are much more important to the understanding of cities and their design than locations. The locations thus turn to be better understood as nodes in networks.

Second, a shift from the view of cities as in equilibrium state too far from equilibrium and ever-evolving state. The previous system theory in urban studies articulated the city system as some long-term equilibrium, which is far from the mark. Batty states in this book that though the enormous lag between the changing speed of physical built environment and the human behavior led to the previous understanding of cities as in equilibrium state, now cities are more widely regarded as in “continual readjustments to the far-from-equilibrium state” (p. 24). Dynamics and innovations are key to the survival and growth of cities. Batty states that any goals for the current cities are contingent on the present, and will be continuously revised and compromised in the unknowable future with uncertainties.

Third, a shift from the separation of the positive theory and normative theory to their integration. The commonly perceived idea is that the study of cities is distinctive from the study of city design as the former is based on the positive thinking of “what it is” and the latter on the normative thinking of “what it should be”. However, Batty argues that they are combined in some way. Cities are “disturbed” by implementations of designs and designs always are situated in the reality. As Batty suggests, the positive and the normative, or the real and the ideal, can be reconciled in the evolutionary process, in which agents, actors or activities in the city system learn from each other to achieve more sustainable environments.

Fourth, a shift from the view of design of cities as massive plans to small changes. Throughout the twenties century, most of the city designs were based on the notion of large changes and massive top-down plans, which brought lots of problems. Instead, following the ideas of Geddes, Alexander, and Jacobs, Batty advocates a type of small interventions in a timely and opportune manner, which can be attuned to the local context, to reach large effects.
Fifth, a shift from the view of city planning as individual design to collective action. Previous notion of achieving collective goods through individual or expertise action in planning field experienced lots of lessons. Instead, the view of planning process should be altered to collective action, by reaching the balance and equilibrium within the group collectively.

These five aspects of view shifting bring new research perspectives to city related fields like social physics, regional science, urban economics, and physical planning by emphasizing on processes of energy and information exchange. The shifting requires new knowledge and theories to better understand the science of cities and of design.

The network science, complexity theory, graph theory, Markov process theory in mathematics, to name a few, are introduced into this new science to facilitate the study, with the new view of the cities and their designs as flows and networks. Though the ideal nicely packaged science which can be applied directly to city problems will not exit, Batty’s new science of cities establishes a framework in which different approaches, methods and tools can be adaptively integrated. According to Batty, such framework can be built only through a consistent philosophy of “complexity”.

This notion of “complexity” places the book in a stream of academic discussions including Notes on the Synthesis of Form (Alexander, 1964), Urban Dynamics (Forrester, 1969), Cities and complexity: understanding cities with cellular automata, agent-based models, and fractals (Batty, 2007), to name a few. By emphasizing networks embedded in the form, activity and design of cities, this book shows a way to understand and analyze the complexity in cities. Researchers in city-related studies may get a clearer picture from this book about how the science of cities evolves and what kind of new theories in their subfields could develop to contribute to building the new science, especially in during the current digital revolution. Planners may find this book helpful in understanding the process of decision making or design and making better choices in this process. And people who are generally interested in urban issues could also deepen their understandings of cities and the design by reading some introductory chapters in this book, such as chapter 1, 4, and 10. The readers who want to go through the other chapters of the book need to have some knowledge of matrix algebra and simple calculus to understand well the equations filled in this book. Those detailed equations are to demonstrate how network analysis could inform the paradigm shifting to the new science of cities.

But it is important to note that this book is not the finale of “the new science of cities” that concludes. On the contrary, it just begins the discussions on this new science. As Batty admits, the proposed world of science is inevitably incomplete, as spatial scales, dynamics, policy environment and so on are not fully discussed. Also, this book puts much emphasis on the “efficiency” in the goal of “more efficient and equitable cities” (p. 4), while the equality issue is not fully explored: Even though the part of design process is based on a bottom-up approach, the factor of weighting still limits its power to improve the “equality”.

Nevertheless, this book is a new step forward in advancing the science of cities. It provides insights of developing a possible new science of cities and uses network theories to set up a rich, synthesized environment to generate new theories within, especially in the new era of digital revolution. The exploration of such new science just begins.
References


Reviewed by Ravi K. Perry, Mississippi State University

Ever wonder what makes a great city? If, like me, you have ever taken a stroll down a once-busy urban downtown street at lunchtime, a once-forgotten rail yard at dusk, or an area once populated that now exists as an abandoned industrial plant, you might find it difficult to see what is great about the city. In *Industrial Cities: History and Future*, the contributors help us find that love for the city once again. With an international and diverse array of case studies, *Industrial Cities* frames how the industrial city gave birth to protest, art, social modernity, and economic vitality. Contributors expand on prior studies of urban history and city landscapes to show how technology has been used successfully in industrial cities in the present era. In addition, the contributors discuss nearly every type of popular urban industry – from automobile cities to steel towns, to the development of urban industry as art, culture, and a place not only to work, but to live and play.

The editor compiles a powerful list of contributors who each show how cultural, social, and spatial shifts have deeply impacted the industrial city within an international context – in some cases for better and in many cases for worse. Yet, in each case, contributors find a silver lining and share with readers substantive reasons why we should hope to see the sustainability of the industrial city not solely dependent on industry, but as a city and residents both shaped and influenced by industry.

The diversity with which the contributors engage with urban space, regeneration, and development clearly establishes *Industrial Cities* in a field apart from earlier works on classic industrial cities. In *Industrial Cities*, you learn of the influence a city whose heyday in industry seemed long past only to rise again as an image of art and architectural beauty complete with neighborhood community. This ‘fall to rise’ comeback city phenomenon is explored in enlightening detail throughout large American cities such as Detroit, Flint, and Chicago, and lesser-known European towns such as Wolsburg and Clydebank.
Industrial Cities is one of the first books on history in the urban context to explore the role that environmental pollution, art, memory, and other related cultural and sociological concepts have on our conception of what is industrial, how we value industry, and the impact of those assessments on our collective identity as residents, visitors, and tourists of these industrial communities. Thus, strikingly, the book’s title Industrial Cities could just as well, and perhaps even more appropriately, be named Industrial Communities. This is because in identifying the conditions under which these case study cities have risen from the ashes as many of us departed for what we thought were greener pastures in suburban communities, the contributors validate in an international context the power of community to eventually, and seemingly always, work together to save the industrial city’s past. This serves as a reminder to those of us in the present and those that will be in the future that the city has an industrial story to tell – a story that engages work, values, ideals, memory, social engineering, mediation, representation, and, most importantly, community.

The book sets out to establish through media, historical, cultural, and political approaches, how cities have managed to survive despite shrinkage in scale and population, disinvestment, outsourcing, and many other realities. The book admirably meets the goals the authors established as they moved beyond paternalistic explorations of industry to include diverse, social and identity-based constructions of the future these cities and their inhabitants have sought to engender.

Though history is its linchpin, Industrial Cities explores the future. We learn how industry impacts community and how community impacts industry. We are introduced to the power of industry in the present as a tool for social change, not just as a tool for development. These approaches allow us to re-introduce ourselves to cities many of us have chosen to forget, although the cities have not forgotten us. While we went elsewhere, these cities positioned themselves for revolutionary change despite the odds being stacked against them.

Because they succeeded, we succeed. As goes the industrial city, so goes global, social, and economic progress.

The editor and contributors in Industrial Cities link cities’ rise and fall to factors beyond causal economic conditions and introduce the role of community and culture as key factors in any comprehensive evaluation of industry, whether it be the car city in Europe or the steel city in the U.S.

The book is written in prose with powerful images that will make the text useful for undergraduate courses on urban politics and studies and graduate courses in sociology, public policy and urban politics. It is a useful source for students and scholars alike with interest in economic development, urban history, art and architecture, and media and communications.

Professor Zimmerman accomplishes a tall task in Industrial Cities. He effectively brings together international scholars of urban life and history and draws upon their varied research expertise to draw connections between differing conceptions of urban space, community responsibility, cultural life, and economic development. Each contributor challenges us to rethink how we label industry and what we consider urban life and culture. For that reason alone, Industrial Cities is a remarkable body of contemporary research on industrial conditions in the cities we love to hate.

Reviewed by Leslie Dunn, Washington & Jefferson College

In 2010, the second conference of the Asia Economic Community Forum was held in South Korea and the text Asian Responses to the Global Financial Crisis: The Impact of Regionalism and the Role of the G20 was a product of this conference. This text holds a collection of papers presented at this forum whose theme was ‘Post Crisis New World Order: Asia and G20’. The papers presented in the text cover various topics including the impact of and response to the recent financial crisis in Asia, the role of the G20 in the response to the crisis and Asia’s representation and position in the G20, integration and cooperation of Asian countries, and focused studies on China. Contributors to the text include researchers from both political science and economics.

The opening chapters demonstrate how Asia has found itself in a changing environment. Wallerstein (Chapter 1) argues that the dominance of the United States has come to an end and there are “…emerging eight to ten centers of relative geopolitical autonomy” (page 1). The four strongest of these centers, Wallerstein argues, are the United States, Western Europe, Russia, and Northeast Asia (China, Korea, and Japan). He describes this new emerging system as chaotic and uses the rest of the chapter to describe the short run results of this chaos from Northeast Asia’s perspective. Xiao et al. (Chapter 2) contends that convergence is occurring, especially during the recent financial crisis as developed economies experienced a stronger downturn than developing economies and uses the impacts on Asia’s economy as an example. The authors argue that, as a result of convergence, the global economy will experience significant changes including “…increased productivity and non-tradable value growth, such as rising property prices, along with rising wages; a higher return on capital and rising prices for capital, that is, through the real interest rate, due to rapid industrialization and urbanization; and rising costs of carbon emission and natural resources” (p. 17). Chen (Chapter 3) discusses what he sees as the various forms of capitalism in the world today. Chen argues that Asian capitalism, which received a lot of attention after the East and Southeast Asian economies were so successful, but then was somewhat disregarded after the Asian financial crisis, has experienced a revival in response to the recent financial crisis. He then goes on to compare the Washington Consensus to the Beijing Consensus and alters the Beijing Consensus to represent what has been occurring in China since 1979, which he refers to as the Chinese Economic Model. Chen argues that as a development model, the Chinese Economic Model will replace the Washington Consensus.

A dominant theme of the text is Asian regional integration. Many of the authors point out that a significant turning point for regional integration was the Asian financial crisis, which caused many to begin talking about greater integration and cooperation. Kim (Chapter 6) points out that after the Asian financial crisis it was realized that greater financial integration was necessary in the region but not enough was done to reach this goal. Kim argues that the Asian economies experienced a stronger negative impact than other emerging markets during the recent financial crisis because of underdeveloped financial markets and a high reliance on external economies. East Asian economies have pursued export-oriented growth strategies and, as a result, have economies that are highly dependent on external trade. Multiple authors point out that there has been an increase in trade within the region in recent years but this is a result of
trade in intermediate goods. Kim also believes that a more significant problem is with the weak financial markets that have caused excess savings in the region to go to external markets and not be distributed to those that need it within the region. The author makes three policy recommendations: (1) increase economic integration in East Asia by creating a more all-encompassing free trade zone between countries; (2) develop regional bond markets; and (3) increase financial cooperation in the region. Many authors discuss the Chiang Mai Initiative as an example of a recent increase in financial cooperation in East Asia. Nakajima (Chapter 9) and Kim (Chapter 10) discuss the impact of two different existing organizations on regional integration. Nakajima reviews the Asia-Pacific Economic Cooperation (APEC), which was formed in 1989. The author discusses successes and setbacks of the organization and its goal of “Open Regionalism” along with the role of the United States and the Free Trade Area of the Asia-Pacific (FTAAP) proposed by the US. Kim argues that the Association of Southeast Asian Nations (ASEAN), ASEAN +3, which includes China, Japan, and South Korea, and the East Asia Summit (EAS) are key initiatives that will assist economic integration. Pan (Chapter 12) reviews the obstacles to community building in East Asia and possible solutions to those obstacles. The author argues that in comparison to the European Union, East Asia is less integrated but the EU model is not desired in the region. “Because of China’s size and rapid growth, material conflicts are less of a problem for East Asian community building. The problem mainly lies in distrust, among one another, doubt and suspicion about China’s military intentions, and prevailing bias against China’s socio-political setting. Therefore, the problem is less economic than socio-cultural” (p. 174). Higgott (Chapter 15) continues the comparison between the East Asian model of integration and the EU model. The author stresses the lessons that can be learned from the EU model, the portions of the model that will be resisted, and the “regulatory regionalism” that is occurring in East Asia. Finally, Hundt (Chapter 14) explains the role of the “middle powers” of Australia and South Korea in the building of regional order. Both of these countries have retained strong linkages to the United States and are also tied to the building of regional cooperation through ASEAN.

Another topic covered extensively in the text is the role of the G20 in the recent financial crisis and Asia’s representation and position in the organization. Yoon (Chapter 7) explains the role of the G20 in the response to the recent financial crisis, what the author believes is the role of the G20 in a post-crisis world, and Asia’s changing role. Asia sends the second largest delegation to the G20 with six countries. “These days, Asia is being required to contribute to the world economy, rather than just make use of the world market” (p. 96). The author argues that the difficulty with this is that there is not a clear sole Asian entity and discusses the obstructions to this being created. Yoon examines ways in which Asia can undertake its new role in the G20 including creating an Asian regional caucus and further integrating Asian economies in a European style. Moon (Chapter 8) looks at the steps that South Korea took in response to the recent financial crisis and the need for a global safety net. The author argues the strategy must be at the national, regional, and global levels. With respect to South Korea, Moon argues that closer bilateral connections should be made to the US and EU, due to the importance of the dollar and the euro, an increase in monetary and financial cooperation with other Asian economies especially Japan and China, and continued progress toward a global safety net, which South Korea has been doing within the G20 framework. Finally, Pempel (Chapter 11) compares the role of the G20 and G2 (US and China) in global financial regulation, arguing that the G20 has been making gains in coordination efforts and has a possible future in this role if it is able to overcome problems, such as realizing continued coordination efforts once the immediate crisis
has passed and the willingness of US and China to forfeit some national power to this global organization.

China is obviously an important player in this region. As a result, China was the primary topic of multiple chapters in the text. China’s currency is a common topic of debate and was the focus of Kim and Kim (Chapter 4). The authors empirically study the experiences of Japan and China with respect to their currencies. They find that a currency appreciation in Japan is associated with a reduction in current account surpluses and prices without decreases in real income. China does not see any significant effect on current account balances or real income with currency appreciation. The authors do caution readers on their results because of limited data availability, which can cause issues with the VAR model being used to study China’s experiences, in addition to the likely existence of structural breaks. Ma and Tian (Chapter 5) argue that China was not as negatively impacted by the recent financial crisis due to significant government involvement to manage the impact of the crisis. Finally, Yongtao (Chapter 13) explores five possible scenarios of US and China relations and the impact that each would have on the East Asian community.

*Asian Responses to the Global Financial Crisis: The Impact of Regionalism and the Role of the G20* takes a broad look at the topic from both a political science and economic perspective giving the reader historical background on many of the dominant relationships in the region and highlighting the impact of the Asian financial crisis as a turning point in regional integration. It also outlines the role of the G20 and its importance to Asian countries. Where this text is lacking is in a unified analysis of the topics covered. The final chapter of the text does give some summary of the various viewpoints expressed but more needs to be done to tie the conclusions together. This is especially true because this text takes an interdisciplinary approach to the topics covered.


Reviewed by J. Zachary Klingensmith, Penn State Erie, The Behrend College

It is no secret that governments are looking to the private sector for ways to become more competitive in an increasingly globalized world. *The Political Economy of City Branding* by Ari-Veikko Anttiroiko examines the ways in which cities are branding themselves to position themselves favorably in the global economy. The book begins with some foundational topics, such as globalization and branding in the private market. The reader is then treated to a thorough discussion of the ‘city attraction hypothesis’ which acts as a bridge between global economic trends and branding. Finally, the author concludes the book with specific challenges that are the result of the global attraction game.

In order to focus on the main thesis of this book, I will only briefly discuss some of the foundational chapters in order to leave ample room for a discussion of the main contributions of the book. After a brief introduction, Chapter 2 delves into some of the challenges of globalization from the point-of-view of local governments. In particular, the author makes an important distinction between mega-cities, those that simply have a large population, and global cities, defined as those that have several layers of connectivity in a variety of industries which allow them to benefit from globalization. Chapter 3 examines the global urban hierarchy in addition to the asymmetries associated with urban areas. Again, special attention is paid to the
way cities are ranked with respect to the types of services offered and roles in the global economy.

Chapter 4 introduces the city attraction hypothesis which acts as the transition from the role of global trends to the role of city branding with respect to urban growth. Specifically the author posits that “…in a globalized world the attractiveness of a city is the key to success.” For some time, cities used tax breaks and subsidies in an attempt to increase their attractiveness. But this quickly devolved into a race to the bottom as cities had to pay a hefty price to attract companies. In addition, these same firms would leave after the tax breaks ended returning the city to its original predicament. Cities have also attempted to improve their desirability through major investments such as world-class infrastructure and business complexes. Even though cities gain an equity position with this type of investment, large-scale projects can still expose cities to an undesired degree of risk. Therefore, cities have begun to focus on attracting firms through advertising and promotion of the amenities and industrial structure of the city. While a mix of all three methods is likely optimal, local governments seem to prefer the advertising and promotion method due to its effectiveness and relatively low cost.

Chapter 5 provides an overview of branding in the private sector. From the historical origins of branding to the multiple dimensions of branding, the author does a very good job of introducing the world of branding to those that may need a primer. While the discussion is geared towards branding in the private market, the author foreshadows the use of this information within the constructs of urban branding.

Chapter 6 completes the transition from globalization to city branding and its use as an urban growth tool. The author begins the chapter by stating that “cities have always been brands of some kind even if not necessarily particularly well managed.” For example, Pittsburgh became known as the ‘Steel City’ not because of a targeted marketing strategy but instead because of a natural agglomeration. But, since the 1970’s, city governments have realized that modern marketing techniques can be used in the promotion and expansion of their city. However, city branding is often much more difficult than product branding due to the fact that cities are not inanimate products but rather a collection of humans with their own stories, histories and cultures. Therefore, the creation of an urban brand is not only about the future but must also be anchored in a city's past.

There are a plethora of benefits to successful city branding. In addition to the creation of a symbol that can create value for the members of a community, branding can increase the standard-of-living for all of those involved. Successful city branding can attract inbound investment, companies, skilled workers, students and new residents. In addition, successful branding can also help a city retain its existing stock of companies, workers and knowledge. Finally, a successful branding campaign can create intangible benefits such as civic pride and increased local harmony. For example, after a turbulent period in New York City during the 1960s and 1970s, the state of New York commissioned a marketing firm to develop a campaign to reinvigorate the city’s brand. The outcome of the marketing strategy was the creation of the famous ‘I Love New York’ logo which is still in use today and is arguably the world’s most famous city marketing logo.

Local governments must also be ready to taper their expectations. While cities like Paris, Sydney, and London rank among the world leaders in city branding, other cities are not as successful. Much of this deals with the preconditions required for a successful campaign. For
example, there are a variety of mistakes local governments can make, such as a focus on short-term results, not following strategy, or not creating a brand that is in line with the customer’s expectations. When these mistakes occur, local governments may find their advertising campaign falls flat.

Chapter 7 again looks at city rankings but with regard to the characteristics of a post-industrial city. The chapter focuses on the facets of a modern city with special attention paid to education, patents and high-tech cities. The author concludes this chapter by relating the profile of a post-industrial city to branding. Specifically, cities that have advanced past the industrial phase have the ability to attract new firms and foreign investment with the assets of the city, such as the availability of highly educated citizens, the amount of discovery already occurring in the city, and the degree to which the city is connected to the world economy.

Chapter 8 delves into a serious side effect of city branding and the attraction of new firms to the area: social strife. As cities attempt to attract firms from different parts of the country or even from foreign countries, local governments must be aware that the new firms may begin to chip away at the fabric of the existing community. Whether it is due to higher housing prices pushing existing residents out of the city or the general charm of small businesses being replaced by the sterility of large corporations, local residents, especially those unable to benefit from the new firms, see the evolution of the city as an undesirable outcome. In addition, the new foreign investment and development generally leads to an increase in income inequality which has the potential to create strife between the classes.

Finally, Chapter 9 examines a variety of issues that will be faced by urban managers in the future. From the social issues discussed in the previous chapter to strategies that can be used to create and maintain branded urban hubs, it is clear that city branding is both a problem and a solution. In an era where city branding can make or break the success of a city, simply allowing unfettered growth can have repercussions, especially during the industrial transition. Therefore, it is necessary to form a plan for the new growth which pacifies existing residents while demonstrating a willingness to work with other local governments in order to create a regional strategy for growth.

Overall, this book was very well thought out with regard to the depth and scope of coverage. For some readers that are very knowledgeable on the topic of globalization or branding, it is possible to simply skip those chapters in order to spend more time on the heart of the thesis. But, for those unfamiliar with the introductory material, Anttiroiko does a marvelous job at presenting the foundational concepts in a way that sets up the thesis of the book. My only criticism of the book is the treatment of public choice theory. While the author consistently uses Marxist theory to frame many of his arguments, especially with respect to the use of city branding, he simply pushes public choice theory aside as ‘radical libertarian theory’ and ignores it for the rest of the book. While this is not necessarily a weakness, it would be interesting to hear a discussion of city branding from a public choice perspective. In any case, this is an excellent read for those in the field interested in another important component of urban growth and management – a component that is likely to grow in importance as the world continues to shrink due to the forces of globalization.