



**BOOK REVIEWS**

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**Systems Thinking and Decision Making in Urban and Environmental Planning**, by Anastássios Perdicoulis. 2010. Cheltenham, U.K. and Northampton, Massachusetts: Edward Elgar. 182 + ix. ISBN 978-1-84980-384-7, \$99.95.

We all doodle, at times idly, at times with purpose. We doodle to think, communicate, and make a point. Professors draw diagrams on the blackboard to explain complicated points for students.

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Faculty colleagues draw diagrams on the back of an envelope or a napkin to win an argument. Diagrams clarify obscure points, help cook half-baked ideas, generate new ideas (the dining room of our faculty club provides paper placemats and crayons precisely to allow such graphic dialogue), and even to reach those “aha” moments of great insights. We fold the napkin carefully and save it for future elaboration. The famous Laffer Curve apparently was first drawn on a paper napkin.

But do all diagrams make effective arguments? We have all seen those flow diagrams—arrows going from a box to a circle and to a box again, sometimes with bidirectional arrows, confounding in the end. A picture is worth a thousand words, as the saying goes; but the corollary must be that a thousand pictures may not be worth a single word, if they are not done right.

This volume by Anastássios Perdicóúlis, an engineering professor at University of Trás-os-Montes and Alto Douro (UTAD), Portugal, is a treatise on systematic, and more importantly, systemic, thinking with diagrams in decision making, problem solving, planning, and simulation. His essential premise in the book is that too often important policy, planning, and strategic decisions are characterized by fuzzy thinking, obscure logic, or at best a kind of “black box” process that is not open to review, critique, or challenge. If such thinking were more structured and organized, taking into account hierarchies, processes, flows, causalities, feedbacks, and the like, the quality of decision making would significantly improve. In other words, the book is about systems thinking and its application to “urban and environmental planning,” as the title suggests.

Perdicóúlis’s aim, more specifically, is to introduce “systems thinking” in urban and environmental planning, which, according to him, typically suffers from “non-explicit planning style” characterized by “undisclosed reasoning,” “unverified outcomes,” and “obscure decision-making” (p. 2). Today, while some like-minded observers may agree with his premise about the shortcomings of planning practice, many planners will no doubt see the argument for systems thinking in planning as a bit of a “retro” thinking—a throwback to the fifties and sixties. Even the believers of the author’s premise might wonder if the return to the systems approach is appropriate for a domain of decision making that is seen essentially as containing “wicked problems” (Horst Rittel and Melvin Webber, 1973). We will return to this point presently, but let’s first consider the content and organization of the book.

Perdicóúlis begins by a rather concise and cogent discussion of the concepts, theories, and applications of systems thinking. The uninitiated, especially students, will find the chapter informative and useful. As part of the foundational materials, Perdicóúlis also provides a concise genealogy of systems thinking in the last century, including some of the pre-twentieth-century antecedents. He shows the evolution of this scholarship as evolving from general systems theory in the earlier part of the century to the more defined fields of systems theory, operations research, control theory, and cybernetics by midcentury, then branching out further in applications such as organizational theory, system dynamics, planning theory, and the like later in the century. He also catalogs some of the foundational contributions of the systems lineage.

Perdicóúlis devotes subsequent chapters to the topics of decision making, diagramming techniques, planning—new and existing—and simulation. The latter chapters, especially the two on planning, deal with specific examples. Here the author first considers the systems approach to new planning initiatives, and then looks at some existing plans and discusses how they could have been done differently, and more effectively, if approached from a systems-thinking perspective. These include such broad topics as home safety, arts strategy, health policy, offshore dealing, housing plans, urban and regional development, among others.

One of the major contributions of the book is to emphasize the role of cognitive maps or “mental models” and representation in systems thinking, both as a learning tool and as a guide in decision making. Of the three modes of representation discussed in cognitive psychology—iconic, symbolic, and enactive—systems thinking seemingly draws on the symbolic and iconic modes, as obvious in many graphs and flow diagrams that occupy most of the pages. Another major contribution is to provide a lexicon for various components of systems thinking and icons of representation. Thus the distinction between causal diagrams and process diagrams, and the associated graphic symbols, are useful, although the sheer number of such diagrams (some 104 in a space of 157 pages) is a bit taxing and has declining marginal value.

The value of diagrams in systems thinking nevertheless is well established and embellished in the works of other authors, namely Christopher Alexander (1964). In the tradition of the systems approach he argued that in modern times finding “good fit”—the aim of design—should not be a trial

and error method of eliminating misfits, as was done in premodern times. The intellectual journey to find the appropriate form should begin with a “mental picture” of the context, then lead to a “formal picture of mental picture” of the context and its corresponding form, which then leads to the “mental picture” of form, which in turn becomes a reality when implemented (Alexander, 1964, p. 76). Invoking the systems approach Alexander argued that formal picture involves a hierarchical decomposition of the problem and restructuring the solution from solving subsets of the larger problem—an inverted-tree diagram as it were—that should yield “best fit” architectural solution. He conceded, however, that this approach might not quite apply to planning and design of cities (Alexander, 1965), since the complex urban phenomena are more like “semi-lattice” and thus elude such systemic thinking.

Indeed the possible future of the systems approach to planning began to decline with the growing critique of the rational model, and a general recognition among the theorists that not only is there a cognitive limit of rationality (Herbert Simon, 1982), but also the scope of planning problem cannot be defined even as a complex system, since its complexities are essentially intractable. This acknowledgement came in a rather influential article by Horst Rittel and Melvin Webber (1973), who argued that all planning problems are essentially “wicked”—intractable and indeterminate—as opposed to being “tame,” i.e., complex but determinate. Any attempt to define planning problems in a systemic way is subject to what C. West Churchman referred to as the “environmental fallacy” (1979, p. 4). To quote Churchman:

In the broader perspective of the systems approach no problem can be solved simply on its own basis. Every problem has an “environment,” to which it is inextricably united. (p. 5)

The problem of the system approach to planning is that it is hard to extricate itself neatly from the inherent “environmental fallacy” when the environment itself remains intractable and “wicked.” In *The Systems Approach and Its Enemies* (Churchman, 1979) that he wrote over a decade after his other philosophical treatise on reason and systems theory (*The Systems Approach*, Churchman, 1968), Churchman acknowledged that the systems approach had yet to fully cope with those “enemies”—politics, morality, religion, and aesthetics—that remain hostile to its credibility. In the area of cybernetics, as Christine Boyer (2011) has recently observed, its first order—the control theories—has dominated systems thinking in planning, and only lately has its other order—that of autopoietic or self-organizing systems—begun to influence more recent thinking. Could this second order then begin to confront the “enemies” of the systems approach more effectively?

Perdicoulis’s book will serve well as an introductory text in fields of engineering, management, and operations research, although not written as a textbook. Despite his attempt to bring some new ideas and perspectives on systems thinking from a very practical point of view, the impact on his intended audience—urban and environmental planners—will remain limited. It is not that the systems approach is totally alien to the field of planning, but increasingly planning theory has tried to adapt itself to the “enemies” of the systems approach—politics, for certain, but also moral and aesthetic values in environmental decision making. This attempt to revisit the legacy of systems theory and rational model may have fallen short again as the enemies continue to define the scope and practice of urban and environmental planning.

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**Complexity, Cognition and the City**, by Juval Portugali. 2011. Series: Understanding Complex Systems. Berlin and Heidelberg: Springer. 412 + xxiii. ISBN 978-3-642-19450-4, €119.95, \$169.

Juval Portugali's book is certainly not the kind of book one encounters every day. I would expect readers to enthusiastically embrace it or decidedly distance themselves from it, depending on their background, interests, and professional goals.

The best part of the book probably consists of its rich, multicolored fireworks combining an unusually large and diverse spectrum of ideas from many disciplines, and leading to a broad and fresh vision . . . Vision of what? Certainly not of city planning alone, or even of theories regarding cities. Portugali's vision goes beyond individual boundaries of different fields and shows a persistent tendency to rise toward generality. The book presents itself more as a way of sharing a worldview (and a fascinating one), rather than as an act of teaching. That might have a mesmerizing effect on certain readers. Those expecting a learning manual, that would help them address problems in the light of new theories and methods, might be less satisfied.

The book is structured in four parts. In the first Portugali presents a historical panorama of theories regarding cities, highlighting the limitations of approaches that precede what he calls "Complexity Theories of Cities." The latter rely on a broad interpretation of theories that emerged in the natural sciences, and their adaptation and development in a new realm, capable of addressing complex systems (e.g., cities), the components of which are in turn complex systems (e.g., people). Portugali refers to different scientific streams in complexity theory, but clearly prefers to embrace—in terms of concepts and language—Hermann Haken's "synergetics" (Haken, 1977). Then in the second part of the book he shifts emphasis to informational and cognitive aspects of complex system dynamics, and their significance for the theories of cities. Starting from these conceptual and methodological building blocks, in the third part he focuses on implications for planning and urban planning in particular. Finally, in the last part, by concentrating on modeling, he addresses special topics related to cities and planning.

Portugali's most prominent message is one that was already present in his earlier publications: city planning cannot afford to ignore the complexity and nonlinear behavior of cities. It would have been self-contradictory for him to indicate in this book step-by-step procedures to "plan" complex dynamic systems as if they were simple entities obeying linear laws. Instead, he chooses to draw our attention to deep-going and often unforeseen implications of nonlinearity, which may require us to change significantly the approach to planning in general, and urban planning in particular.

The book covers a vast amount of material. However, in my view, it is neither a textbook that systematically provides the theoretical basis for some field of knowledge, nor a look-up manual with solutions to be used in practice: in brief, it does not teach, but it does reveal. For some readers, this might be the most important achievement to which an author can aspire. For others, the fact that the concrete theory is sometimes sketchy and even incorrect makes the endeavor unsatisfactory. Chapter 4, in which Portugali introduces key ideas he uses throughout the book, is among the most problematic chapters. For example, an important concept he discusses at length, and justifiably so, is self-organized criticality (SOC). He explains the "sandpile model" and draws a parallel between SOC and the way cities develop. He states that "as the control parameter crosses a certain threshold—a critical point in the language of SOC, the system (sandpile) enters a steady state" (p. 70). In reality, one of the key aspects of SOC is precisely the fact that there is *no* "threshold" of a control parameter for the steady state to be reached—there is *no* tuning: individual "thresholds" operate locally, but the steady state is reached globally (see Bak, 1996). He presents "Mandelbrot's theory of fractals" as one of a group of "short-term complexity theories," which "concentrate on the process of emergence, that is, the bottom-up process by which local interaction between the parts gives rise to a global structure" (pp. 55–56). Actually, fractal theory is concerned with *patterns*; the fact it may also suggest the generation algorithms for those patterns does not turn it into a theory about the "process of emergence."

Other definitions, too, are incorrect and misleading, for example “chaos theory (or theories) is (are) a short-term complexity theory that looks at the reverse process of the ‘emergence’ of chaos out of order” (pp. 55–56). For readers with a background in nonlinear science, such perplexing statements tend to ruin the image of the book and discourage them from searching for valuable insights. It is surprising, to say the least, to read, “Shannonian information is a property of simple and closed systems, while semantic information of open and complex systems” (pp. 281–282). We would indeed be in trouble if complex systems dynamics would have to give up the “Shannonian,” quantitative approach to information and rely on “semantic information” only.

There are also examples at a more elementary level (convection is defined as “a process in fluid dynamics referring to the flow of heat, e.g. molecules, from the hot to the cold region of the liquid” (p. 53)). In spite of the author’s insistence on a web of concepts including complex systems, chaos, fractals, self-organization, etc., it is important to keep in mind that these concepts are not *intrinsically* linked with each other: phrases such as “open, complex, and as such self-organizing systems” (p. 282) are not justified. Other smaller, factual errors do not help restore one’s confidence either (e.g., Brancusi’s sculpture “The Gate of Kiss” was “imbedded in the cityscape of Bucharest” (p. 145); in fact, it sculpture was—and still is—located in another Romanian city, Targu Jiu).

How important are such confusions and inaccuracies? I am of the opinion that it would be a loss to the reader to give up the lecture of the book because of them. There are many deep, original ideas worth exploring in this extremely diverse material. The wealth of domains that Portugali touches upon is breathtaking. Whether he addresses philosophy, discussing ideas of the Frankfurt School, or considers an operational approach to the concept of memes, or highlights merits of network theory from Watts and Strogatz’s (1998) small world to Barabási’s (2002) scaling laws, or explains cellular automata from Wolfram’s (2002) general theory and their applications to the dynamics of cities, he strives energetically for new connections.

Portugali applies metaphors abundantly on this journey. Generally, metaphors are recognized for their power to support explorations into new, unmapped territory, but their success depends, among other things, on the choice of the terms addressed. For instance, parallels drawn between the paradox associated with “Schrödinger’s cat” and paradoxes in city planning may be perceived as a stretch: “The fate of the prediction . . . is determined by means of the interaction between the many agents of the system. In fact, Schrödinger’s cat that was discussed above was exactly about this: in the subatomic quantum domain, he said, there are no external observers but rather interacting entities” (p. 277).

There are at least two broad categories of dangers that may affect readers. On one hand, one may end up believing the described approaches to intricate problems can be immediately applied based on their description in the book. On the other hand, one may think the methods described here are too difficult and sophisticated to be attempted. Both assumptions are largely incorrect. The most fruitful approach to Portugali’s book probably is to allow oneself to be stimulated by the many interesting ideas and the wealth of original insights, and subsequently consult original sources for more concrete information on concepts, methods, and their applications.

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**GeoHumanities: Art, History, Text at the Edge of Place**, edited by Michael Dear, Jim Ketchum, Sarah Luria, and Douglas Richardson. 2011. New York: Routledge. 326 + xviii. ISBN 978-0-415-58979-6, cloth, \$130; ISBN 978-0-415-58980-2, paper, \$47.95.

In 2007 the Association of American Geographers sponsored a Geography and Humanities Symposium to uncover the emerging intersection of geography's focus on space and place with humanistic disciplines such as history and literature and the visual arts. *GeoHumanities*, the resulting book, contains over two dozen examples of cross-disciplinary work that emerged from presentations at the symposium. It is arranged in four sections, each introduced by one of the four editors: creative places, spatial literacies, visual geographies, and spatial histories. Routledge also published a companion volume with roots in the symposium, *Envisioning Landscapes, Making Worlds: Geography and the Humanities* (Daniels et al., 2011; reviewed by George Roberson and Richard Wilkie in this journal's May 2012 issue), which contains solicited contributions on the philosophical and intellectual intersections among the disciplines. Both volumes are designed to introduce to students, teachers, and practitioners in geography, history, and urban and regional planning many of the creative and imaginative approaches that the visual and literary arts can offer in re-reading space and place.

The editors of *GeoHumanities* introduce the volume by considering the growth of interaction between geography and the humanities as one of increasing ferment among the disciplines, energized by global social, technological, and political change. The contributors are transdisciplinary in scope and intent, and they engage their subjects through the traditional categories of text-based (novels, histories), visual (photography, film), and cartographic (maps, spatial ecologies), even as they push their disciplinary boundaries into geography's realm.

The map as a visual tool and mapping as a heuristic device, central to traditional inter-weavings of the disciplines, remain as the nexus of the "spatial turn" (Peta Mitchell, p. 71) in contemporary research, analysis, and presentation. Of particular importance to urbanists and regional planners is the use of geographic information systems (GIS). As Peter Bol notes in his essay on creating an historical data base on China using GIS: "The map is basic to thinking about spatial variation, just as the chronology is a basic tool for thinking about temporal change.... Being able to determine where things happened and to see many things happening across space is something humanists find it easy to be interested in" (pp. 297, 299).

Historians' use of GIS is becoming more advanced, moving from traditional cartographic representation of topography, boundaries, or locations where events occurred to more sophisticated spatial analysis that asks new questions as it frames the discourse. For example, the essay "Mapping Time" by Edward Ayers reports on a project that uses GIS to "throw" the "formulaic understandings" of the geography of the Civil War "off balance a bit" (p. 216). A spirited and successful example of a web-based interactive experience for students by Amy Hillier on the work of the African-American sociologist W.E.B. Du Bois maps Du Bois's classic study *The Philadelphia Negro* (1899), in which he described the daily lives and struggles of African-Americans in the city's Seventh Ward neighborhood. Another project on "spatial storytelling" (Trevor Harris, Susan Bergeron, and L. Jesse Rouse, p. 226) used geovisualization techniques to characterize the phenomenology of place through the multiple experiences and perspectives of individuals and groups through time.

Cartographic projects such as a "disOrientation Guide" of the University of North Carolina-Chapel Hill campus produced by the CounterCartographiesCollective work particularly effectively as student efforts, particularly when they include an activist component. Michael Dear notes that when artists and scholar critics collaborate on place making, they can reveal how "creativity and place come together to imagine and build better ways of realizing our collective futures" (p. 14). For example, in a "useless map" of Cambridge, Massachusetts, the Institute of Infinitely Small Things renamed the city's streets and public places to "reflect who is included (and who is excluded) from a city's history" (Catherine D'Ignazio, an artist and educator, a.k.a. kanarinka, p. 48). Artists, geographers, and urban planners joined together with community activists to name and rename public places to create a shared sense of community and belonging.

Many of the essays on projects in the visual arts and literature are equally compelling in creatively examining human experience of space and place. Emily Eliza Scott's essay on "undisciplined geography" (p. 50) offers a number of examples of artists' projects that "provoke new ways of seeing and actively participating in the world" (p. 52). In Norma Iglesias-Prieto's essay, beautifully rendered

color illustrations of paintings by children who live in Tijuana and San Diego suggest their different attitudes, perceptions, and knowledge of each other's cities. Other artistic responses to various geographic themes include a "wordmap" (Howard Horowitz, p. 107) of Manhattan Island, photographic exhibits of landscapes of war and the aftermath of September 11, colorful sketches of transborder urban architecture, and dramatic photographs of landscapes devastated by toxic chemicals and nuclear weapons research. All are creative approaches that open up new avenues for transdisciplinary examination of space, place, landscape, and design.

Those four geographic variables—space, place, landscape, design—are the focus of essays that engage the literary arts. In a *tour de force* that integrates creative writing, urban history, and geographic theory, Timothy Mennel turns the tables on traditional urban studies through an imaginative "novel" of Robert Moses and his role in reshaping the landscape of New York City. Mennel's retelling of *The Power Broker*, Robert Caro's (1974) biography of Moses, offers a fictional narrative that probes the social and psychological frameworks that underlay some of the characters, both real and imagined, who were involved in the actions that changed the face of the city.

The life and writings of Henry David Thoreau have been the source of philosophical, literary, and environmental analysis for over a hundred years. Sarah Luria writes authoritatively about Thoreau's scientific and poetic mind as she ponders his survey and map of the Concord River in 1859. While examining both the map and his text Luria is able to follow Thoreau's thoughts and language from his early writings that touch on the romanticism of nature to a more biocentric reading of his later work. Her clear and cogent writing contrasts with other authors' reliance on the language of postmodern critical theory that can often obscure rather than clarify revealing linkages between metaphor and the intersections of landscape and history.

Not all efforts in *Geohumanities* successfully integrate spatial science with the methodologies of the humanities. Some authors tend to use maps and GIS within the more traditional range of the social sciences, such as an essay on the historical development of railways in nineteenth-century Wales, while observations and photographs of urban street life may be found in many art gallery exhibits that have touched on urban social conditions.

Although the editors suggest that geographers working in interdisciplinary modes with historians, artists, photographers, writers, or designers are newly innovative or even "radical," in fact there are numerous examples of such collaborations in the past. For example, many site-specific public arts projects have integrated a geographic knowledge of landscape with aesthetic design; museum exhibitions on cultures and histories of specific places frame their exhibits through cartographic displays; video artists film townscapes and cityscapes using the language of urban geography; the arts and stories of indigenous cultures are imagined by both art historians and cultural geographers; and novels are studied through geographic lenses as well as literary theory. Geographers have also collaborated as coparticipants in projects to preserve environments, viewsapes, historic architecture, and neighborhoods. Nonetheless, the attempt to bring to the forefront of twenty-first century geography the potential, indeed the necessity, for interdisciplinary engagement with the humanities is the over-arching message of this collection.

The case studies chosen for the volume have much in common: they are contemporary projects that can elicit potential interdisciplinary interaction. Most have been edited to ten pages with informative footnotes, and often with color illustrations. Many can be contextualized through use of its companion volume *Envisioning Landscapes*. Together, both volumes forge a new era for geographic, cultural, urban, and regional studies.

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**Lectures on Urban Economics**, by Jan K. Brueckner. 2011. Cambridge, Massachusetts: MIT Press. 285 + vii. ISBN 978-0-262-01636-0, \$35 (paper).

Jan Brueckner's slim new book is a welcome addition to a fairly thin market in urban economics textbooks. In only 245 modestly sized pages, the book's concise prose zeros in on the core topics of the field, making it possible to digest in a single semester, although the topics could be explored over a lifetime. As it happens, the author has almost a lifetime of teaching and influential research to draw on, as well as years of editing the *Journal of Urban Economics*, and this is reflected in the book's sage and perspicacious writing. Few competitors can offer the depth and breadth that Brueckner provides in surveying the field, which makes his book an excellent read for teachers and researchers, as well as students. It stands out for being exceptionally smart, as well as cheap, and small enough to read while standing on the bus.

In harmony with Brueckner's research, the book's primary thrust is theoretical, although he does cite empirical studies to motivate and discipline his theoretical derivations. Unlike most theoretical books, this one does not burden the reader with heaps of mathematics and cascading rows of equations. Instead, Brueckner explains the logic of urban economics using tight sentences and crisp diagrams, giving the book a clean and satisfying aesthetic. Nevertheless, it does require some background in microeconomics at the intermediate level, including familiarity with utility theory. Brueckner is also fond of using mathematical notation, including Greek letters, and fairly sophisticated mathematical concepts, such as multivariable functions. While in most cases this is called for, in others he could reduce the notation to a barer minimum, without much loss of generality, to draw in a broader readership.

Extra mathematical notation appears as early as the opening chapter, which contains the requisite and important explanations of why cities exist. In an otherwise crystal-clear explanation of returns to scale (p. 4), average output of a small firm is denoted " $\alpha$ ," and output of a larger firm is " $\beta$ ," where  $\alpha < \beta$ , although a "1" and "b," or just a "1" and "2," would suffice. Despite the notation, Brueckner does an excellent job explaining how cities may spring up from agglomeration economies in production and in transportation costs. Here he displays a knack for using the simplest model needed to demonstrate concepts. He is also quite adept at explaining and justifying standard assumptions in urban economics that may make the newcomer uncomfortable, such as perfect mobility, but that are particularly valuable because of their power and ability to predict long-run phenomena.

The book really takes shape in chapter 2, which covers the economics of urban spatial structure. Brueckner explains how households decide where to locate, making trade-offs between their desires to be close to work and to consume more space. The explanation dovetails nicely into one explaining how profit-maximizing firms decide to build housing on land that has ever-increasing value towards the urban center. The firms heap capital in ever-increasing concentrations towards the central business district, giving cities their shape from central skyscrapers to low-density suburbs. I especially appreciated chapter 3, which modifies this core model with freeways, multiple job sites, durable housing, and households of different incomes, providing essential insights without getting bogged down in unnecessary details. The chapter concludes with a neat explanation of the Harris-Todaro model of urban overmigration in developing countries, complete with Brueckner's integration of a land market. Although the book is meant to be an introductory textbook, it nevertheless contains material that almost all economists would learn from.

The next chapter covers the complex issues around land-use controls, mustering arguments in their favor while also explaining how they can backfire and reduce welfare by raising housing costs. This analysis is important for all those interested in urban policy and planning, as it questions some conventional wisdoms, while refining others, and calls for policy to be directed most effectively at helping cities benefit their residents. But unlike the work of Ed Glaeser, this section may have a hard time converting the unwashed masses not steeped in economic wisdom, as some of its more subtle arguments rest on allusions to "mathematical analysis" (p. 85), rather than relying on colorful anecdotes and forceful intuitive ideas. As he must, Brueckner presents the standard logic for why cities may become overcrowded and underprovide open space, but he is good to mention that social interaction is actually higher in denser areas, which means that too much open space can be a bad thing. It would have been worth adding that density in production may be underprovided, as nearly a third of the productivity gains from density are taxed away by federal and state governments.



Brueckner is less shy with equations in his chapter on freeway congestion, where he explains the virtues of congestion tolling. Although the book might benefit from omitting a potentially confusing section on subsidies, the contrast he draws between road and air congestion illustrates well how atomistic, relative to coordinated, behavior leads to inefficient behavior through negative externalities. Particularly noteworthy is Brueckner's presentation and derivation of the user-cost of housing model in chapter 6. He does an excellent job clarifying how favorable tax treatment typically benefits owner-occupiers, with the exception of accelerated depreciation allowances, which instead benefits renters: together with the progressivity of income taxes, this provides a tax incentive for tenure choice. A page later, he explains intuitively how housing inflation can feed a housing bubble, as capital gains lower the user-cost of housing, leading to higher bids for housing and a self-perpetuating cycle. He might do more to clarify how this bubbling ends, but for the most part readers should find this explanation helpful and exciting.

A chapter on housing policy does a nice job of comparing the relative advantages of different housing policies, using broader economic principles. Brueckner proceeds to rank income grants, housing vouchers, proportional rent subsidies, and public housing according to how they improve household welfare and reduce slums. He also bravely discusses homelessness and how regulations against single-room occupancy housing may make it too expensive for some individuals to avoid living on the streets.

In only 25 pages, Brueckner covers tremendous ground in his chapter on the economics of local public goods and services. Here he explains the level at which local governments provide public goods efficiently, and how in a majoritarian democracy a public good may be under- or overprovided. This leads into a discussion of how residents may vote with their feet and how that love-it-or-leave-it principle may lead to surprising efficiency gains. Of course, the analysis comes with complicated problems related to property taxation and urban sprawl, as well as inequities and peer-group effects, which Brueckner discusses with sensitivity and grace.

It is a little surprising that the book contains a chapter on pollution, which seems to belong more in an environmental economics textbook. Nevertheless, the chapter contains important lessons about negative externalities, and how they may be corrected by Coasian bargaining, Pigouvian taxation, or a cap-and-trade system, depending on the circumstances. Amid discussion of whether price or quantity regulation is optimal under uncertainty, Brueckner offers the following: "the relevant analysis, first offered by Martin Weitzman (1974) isn't really illustrated in simple diagrams" (p. 196). That may be somewhat misleading, as I have seen the Weitzman analysis explained in arguably simple diagrams in other undergraduate textbooks. That this statement is the closest to an inaccuracy that I could find in this book, a first edition with 245 pages, is testament to the care and thoroughness of its composition.

The penultimate chapter on crime contains an interesting and contemporary take on the topic. Brueckner provides a deep and fairly novel discussion of how dividing crime-prevention resources between rich and poor communities could involve trade-offs between equity and efficiency. Personally, I most enjoyed Brueckner's last chapter, on urban quality-of-life measurement. It's an important topic that many books do not cover, as it points out the important fact that housing may be most unaffordable in areas that are the most desirable to live in, such as on the California coast. Brueckner does a nice job contrasting economic quality-of-life measurements, based on willingness to pay, with those based on ad hoc opinions seen in the popular magazine articles. He also provides lists of the most desirable cities (table 11.1, p. 243), although alternatives that don't elevate Albany and Binghamton to unbelievably high levels might be more compelling.

In case there was ever any doubt that this is a textbook, there are also many exercises at the end. I particularly enjoyed the one that analogizes the optimal number of residents in a city to the number of bathers in a hot tub (p. 257). Even in a serious and concise textbook, Brueckner's good sense, wit, and humor come through.

Overall, this book does an excellent job of surveying the theory of urban economics. It does so cleanly, neatly, concisely, and about as simply as is possible, making it accessible to a wide audience. The diagrams and tables help the book illustrate many concepts without resorting to mathematics. In its brevity, the book is rather Spartan in its empirical content, and the allusions to empirical evidence in the literature are generally impressionistic. Given its sophistication, the book can be used effectively as a textbook for advanced undergraduates or master's students, although I would expect more empirically minded teachers to want to complement the readings with more maps,

illustrations, and other empirical nuggets. Although the book does not seem to be marketed to Ph.D. students, its scholarly qualities and up-to-date reference list make it an excellent introduction to many urban economic topics for even the most sophisticated readers. I would recommend that anyone teaching urban economics have a look at it.

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**Statistics for Spatio-Temporal Data**, by Noel Cressie and Christopher K. Wikle. 2011. Series: Wiley Series in Probability and Statistics. Hoboken, New Jersey: Wiley. 588 + xxii. ISBN 978-0-471-69274-4, \$84.95.

If you want to know where empirical research in regional science is heading over the next few decades, then start here. Noel Cressie and Christopher Wikle make a cogent argument that Hierarchical Models (HMs), and especially Bayesian HMs (BHMs), represent "the final frontier" of spatiotemporal data analysis in the twenty-first century. They want to change the way scientists and engineers practice statistics, particularly for spatiotemporal data, and so have provided an encyclopedic reference to lead practitioners to this frontier.

Given its aim and scope, naturally this is a difficult book in that it requires a fairly advanced level of mathematical maturity and understanding of statistical inference to get through, and it is probably most useful for a graduate class, or as a reference book for a researcher aiming to apply the methods covered. However, I think there is something to be gained for almost anyone who analyzes data that has a space or time dimension, particularly from the first chapter or two and the extensive bibliographical notes at the end of each chapter. There are many nuggets of wisdom throughout, and the authors' extensive experience applying the methods covered shows.

Don't be misled by the notion that an advanced statistics book is too technical and so inappropriate for many regional scientists. This is the information age; regional science, along with many other fields, is in a tooling-up phase as researchers seek out appropriate methods to analyze increasingly rich and complex data. To shy away from the appropriate methods because they are technically demanding is to be unscientific. While the book does not lead you by the hand, it does clearly point the way, with plenty of signposts of where to go next on your journey to statistical enlightenment.

Cressie and Wikle adopt the notation  $[X|Y]$  to represent the probability distribution for  $X$  conditional on  $Y$ . With this notation, the BHM is specified by three equations: (1) the data model  $[Z|Y,\theta]$ , (2) the process model  $[Y|\theta]$ , and (3) the parameter model (aka the prior distribution)  $[\theta]$ , where  $Z$  are the observed data,  $Y$  is the actual process we are attempting to model or analyze (typically unobserved or observed with error), and  $\theta$  are the parameters relating the distribution of the unobserved  $Y$  to the observed  $Z$ . In contrast, the standard model for analysis in the twentieth century, for both frequentists and Bayesians, has been to consider only  $[Z|\theta]$  as the data/process model, so that "both approaches miss the fundamental importance of modeling the process  $Y$ , where the Physics/Chemistry/Biology/Economics/etc. typically resides" (p. 27) and ignore the difference between a theoretical variable  $Y$  and its observed empirical counterpart  $Z$ .

Cressie and Wikle's goal is "to take science on a path where original observations  $Z$  are used as much as possible . . . where uncertainties are captured in a HM using conditional probabilities, and where inference is based on the posterior distribution . . . This is the sharp statistical tool needed for scientists to ascend the knowledge pyramid" (p. 28). After this rousing manifesto, they largely deliver on outlining this path in the first couple of chapters, with some very nice examples to illustrate.

The first two chapters are exceptionally good, and I would recommend them to anyone. Chapters 3 through 6 consist largely of review material, covering "twentieth-century" time series, spatial and spatiotemporal methods, with only a few pages at the end of each chapter on BHMs (though, again, the bibliographical notes alone are worth the price of admission). Chapters 7 and 8 provide a more thorough exposition of the main tool for the "final frontier," BHMs, and their

application. For the practitioner, I think the most useful chapters are the last three, especially chapters 8 and 9, where the authors show how actually to perform an empirical analysis with a BHM, and provide several examples of applications. The example of the Eurasian Collared Dove invasion of North America in chapter 9 was especially enlightening for me, because I could see immediately how the same modeling and inference approach could potentially be applied to regional economic data.

It would be strange indeed, with a book this long and technically demanding, if I didn't have a few minor gripes. The color illustrations are wonderful, and I don't see how the information they contain could be effectively conveyed by other means, but the color-coded equation system did not work for me. Maybe it's just me, but I don't particularly like my posteriors to be red (or green or blue). I even copied some pages and found the equations easier to parse in standard black on white. Further, as with most encyclopedic references, there are a lot of lists of terminology. For example, if you don't already know what "infill asymptotics," "increasing-domain asymptotics," or "mixed-domain asymptotics" are, I don't think you will know what they are after reading page 35, but on the other hand, at least you will have a good idea where to look to find out more. Maybe you shouldn't bother though, since on the same page we learn that, as with Bayesian inference in general, "in the HM approach, there is rarely need to do asymptotic statistical analysis" (p. 35).

One final nitpick. At the very heart of the book is a canonical example of implementation of a spatiotemporal BHM using Markov Chain Monte Carlo (MCMC) (pp. 454–460). While that provides a relatively straightforward model for pedagogical purposes, it is well known that the Wishart prior is a rather restrictive specification in practice (though admittedly, coming up with viable alternatives has been something of a challenge). Since this model is ultimately where the book has been heading for 450 pages, it would have been nice to see the authors take the exposition a little further, particularly with respect to alternative priors, though again, the copious references and the thorough bibliographical notes at the end of chapter 8 guide the reader to the necessary sources.

Cressie and Wikle's book is an important reference for someone embarking on a research effort involving spatial or temporal data uncertainty and modeling, and it provides techniques that are directly applicable to the spatiotemporal analysis of the type of data commonly occurring in regional science. I expect their book will be a useful and important reference for researchers in regional science for the coming decades. I would highly recommend it to any researcher embarking on a serious scientific analysis of regional data.

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**Regional and Urban Policy and Planning on the Korean Peninsula**, by Chang-Hee Christine Bae and Harry Richardson, with contributions by Eric J. Heikkila, Myung-Jin Jun, Won Bae Kim, Suk Lee, Curtis Melvin, and Jiyoung Park. 2011. Cheltenham, U.K. and Northampton, Massachusetts: Edward Elgar. 265 + ix. ISBN 978-1-84980-284-0, \$150.

With the progress of globalization and the knowledge-based information society, there has been a dynamic global space economy on the one hand, and increasing disparities between poor and rich countries on the other. Two Koreas in the Korean peninsula clearly represent a distinct example of both dynamics and disparities. Since the Korean War (1950–53), South Korea changed from one of the poorest countries, with gross national income (GNI) less than US\$100 per capita in the 1950s to more than US\$20,000 in 2010, and from an aid-receiving nation to an aid-giving nation. Per capita GNI of North Korea was around US\$1,000 in 1970, which was slightly higher than that of South Korea at that time. However, North Korea's per capita GNI has not increased much since then, reaching only around US\$2,000. Considering the division of the peninsula into two Koreas and such contrasting performances of economic development, it is fascinating to read the analysis of the spatial development and reunification issues in Chang-Hee Christine Bae and Harry Richardson's book.

It comprises sixteen chapters, divided into four parts. The first two parts deal with mainly regional issues, the trend of changes, and regional policy, focusing on South Korea; the third deals with North Korea; and the last touches on reunification issues on the Korean peninsula.

Part 1 has an introduction by Bae and Richardson and five other chapters. "Re-inventing Korea" by Eric Heikkila in chapter 2 is very fresh and suggests broad social and cultural schemes for the future of Korea. Heikkila asserts that reinventing Korea should emphasize "the cultural values and social cohesion that are so distinctly Korean, and that are Korea's strongest and most vibrant qualities" (p. 16). Considering the geopolitical location of Korea in North-East Asia, his suggestions of enlarging its spatial orientation toward that larger region and of constructive regional cooperation for mutual benefit should be seriously considered in Korean society.

After Heikkila's chapter, two chapters by Bae and Richardson and one by Myung-Jin Jun introduce demography, urban issues, and the dominance of Seoul in South Korea. Most of the migrants from the countryside concentrated in Seoul during the 1970s and 1980s, while suburbanization from Seoul to suburban Seoul (the two together forming the Capital Region) has progressed significantly since 1990. The three chapters together generally reveal that changes of South Korea's spatial structure are related to urbanization, dominance of the Capital Region, and suburbanization within the Capital Region. The core-dominance structure resulted in diverse problems such as imbalance of housing supply and demand and high transportation and energy consumption. Myung-Jin Jun analyzes housing issues with regard to housing market characteristics and transportation issues, such as congestion costs and energy consumption. There is considerable overlap in the descriptive analysis in these three chapters, and it might have been better to integrate them into one or two chapters. In the final chapter in part 1 Bae and Richardson introduce briefly two case studies of livable community projects. One is a study of the Cheonggyecheon Restoration Project in Seoul, which Bae and Richardson describe as "a top-down project with minimal community participation" (p. 70). The other is a study of a "bottom-up" (p. 72) project in the city of Kwangju. All told, part 1 seems to be helpful as an introduction to sketch general spatial trends in Korea before the book proceeds to an in-depth analysis of spatial policy and planning in the Korean peninsula.

The second part of the book deals with major regional policies in South Korea. Bae, Jun, and Richardson analyze the Greenbelt (GB) policy, which has been one of the hot and controversial issues and the most important land-use policy in South Korea. The policy, established in 1971, has several objectives: to slow down population and industrial concentration in Seoul, prevent urban sprawl, reduce air and water pollution, and preserve natural environments (p. 76). "Although Greenbelt policies were adopted in and around 33 large, medium and small cities . . . controlling urban growth in Seoul became a national obsession" (*ibid.*). The results of a spatial analysis of the GB's impact suggest that "Seoul has had a polycentric urban form since 1981" (p. 81), and the Greenbelt has significant impacts on "core densification and leapfrog development with respect to both employment and population" (p. 83). However, the leapfrog effect might be closely related to the new-town policies in suburban Seoul. Furthermore, the dynamic processes of a multi-core structure and core densification might be related to the changes of economic structure toward a knowledge-based economy since the 1990s, rather than the results of the GB policy.

In two chapters Harry Richardson culminates critical discussions by a strong representation of his views and philosophy on regional policies in Korea. Richardson strongly criticizes President Roh Moo-Hyun's balanced national development policies and the New Administrative City Plan, because he feels they contribute to the Capital Region's losing global competitiveness. Richardson emphasizes that interpersonal equity and social policies should be considered instead of balanced national development. Similarly, Richardson incisively criticizes the Grand Canal Waterway project and the Four Rivers Restoration Project of President Lee Myun Bak's administration. He criticizes recent regional policies of the Presidential Committee on Regional Development, which he regards as the result of borrowing ideas from French and U.K. policies, because they are based "more on political factors than on regional economics principles emphasizing functional economic regions" (p. 115). Richardson tries to see objectively the practical problems of the regional policies of South Korea, and warns that South Korea may lose international competitiveness if it neglects the goal of increasing global efficiency. These criticisms and discussions are valuable, and Korean government policymakers should listen attentively.

Part 3 examines North Korea in terms of various data, the role of markets, and business strategy. Suk Lee suggests that the availability and lack of access to Democratic People's Republic of Korea (DPRK) statistics was no longer a problem by 2000. He states that "the DPRK statistics have serious innate problems with statistical definition, exaggeration and manipulation" (p. 133) before the mid-1990s, but the case since then is different, the data being characterized by clear definitions and "relatively free from exaggeration, manipulation and correction" (*ibid.*). Lee asserts that even though the reliability of the GDP statistics cannot be questioned, DPRK demographic data may not be reliable. Considering that most observers question the reliability and availability of North Korean data, the result of Lee's detailed analysis would seem to be very useful for scholars and policymakers.

In another chapter Curtis Melvin reveals that a spontaneous grassroots network of markets has begun to grow to dominate economic life for the majority of North Korea's population. Considering that the role of the market was important for raising people's economic well being in the former Soviet Union, this suggests that North Koreans will continue to increase their ability to engage in private transactions. Won Bae Kim stresses the importance of economic reform and openness for the survival and lifting of the North Korean economy. He suggests "H-shaped transport arteries" (p. 172) and six growth centers are needed, and proposes a mixed public-private and gradual approach to build infrastructure through international cooperation. Richardson and Bae propose a global business strategy in the pacification of North Korea. They examine two cases in North Korea—the Kaesong International Industrial Complex (near the Demilitarized Zone) and the Tumen River Project, in the north-east corner of the country—and they assert strongly the global business strategy not only for North Korea but also for the Middle East "to deter terrorism or potential terrorist activities" (p. 193). Despite the fact that the chapters by Lee, Melvin, and Bae and Richardson deal with different themes, their suggestions are valuable and relate closely to lifting up the economy and pacification of DPRK.

The final part of the book deals with the issues related to reunification. It is not an easy task to examine reunification under the geopolitical uncertainties. Accordingly, the authors in this part focus on the spatial issues, rather than political and military issues. Considering lessons from recent history of economic integration, Jiyoung Park suggests some strategies of inter-Korean economic integration based on a peaceful and gradual path toward reunification. He also suggests the need for a North-East Asian inter-country multiregional economic model and for long-term spatial plans for the two Koreas after unification. Won Bae Kim and Richardson analyze two alternatives for reunification: a sudden Reunification Day scenario and a Transitional Phase approach that requires considerable preparation before reunification. Considering the examples of reunification of East and West Germany, and of China and Hong Kong, and also increased integration of the U.S. and Mexico, the Transition Phase approach is much preferred. In the book's final chapter Richardson and Bae examine options for the location of the capital city of a reunified Korea. Comparing four alternatives, they conclude "the most likely outcome is that Seoul would be the capital of a reunified Korea, not a bad idea because of proximity to Incheon International Airport and the benefits derived from world city status" (p. 240). The conclusions and suggestions of the pieces in this final part are not new but they seem to be reasonable and should be listened to attentively.

Most of the books on Korea have focused on South Korea, and accordingly it is rare to deal with the spatial issues of the two Koreas together. In this aspect Christine Bae and Harry Richardson make an appropriate and significant contribution to understanding the Korean peninsula by dealing with the broader issues there, including reunification and hot spatial policy issues raised in South Korea. Despite some overlaps between chapters and some descriptions already known, the contents of the book as a whole are fascinating and insightful. I see it as very helpful to an understanding of spatial policy and planning in the Korean peninsula by both international and Korean readers, and by both academic scholars and general readers.

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**Demography at the Edge: Remote Human Populations in Developed Nations**, by Dean Carson, Rasmus Ole Rasmussen, Prescott Ensign, Lee Huskey, and Andrew Taylor. 2011. Series: International Population Studies. Farnham, Surrey, U. K. and Burlington, Vermont: Ashgate.

Conventional theories of demographic change have focused almost exclusively on the national and international levels. This state-centrism has led to the relative neglect of intranational differences in demographic dynamics, with rural-urban comparisons the notable exception. Dean Carson, his coeditors, and contributors to *Demography at the Edge: Remote Human Populations in Developed Nations* attempt to fill this gap by examining the dynamics of remote populations in Australia, Canada, Norway, Sweden, and the United States. There are thirty contributors in addition to the five editors, and fourteen of the seventeen chapters have multiple authors. Through a set of interdisciplinary case studies and synthesis chapters, the group takes steps to build upon existing substantive knowledge about remote populations in the five countries, and they also highlight important methodological challenges to demographic research on remote areas in general.

The first five chapters are on demographic methods, models, and data for remote areas. The countries' national governments collect data in various ways—censuses, surveys, and registers—and face a host of challenges to accurate enumeration and analysis. The issues are diverse, ranging from the difficulty of physical access to communities not connected by transportation infrastructure, to politically charged questions about the definition of indigenous status, and historical discontinuities in methods and definitions. While some of these challenges are not unique to remote areas, their multiplicity and magnitude make such areas an unusually difficult context for demographic research.

Indeed, the authors clearly advocate that more complete and detailed data are needed. Improving knowledge of remote area populations is not only important for academic theory building, it also has important implications for the distribution of government resources to remote communities. Improving data will require a significant increase in funding, and “convincing the general public of the value and importance of core national data sets” (Andrew Taylor, Lauren Bell, Per Axelsson, and Tony Barnes, p. 35). Even in the absence of such changes, however, improvements are possible, such as utilizing experts' knowledge of local conditions and microsimulation to improve population forecasts (Andrew Taylor, p. 48).

In the remaining chapters, contributors focus on the unique population dynamics observed in remote areas of developed countries. While these cases continue to highlight methodological challenges, they primarily contribute to the substantive, empirical knowledge of the populations. A number of the analyses focus on population composition and the components of population change—fertility, mortality, and migration. They demonstrate that remote populations are often sensitive to demographic and socioeconomic change, which contribute to temporal and spatial diversity. However, a number of common characteristics tend to distinguish them from national averages, including small size and low density, high mobility, young age structures, and high sex ratios (Dean Carson, Prescott Ensign, Rasmus Ole Rasmussen, and Andrew Taylor, p. 6). They also tend to have high proportions of indigenous peoples, who often have significantly different demographic and socioeconomic profiles. Given this, and other sources of heterogeneity, a number of contributors stress that average characteristics of remote area populations often mask bi- and multimodal distributions.

Authors in the second part of the book also examine the social, economic, and ecological causes and consequences of demographic change. While one could argue that demographic processes should always be contextualized as such, these contributions are particularly important because remote populations tend to be embedded within sensitive economic and ecological contexts. For example, many remote coastal communities in the Arctic are facing the negative effects of erosion and sea ice loss due to climate change; others depend upon natural resource extraction and are vulnerable to boom-and-bust commodity cycles. These and other factors (e.g., tourism) drive aggregate population growth (or decline) via in- and outmigration. They also affect the composition of populations by selecting particular types of persons as in- and outmigrants, which has important cumulative social and demographic consequences (e.g., by affecting fertility rates) regardless of the level of net migration. Examples addressed here include “bubble-and-crater” age distributions and extremely high male-sex ratios.

Despite the volume's limited geographic scope, it covers an extremely diverse series of population dynamics, policies, and methodological issues. Fortunately, four of the editors develop a unifying framework of the key cross-cutting themes, which they term, "The Seven D's of Demographic Research at the Edge" (Carson, Ensign, Rasmussen, and Taylor, p. 11). According to the framework, remote areas are *different* from peripheries as conceptualized in core-periphery models; they are only weakly tied to national core regions, and their own population centers serve as weak cores, at most. As such, the demographic (and related social and economic) relationships within remote areas, and between remote areas and national cores, are idiosyncratic and difficult to situate within a broader theoretical framework. Remote areas are also *distant*, having been largely excluded from the space-time compression experienced so dramatically in more central regions. However, they are characterized by *dependence*, on government transfers and decisions (e.g., the location of military bases, migration policies), as well as exogenous factors such as commodity prices and tourist flows. As a result of these relations with external actors, limited endogenous capacity relative to external dynamics, and small size, remote area populations are often *dynamic and delicate*. They are also *diverse*. Stark differences between subpopulations—young and old, indigenous and nonindigenous, rural and urban—require careful analysis of within-community difference. Given this diversity, dynamism, and delicacy, demographic research in remote areas must be *detailed*, and account for small-scale differences and errors. Although many of these characteristics are not necessarily unique to remote areas, this framework is indeed a useful guide as readers navigate the diverse and detailed case studies.

Overall, the editors and other contributors to *Demography at the Edge* provide an accessible and informative introduction to the social demography of remote areas in developed countries. By reviewing a broad set of methodological and substantive topics, and complementing them with numerous case studies, they give readers a necessary baseline of knowledge about remote area demography. Their book contains important lessons for academics, policymakers, and local stakeholders, as well as the beginnings of an agenda for future data collection and policymaking. The content may disappoint readers looking for a guide to technical solutions to the many challenges of analysis in remote areas. However, many contributors point out there are no quick technical fixes to the challenges, which require both in-depth knowledge of remote areas and an increased political and financial commitment by stakeholders.

Finally, by examining a select number of developed countries, the editors maintain focus and provide the reader with an adequately in-depth look into each case. However, their work leaves significant room for future research on remote populations in developing countries, where larger proportions of the population live in remote areas—and often face much more urgent development problems than those discussed in *Demography at the Edge*. The collection provides an excellent foundation for such research to build on.

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**Contemporary Migration to South Africa: A Regional Development Issue**, edited by Aurelia Segatti and Loren B. Landau. 2011. Series: Africa Development Forum. Washington: World Bank, copublished with Agence Française de Développement. 178 + xxi. ISBN 978-0-821-8767-2, \$17.50.

The editors and contributors to *Contemporary Migration to South Africa* document what is known about migration into South Africa, take a pragmatic look at the government's past and present role in creating policy to manage migration and its consequences, and weigh the costs and benefits of future action and inaction in terms of economic growth and regional development strategies. Given that in the single decade of the 1990s South Africa became the new migration hub at the southernmost tip of the continent (p. 9), research examining this phenomenon seems especially timely and relevant. Produced by the African Development Forum (a series created and sponsored by the Agence Française de Développement and the World Bank), the book brings together seven researchers with affiliations at the African Centre for Migration and Society at the University

of the Witwatersrand, Johannesburg. The overall goal is to provide new insights and alternative ways of analyzing the migration and development realities of the Sub-Saharan Africa Region, based on over a decade of research.

The book consists of a preface, overview, introduction, and five main chapters, along with four appendices. There are an impressive number of figures, maps, and tables, along with informative "boxes" on special topics (including one on the Xenophobic Riots of 2008). All of this information will prove useful to those interested in the particular dynamics of migration to this region. While the book is accessible to general readers, it is not a primer on migration and development in South Africa, and it is more likely that practiced scholars with interest in the region will appreciate the detailed information and conclusions.

Despite the diverse research and writing styles of multiple scholars discussing varying aspects of migration to/from South Africa, the book's overarching ideas and concepts hold together well. While in some chapters there are hints to the theoretical connections between migration, migration policy, and development, most authors intend detailed empirical accounts that describe the contemporary South African migration experience. Indeed, the editors state that "empirically based policy making stands a better chance of succeeding than untested preconceptions that risk reproducing recipes that have failed elsewhere. The book is therefore strong on empirics" (preface, pp. xiii–xiv). As a result, the authors use all kinds of primary and secondary data to measure what most migration scholars everywhere agree is one of the most difficult processes to capture, namely the absolute and relative growth and composition of migrant populations (both legal and undocumented), as well as the impacts of that migration both overall and within various subregions.

An Overview and Aurelia Segatti's Introduction convey the editors' and contributors' main goals. In chapter 1 Segatti provides a description of both historical and contemporary South African migration policy, with particular emphasis on the genesis of a discriminatory migration system and its resilience into the post-1994 era. Chapters 2–5 convey the crux of the analysis, with focus on the role of skilled labor, local authorities, undocumented migrants and enforcement agents, and public health officials in the management of migration. In the four appendices we find a useful comparative table of migration legislation and policy in South Africa and the rest of the world from 1986–2010, an outline of the issues related to migration data collection, a regional analysis of migration statistics for Southern Africa, and an outline of urbanization trends in Africa from 1950 to 2010.

Two chapters stand out. In chapter 2 Stephen Ellis and Segatti explore skilled labor, a crucial issue given the structure of the South African labor market. The authors argue there is a "skills problem" (pp. 68–71) in South Africa resulting from the combination of a poor education system under apartheid and the departure of highly skilled workers. Thus Ellis and Segatti contend that government policy needs to increase efforts to build a regional skilled-labor migration system, despite the resistance to such initiatives by certain constituencies (such as pro-South African protectionists and trade unions). In other words, there needs to be a commitment to lifting obstacles not only to capital and goods circulation but also the circulation of people (a not surprising stance given the volume's publishers). In this way, the authors argue migration could play more of a development role in the entire region, by serving as a survival strategy, mitigating labor supply shortages and educational system shortcomings, as well as linking rural and urban economies more efficiently.

In chapter 4 Darshan Vigneswaran examines undocumented migration and the challenges it raises for both state and nonstate actors. He is especially compelling as he focuses on the ongoing Zimbabwean crisis, which has resulted in massive flows of both legal and undocumented migration from that neighboring country to South Africa. Vigneswaran contends that "on the fly" (p. 105) immigration policies and practices are creating an ongoing state of emergency in the region. He demonstrates this effectively by relying on several rich sources of secondary data, as well as original data gathered in interviews with various government representatives who deal with undocumented migration and in ethnographic research conducted within government spaces of migration bureaucracy like police stations, border posts, detention centers, and Department of Home Affairs offices.

Unfortunately, some of the other chapters suffer from trying to include too much information without sufficient explanation. The reader gets very detailed descriptions of both historical and contemporary migration trends as well as national and local impacts, and the authors also highlight how governments' immigration and integration policies affect the numbers of migrants, their characteristics, and how the migrants adapt to their destinations. But these weaker chapters lack

organization, thus leaving the reader puzzled about the author's intent and unsure what information is most relevant. The better chapters stay with the reader, probably because they provide sufficient background and outline particular impacts that come with the migration of newcomers to South Africa, rather than sweeping overviews with a lack of focus.

Overall, Segatti and Landau's book contributes to an emerging body of scholarship on international migration in an understudied region of the world by providing empirical research and a deepened understanding of contemporary South Africa. Additionally, it traces the painful social and economic consequences that come with the acceptance of neoliberal market rules and economic development strategies, as well as the potentially rewarding outcomes that can come with increased global and regional interactions. Interestingly, it is this contribution that is the most innovative and useful to migration scholars, because it makes possible comparative statements about how the South African experience is different from, and similar to, the migration experience in other developed and developing countries.

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**Enclosing Water: Nature and Political Economy in a Mediterranean Valley, 1796–1916**, by Stefania Barca. 2010. Cambridge, U.K.: White Horse Press. 180 + xii. ISBN 978-1-874267-56-0, cloth, £55, \$80; ISBN 978-1-874267-57-7, paper, £22, \$33.

In *Enclosing Water* Stefania Barca makes an important contribution to environmental history and river historiography by describing the advent of industrial capitalism and its socioenvironmental effects in southern Italy's Liri Valley from the late eighteenth century to the First World War.

The Liri is located in the Italian Apennines, within the former Kingdom of Naples, which Barca identifies as having been "one of the most feudal countries of the continental margins" at the beginning of the study period (p. 31). Her book centers on the transition from a moral (feudal) economy of common property relations in land and water resources to enclosure of these resources as private property. It provides a detailed account of this process during the period of Napoleonic rule at the beginning of the nineteenth century, continuing throughout the Bourbon monarchy and after its fall in 1860. Barca shows the effects of the process on the ecology of the Liri and the people who lived in its basin to have been disastrous, particularly in causing increased, and more damaging, flooding.

The enhancement of risk and production of disaster as a result of the imposition of private property relations provide the book's main argument: Contrary to Garrett Hardin's (1968) infamous "tragedy of the commons" thesis, the enclosures produced astonishing legal uncertainty and inefficiency and gave rise to over a century of intractable legal disputes over water-use rights. Meanwhile, privatization of common lands brought practices of "agrarian capitalism" that resulted in deforestation and increased hydrological instability (p. 54). At the same time, applying the tenets of economic liberalism to water resulted in choking the river bed with dams and mills, which greatly increased the incidence and the social effects of floods. Privatization, Barca argues, "*did not* produce efficient resource management in either ecological or economic terms. Exclusive property rights were claimed over water, but both the transaction costs and the environmental costs of industrialisation were persistently high throughout the nineteenth century. . . . The 'tragedy of the commons,' from this perspective, can be seen as a tragedy of water 'enclosure' and privatisation" (p. 114, italics in original).

The book is divided into two somewhat overlapping parts. The first, "Water and Revolution," consists of three chapters describing the arrival of two related revolutions in the Liri Valley—the French Revolution and the Industrial Revolution. The first two chapters focus mainly on the political economy and political ecology of the annexation of southern Italy to the Napoleonic Empire in the period from 1806 to 1815. Foremost in "the improving-liberating mind of the Neapolitan Jacobins" was the elimination of "the moral economy aspect of the feudal system, namely that complex web of customary practices and legal titles around which the people of southern Italy organized their subsistence outside of the sphere of the market" (p. 32). Water was thus "liberated" from feudal

restrictions by means of an 1806 law abolishing “feudality” and making the power of water (hydraulic energy) available to industrial capital. Figuring importantly in Barca’s account, the transfer from common to private property rights in land and water use was occasioned by an environmental thesis of the time, known as “the disorder of water,” according to which the problem of flooding was caused by poor governance and the inefficient and uneducated land-use practices of peasants working common lands in the upper part of the basin (pp. 50–51).

In the third chapter 3 Barca details the new industrial waterscape that emerged and how “this in turn produced a new ecological consciousness, a new way of seeing society-nature relationships in the local space” (p. 59). Here, the way mechanization of the river affected (mostly negatively) the life and work of people in the Liri Valley is set somewhat confusingly against a contemporary “narrative” by which the aesthetic of waterpower was made consistent with the idea of the river’s nature and by which “The beauty of nature lies precisely *in* its incorporation within the factory system, not in an idealised past” (p. 79, italics in original).

Part II, “The Economy of Water,” repeats many of the themes introduced in part I, and brings the story through the nineteenth and early twentieth century. In chapter 4 Barca provides a wealth of detail showing how the privatization of water rights gave rise to interminable legal disputes between individuals and between individuals and the state. In her fifth and final chapter she describes efforts to engineer flows of water in the basin so as to prevent floods, which failed owing to the incapacity of the State to effect the necessary infrastructural improvements: “Most of southern Italy . . . may be considered a Mediterranean version of reclamation: that is to say, one where nature wins and the State gives up on its improving schemes” (p. 138).

The story told in *Enclosing Water* is woven through a number of themes, each of which Barca approaches in a unique and somewhat demanding way. She cites Karl Polanyi throughout, and indeed, *Enclosing Water* could be read as an account of Polanyi’s Great Transformation (Polanyi, 1944) as it played out in the Liri Valley. Polanyi’s distinction between “habitation” as precapitalist mode of socionatural engagement, and “improvement” as a defining feature of industrial spacemaking, receives novel treatment in Barca’s account, which treats of “the necessity of improvement as a ‘liberation project’” and as “an inextricable mix of ecological, economic and social imperatives” (p. 24). Barca also gives an interesting twist to the concept of “enclosure” as applied to water. To be sure, she devotes a great deal of attention to the eighteenth- and nineteenth-century changes in political economy by which water rights were privatized in the Liri Valley, making water available for the expansion of industrial capitalism. But she also gives “enclosure” a physical aspect: “It was a material process, carried out by fencing the river with stones and wood fascines, diverting water through millraces and into hydraulic engines which physically occupied the streambed, eventually producing a new, industrial riverscape” (p. 95).

Barca’s most novel—and perhaps most interesting—theme is the aforementioned concept of “the disorder of water,” by which floods were seen to result from improper land use (mainly deforestation), which in turn was associated in the late eighteenth century with backwards (i.e., feudal) political economy. Early reformers envisioned liberal political economy, specifically capitalism and the privatization of resources, as the solution. However, “the disorder of water” persisted though the nineteenth century, well after the liberal reforms had taken effect, so the view changed: Now the disorder “was caused not by feudalism and communalism (these having largely disappeared from the country) but by the political revolution, war and imperial dominion of the 1799–1815 period and by the division of the commons” (p. 91). The nineteenth century “thus reversed the narrative of disaster created by the previous generation: the ‘disorder of water’ was being caused not by a lack of private property but by its very introduction” (p. 92).

As might be inferred from my account, *Enclosing Water* is demanding of the reader in that it is somewhat repetitive in places, it relates a great deal of highly detailed historical data, and the argument is occasionally difficult to follow. Nevertheless, it is hard to do justice to the richness of the book in a brief review. Stefania Barca’s work is full of detail and insights that will be of interest to the social theorist as well as the water historian.

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**Urban Wildscapes**, edited by Anna Jorgensen and Richard Keenan. 2012. New York: Routledge. 252 + xv. ISBN 978-0-415-58105-9, cloth, \$155; ISBN 978-0-415-58106-6, paper, \$53.95.

With most of us now living in cities or towns, the interest in green space as contributor to high-quality living environments has increased. When we talk of *urban* green space, the focus is often on city parks, street tree plantings, green roofs, and the like. Jorgensen and Keenan take a rather different perspective, making a strong case for spaces that can be grouped under the term "urban wildscapes." These are spaces that emerge as a result of abandoning and lack of control, areas that have evolved rather than having been designed and planned. They include, among other examples, former industrial sites, spontaneous urban woodland, cemeteries, as well as "left-over" plots.

Anna Jorgensen, of the University of Sheffield, U.K., has led the efforts to give urban wildscapes their rightful place in urban planning, design, and management. She was lead organizer of a conference on the topic in Sheffield in 2007, where the idea of this book was born. She has teamed up with artist Richard Keenan to compile a very interesting collection of essays on almost every imaginable aspect of such places. Although the essays vary widely in their perspective and depth, the book comes a long way in outlining the field and making a strong theoretical and planning case for urban wildscapes. The influence of coeditor Keenan becomes clear from the quality of the illustrations throughout the book. They not only support the texts, they often also tell a powerful story of their own, for example in Katy Mugford's essay on urban wildscapes in children's literature.

After a foreword by Chris Baines, who sketches half a century of landscape change and makes a case for the wild side of town, and Anna Jorgensen's thorough introduction to the book, the editors present three parts. The first, which I personally found the most inspiring, comprises essays by authors who explore the theoretical aspects of urban wildscape. The second is a collection of international case studies describing different interventions in urban wildscapes, and the third has essays on the implications for landscape architectural and urban design practice, in relation to both derelict and postsuccessional wildscape sites and the wider urban environment. The message emerging from almost all contributions is clear: we need wildscapes in our cities as contrasts to controlled urban life, as settings for play (by both children and adults), as places for coming of age. But we really need to do better in integrating these spaces and their particular qualities into how we plan and design urban landscapes. There is no dichotomy of regulated and wild places; rather there is a continuum ranging from "wilderness" to apparently ordered spaces, with different levels of wildness existing at multiple different scales at each locality.

The first chapter after Jorgensen's introduction presents us with a very interesting journey through the urban wildscapes of Detroit, in the U.S. We are in the capable hands of Christopher Woodward, author of the acclaimed book *In Ruins* (2001). While exploring the ruins of industrial Detroit, Woodward identifies some of the reasons why ruins fascinate us, for example through calling upon our own imagination and by showing the dynamic relations between people and nature. He explains the growing interest in ruins by the fact that urban decay has coincided with the rise in environmental awareness.

Paul Gobster uses another American city, Chicago, to present a typology of urban wildscapes. The typology includes, among others, "in-between" nature as wildscape fragments in dense urban neighborhoods, and recovered nature in large vacated areas such as industrial sites or landfills. Gobster also shows that our perceptions of wildscapes differ according to different aesthetic preferences: what looks messy and even dangerous to one group could be a much appreciated wildscape to another. Catherine Ward Thompson shows us that the links between green space and antisocial

behavior have been strong. Contemporary writing about antisocial behavior has many dimensions, but a common theme is a bias against teenagers and other young people. But the use of green space has been shown to be important for those groups, as the spaces—and not in the least urban wildscapes—can be places where young people can legitimately explore the limits of the world into which they are growing.

The topic of industrial ruins is taken up again in chapter 4, by Tim Edensor, Bethan Evans, Julian Holloway, Steve Millington, and Jon Binnie. They focus on ruins as settings that host and stimulate play, including by adults. Industrial ruins lack overt regulation and offer material affordance, thus enabling play in many forms, from destructive play such as joyriding to adventurous and expressive play. In the final chapter of part 1, Katy Mugford discusses the role of wildscapes in children's literature. Books such as *Danny, the Champion of the World* by Roald Dahl (1975) and the *His Dark Materials* trilogy by Philip Pullman (*Northern Lights*, 1995; *The Subtle Knife*, 1997; *The Amber Spyglass*, 2000) all illustrate the opportunities that wildscapes provide for children's development. Wildscapes are areas of unsupervised play, vehicles of adventure, but also places of learning about dangers.

The collection of case studies in part 2 starts with a chapter on the vast wildscapes that have emerged on the former opencast coal mines of Lusatia, in the former German Democratic Republic. Authors Renée de Waal and Arjen de Wit describe the partnership approach to reclaim the lands, and they stress the need to recognize different perceptions and preferences for transformation options, in particular between the local communities and "outsiders." Other cases "zoom in" on the city, neighborhood, and park level, including the one by Yichen Li on the Houtan Wetland Park, part of the Shanghai Expo 2010, and the one by Maria Hellström Reimer on the iconic "free town" of Christiana in Copenhagen (p. 121). The latter has emerged as a new type of "commons" (p. 125), built on 1970s idealism.

There are two case studies from Sheffield: one by Ian Rotherham on the reclaiming of the River Don riverscape and one by Marian Tylecote and Nigel Dunnett on the use of planting design (with ruderal perennials) to reclaim a park that had turned into "bandit lands" (p. 141), something that was not helped by ruderal vegetation running out of control. Marian Tylecote and Nigel Dunnett describe how integrating both wild and designed vegetation into planning can provide aesthetic enhancement and also evidence of maintenance of public parks. Andreas Langer presents the well-known case of the Nature-Park Südgelände in Berlin, where 50 years of natural succession have transformed a derelict rail shunting station in the heart of Berlin into a highly diversified piece of natural urban landscape. Here a combination of natural dynamics and controlled processes has proven successful, while combining nature conservation with public access has been another key priority. The final case study is on the role of wildscape as a setting and inspiration of art. Helen Morse Palmer describes how introducing art to a London wood (Sydenham Hill Wood) helped visitors gain a fresh look at their surroundings.

Following the making of the case for urban wildscapes and illustration with examples, the third part of the book presents implications for landscape practice. It emerges that the landscape professions need to become much better at taking wildscapes on board. One instrument for doing so, as developed by Catharine Heatherington, is storytelling. Narratives of place are important ways to connect individuals and communities with their history and environment, but the narratives are often contested. It is necessary to recognize different stories, drawing on consultation with the community. Examples such as the High Line (in New York City) and Landscape Park Duisburg Nord (in North Rhine-Westphalia, Germany) show how different narratives have helped to shape and reshape place. Different understandings of place are also in focus in Mattias Qviström's chapter on Gyllin's Garden in Malmö, Sweden. A former private plant nursery became a much-appreciated local wildscape after abandonment, with local residents even carrying out small-scale maintenance activities. When the city of Malmö recognized the area's importance and started to develop a plan for it, local residents expressed their concern over too much control and "normalization."

The authors of the final two essays consider more specifically how to integrate urban wildscape into landscape practice. Dougal Sheridan raises the central question: to what degree is it possible to leave public and environmental spaces to their own internal dynamic forces of evolution? Anna Jorgensen and Lilli Lička show how the characteristics of the wild spaces can be used to inform planning and design strategies for the urban environment more generally, and contrast these strategies with some contemporary design approaches to the planning and design of public urban open space. They

call for more debate about the values underpinning planning and design decisions and aesthetics. It is crucial, they state, to recognize that landscapes are shaped by many people, not least by their users, and that letting spaces evolve arguably results in more interesting areas, more expressive of their locality.

The book offers highly recommended reading for landscape professionals, as well as for urban planners and others interested in shaping more interesting and liveable cities.

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**The Workforce Investment Act: Implementation Experiences and Evaluation Findings**, edited by Douglas J. Besharov and Phoebe H. Cottingham. 2011. Kalamazoo, Michigan: W. E. Upjohn Institute for Employment Research. 523 + ix. ISBN 978-0-88099-371-5, cloth, \$40; ISBN 978-0-88099-370-8, paper, \$20.

Douglas Besharov and Phoebe Cottingham have edited a valuable book on the workings and the impacts of government-sponsored job training programs in the U.S., administered under the Workforce Investment Act (WIA) passed in 1998. After their very comprehensive introduction, there are 16 papers covering implementation of WIA, the design of performance management systems, the results of impact evaluations of the Act, and the merits of alternative design choices for both the program and its evaluation. There is something here for everyone, ranging from practitioners to hard-core applied econometricians.

To highlight and extend some of the points made in the book, I use some calculations from my own research with Louis Jacobson and Daniel Sullivan on the impacts of community college retraining of displaced workers in the state of Washington in the U.S. (Jacobson, LaLonde, and Sullivan, 2005). Table 1 presents eight alternative estimates of the impact of retraining for men and women, separately. The first column of estimates covers the first year (or four calendar quarters) after individuals exited training, the second column covers the fifth year after they left training.

Notice that these nonexperimental impact estimates exhibit the variability across estimation approaches that has come to characterize the literature on effects of training. The lessons from the six evaluations of the 1976 Comprehensive Employment and Training Act (CETA) cohort also come to mind here. Haeil Jung and Maureen Pirog discuss them here in Besharov and Cottingham's collection. Those evaluations were conducted by well-regarded evaluators who all used the same data yet reported widely different program impacts. Jacobson, Sullivan, and I also find substantial variability as the CETA studies did two decades earlier. In those earlier studies, estimates for male trainees after their first year range from  $-\$700$  to  $\$400$ , and from  $-\$500$  to  $-\$2$  for women. By the fifth year after leaving retraining, the impacts were uniformly positive but still variable, especially for men.

As Jung and Pirog observe, one important lesson from the program evaluation literature is that this variation in estimates is to be expected. It results from nonrandom selection of individuals into training. The different estimates in Table 1 result from the different ways the analysts deal with this selection problem. The estimates are based on four relatively complex econometric estimators. Each estimate accounts for nonrandom selection based on individuals' *unobserved* characteristics in different ways. (Note that we had to program our preferred "random growth" estimators on our own, as there was no procedure in SAS or STATA to rely on.) The variability in impact estimates does not demonstrate that nonexperimental estimates cannot replicate the results of experiments. Instead, they underscore the really hard part of impact evaluation: which one do we choose? In my

TABLE 1: Alternative Estimates of the Impact of Community College Based Retraining for Displaced Workers in Washington State (Impact on annual earnings in 2011 dollars)

| Gender/Description of Estimator                             | Alternative Impact Estimates |          |
|---|------------------------------|----------|
|   | 1st year                     | 5th year |
| <b>Males</b>  |                              |          |
| Fixed effects using conventional training effect model      | \$ -365                      | \$ 2,000 |
| Fixed effects using conventional returns to schooling model | \$ -862                      | \$ 835   |
| Random growth using conventional training effect model      | \$ 492                       | \$ 2,712 |
| Fixed effects using conventional returns to schooling model | \$ -107                      | \$ 1,460 |
| <b>Females</b>  |                              |          |
| Fixed effects using conventional training effect model      | \$ -405                      | \$ 1,120 |
| Fixed effects using conventional returns to schooling model | \$ -709                      | \$ 490   |
| Random growth using conventional training effect model      | \$ -161                      | \$ 1,037 |
| Fixed effects using conventional returns to schooling model | \$ -2                        | \$ 1,285 |

*Notes:* Estimates are the reviewer's calculations from Jacobson, LaLonde, and Sullivan (2005), Tables 2 and 3, columns 2 and 6 (pp. 285, 288). The "training effect model" is from parameters  $\tau_0$  and  $\tau_2$  in equation (3b) in the paper, when parameters  $\tau_1$  and  $\tau_3$  are set equal to zero. The "returns to schooling model" is from the parameters  $\tau_1$  and  $\tau_3$  in equation (3b) when we ignore the estimates of  $\tau_0$  and  $\tau_2$ . We evaluated equation (3b) at the mean credits obtained by male and female trainees, respectively. Inflation adjustment from 1995 to 2011 dollars is based on <http://www.usinflationcalculator.com>.

own study (LaLonde, 1986), graciously cited by several of the authors in the book, I did not contend that we cannot use nonexperimental methods to replicate experiments. I reported that 9 of the 68 point estimates for women in the Aid to Families with Dependent Children (AFDC) program were within \$100 of the experimental impact. But from among this large number of estimates, how do we know which one to choose? The one estimator that passed a conventional specification test was off by more than \$2,500. To be sure, this is a question that labor economists and applied econometricians have made considerable progress on in the last 25 years, but we are not there yet.

A very closely related problem turns on the merits of using performance measures to proxy for rigorous impact estimates. Since these measures were first conceived during the CETA program, attempts to refine them so they actually "work" have amounted to the workforce development field's equivalent of the quest for the Holy Grail. Like its predecessor quest, so far this effort has been futile. There is no convincing evidence that using performance measures as a proxy is a good idea and lots of evidence against it. As explained by Burt Barnow in his chapter here, "Lessons from the WIA Performance Measures," workforce performance measures do not correlate well with program impacts. That really should not be a surprise, because coming up with reliable performance measures requires that we be able to confidently and consistently solve the evaluation problem.

Further complicating the quest for reliable performance measures is Kevin Hollenbeck's finding (in the chapter "Short-Term Net Impact Estimates and Rates of Return") that it takes several years for impacts to emerge and to stabilize. This point is also illustrated in Table 1: Jacobson, Sullivan, and I found the short-term impacts were usually negative whereas the long-term impacts were positive and sometimes pretty large. Moreover, there does not appear to be any correlation between the magnitudes of short- and long-term impacts. This evidence underscores how difficult it will be to obtain timely and easy-to-calculate short-term performance measures that correlate with long-term impacts.

Additionally, the small  $R^2$  associated with "regression-adjusted" performance measures indicates to me how much scope there is likely to be to "game the system" even for the state-of-the-art measures reported here by Randall Eberts, Timothy Bartik, and Wei-Jang Huang. At least for the foreseeable future, adjusting for observed demographic characteristics and local labor market conditions offers little hope in helping performance measures better identify programs that work compared to ones that don't.

I completely agree with several of the contributors to Besharov and Coddington's book who contend that performance measures should not be used to provide for rewards and sanctions of

training sites and providers. After reading Steven Wandner's and Michael Wiseman's chapter on financial performance incentives, it occurred to me that the approximately \$170 million that has been available for high performance bonuses would have been better spent by the states to develop consumer/labor market information systems (CIS). In a very valuable and timely chapter, Carl Van Horn and Aaron Fichtner explain how CIS were created in four states (Florida, New Jersey, Texas, Washington). To better appreciate the challenges associated with creating an effective CIS, I recommend that practitioners and researchers go to the website for New Jersey given in this chapter and try to imagine themselves as a prospective trainee navigating the site (the URL is [njtrainingsystems.org](http://njtrainingsystems.org)). In an era with individual training accounts, testing how prospective trainees themselves use CIS to make training decisions should be a priority research area.

Finally, Jeffrey Smith observes in his thoughtful concluding chapter on Europe that too often policymakers, practitioners, and even some researchers do not want to know the answer. I would add that, even when the answer is clear, usually little is done systematically to reallocate the resources available to more productive uses. For example, 40 years of evaluations of programs that target economically disadvantaged youth have consistently shown them to be ineffective. One would have hoped this knowledge led policymakers to scale back such programs, go back to the drawing board, and design and rigorously test new models. No, instead, during fiscal year 2011 expenditures on youth training programs were about \$1 billion. To give credit where it is due, the Department of Labor's Workforce Innovation Fund (announced in December 2011) is a step in the right direction.

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**Regional Planning for a Sustainable America: How Creative Programs are Promoting Prosperity and Saving the Environment**, edited by Carleton K. Montgomery. 2011. New Brunswick, New Jersey: Rutgers University Press. 387 + xiii. ISBN 978-0-8135-5132-6, \$45.95.

The need for regional planning arises from a mismatch between existing political jurisdictions and the proper territorial framework for meaningful discourse and effective governance. In the case of metropolitan North America, this has occurred as cities have grown out of their nineteenth-century, and sometimes twentieth-century, boundaries. Metropolitan regions have become fragmented, not because of some willful fracturing of existing jurisdictions, but rather by accretion of jurisdictions through the inexorable creep of growing metropolises. Most states in the United States are too slow to adjust municipal boundaries to keep pace with urban growth. In many cases the necessary adjustments are prohibited or hindered by county, state, and sometimes even national boundaries. The mismatch is caused not only by the organic growth of cities, but also by changing economic, environmental, and policy concerns. Phenomena such as region-wide workforces, ecoregional climate change and adaptation to it, interstate highway networks, and river basin water interdependencies were not even imagined when city and county lines were being drawn. Yet, now they are critically important factors that warrant a regional framework.

It is against this American backdrop that Carleton Montgomery edited *Regional Planning for a Sustainable America*. There are 42 contributing authors, and Montgomery adds an introduction and conclusion, both substantial. The resulting volume is an emporium of regional planning initiatives and concepts, well organized for people who suspect a regional initiative would facilitate sustainable human communities or adaptive natural environments in their region. There are many links to web sources: many entries in the list of references contain links. There are two pages of links to relevant



regional organizations, and Montgomery also names a web site where maps, documents, and still more links can be found. With use of these supplemental materials, the book could be an effective introductory textbook.

After Montgomery's introduction, the book has five parts. The first two contain case studies involving mandatory plans and voluntary or collaborative initiatives; the third is a collection of six essays on society, economics, and regional planning that takes on slightly, but only slightly, more generalized concepts; the fourth and fifth are a bit more directive in describing tools and techniques. The book is not, however, a handbook of directions on how to get started in regional planning. In fact, Montgomery is quite clear in his intention, and the contributing authors clearly support him, that there is no one-size-fits-all solution coming from regional planning.

The 22 case studies in the first two parts cover two-thirds of the book. They center on issues of land use and growth management in areas with strong development pressures. Land use, infrastructure, water, and conservation are strong driving forces for regional planning. While metropolitan growth is the predominant issue (e.g., in Portland (Oregon), Ontario (Canada), Utah, Sacramento, Atlanta, Philadelphia), some of the cases also deal with exurban growth (Columbia River Gorge, New Jersey Highlands, Lancaster (Pennsylvania)), as well as rural, conservation, and resort regions (Adirondacks, Cape Cod, New Jersey Pine Barrens, Maine). Some are on initiatives that play out over larger areas still, such as Florida, the Chesapeake Bay, or the Delaware River Basin. In most of the case studies, the authors are persons who have played a leadership role in the regional initiative.

The case studies are noteworthy for both the patterns that emerge and the exceptions to those patterns. For example, they reveal the frequency that formal Metropolitan Planning Organizations (MPOs) play a critical, and often formative, role in regional planning. MPOs were instigated and funded by the federal government, and over the last 20 years they have been a powerful force behind many regional planning efforts. The case history of Maryland's Smart Growth Program by Richard Hall gives an unsentimental assessment of how one state is trying to steer regional strategies while still allowing county government control of land use. Still other examples of regionalism are genuinely more autochthonous, perhaps most notably Envision Utah, an initiative that is specifically citizen-driven and not connected with government at any level.

The opportunity to hear from individuals who are in leadership positions in regional planning initiatives gives a valuable inside look into the mission, activities, and recent history of the organizations. It does, however, create an undercurrent of boosterism to the concept of regional planning by not applying a critical eye to the outcomes of the initiatives. Standing out as the biggest exception to this pattern is Howard Ernst's essay, "The Political Dead Zone in the Chesapeake Bay." Ernst, an academic political scientist, critiques the lack of accomplishment in a decades-old struggle to save the Bay. Recognizing the need for more critical analysis, Montgomery states accurately that measures of success for regional planning are hard to come by, and there is insufficient scholarly research on this question.

While some of the case studies trace back to the establishment of their respective regional planning initiatives, not all do. And unfortunately few of them actually consider what the precipitating factors were that engendered the regionalism in the first place. Yet we know, for example, from a deeper history of the Delaware River Basin that opposition to and eventual abandonment of the Tocks Island Dam Project was an important factor for regionalism there. It is beyond the scope of this broad volume to include deeper histories, but I encourage persons who are contemplating a regional initiative to use the links given in the book and to understand regional legacies that engender regionalism.

The last third of the book contains eleven essays that largely look at empirical cases but focus on particular topics and tools important to regional planning in America. The space allows only for summaries of important topics such as climate change, revenue sharing, affordable housing, and land conservation, among others, but the essays are fine synopses of topics important to the broad phenomenon of regional planning for a sustainable America.

There are relevant topics that are not included in the volume. There is not a discussion of the geographical pattern of regional planning, or, more importantly, places where initiatives simply do not exist, or existed and failed. The great majority of the case studies are from coastal states (exceptions are Utah, Ontario, Lancaster, Philadelphia; Lake Tahoe and the Delaware Basin involve both coastal and noncoastal states). If that is because there is less regional planning elsewhere

or some other reason remains to be seen. There is also little discussion of racial issues or public education, which have been important drivers of regional migrations.

We can't expect any one volume to cover all aspects of a phenomenon as complex as American regional planning in the early twenty-first century. In this regard, Carleton Montgomery does a fine job in his opening and closing essays in laying out the objectives for the collection. In fact, his essays by themselves make a clear-headed and hopeful, yet not Panglossian, case for regional planning. America in the twenty-first century needs to be sustainable, and it is hard to imagine this will be possible without regional initiatives. *Regional Planning for a Sustainable America* offers a broad look at a phenomenon that has many contexts and variations, and it delivers a valuable chronicle and assessment of an experiment that is half-finished and still ongoing.

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**Perverse Cities: Hidden Subsidies, Wonky Policy, and Urban Sprawl**, by Pamela Blais. 2010. Vancouver: University of British Columbia Press. 294. ISBN 978-0-7748-1895-7, cloth, CAN\$85; ISBN 978-0-7748-1896-4, paper (2011), CAN\$39.95.

Sprawl—what is it, what causes it, and what can we do to prevent it? These are the questions that have consumed reams of literature over the past decade, and the ones Pamela Blais addresses in *Perverse Cities*. After an introductory chapter titled “The Price of Sprawl,” the book has four parts. In the first Blais addresses the problem of defining sprawl and its various perceived costs and benefits. In the second she analyzes costs and benefits of sprawl, describes common key planning principles, and then dives into the first statement of what she will ultimately call the true cause of sprawl. In part three she elaborates on the concluding assessment of part two: sprawl is caused by the rampant mispricing of everything urbanized. In the final section she offers some suggestions on how to deal with sprawl, which essentially entails getting prices right.

In the initial chapter “The Price of Sprawl” Blais discusses many of the common drawbacks of urban sprawl. Among the usual suspects are increasing automobile use at the expense of transit patronage, overproduction of greenhouse gases, and various public health concerns. She then sets up what will be the overarching theme woven throughout each chapter: the average-cost principle, as opposed to the marginal-cost principle, that is used to price most urban development and services leads to the subsidization of low-density, exurban development. The argument is built upon the supposition that marginal-cost pricing would lead to price signals that would encourage dense urban development.

In part one, on the definition of sprawl, the causes of sprawling development patterns, and a reiteration of the costs, Blais, after summarizing the usual sources, settles on “the common definition of sprawl—that it is a pattern of land use with some or all of the commonly cited physical characteristics and that not all suburban expansion or decentralization is necessarily sprawl” (pp. 18–19). A summary here of the causes adds a bit more substance to the first analysis by including some of the more planning-related suspected drivers, including exclusionary zoning, maximum densities, required setbacks, and parking space requirements. Though the discussion largely focuses on the costs of sprawl, Blais aptly points out: “whereas the benefits of sprawl tend to be private in nature . . . the costs tend to be public” (p. 40). This statement sets up much of her focus on the causes of sprawl.

The third part of *Perverse Cities* deals with Blais's central arguments: current public policy results in prices for urban services and development that subsidize sprawl and create a disincentive for dense urban redevelopment. The root cause of policy-induced sprawl is identified as average-cost pricing for development and municipal services. Blais argues that average-cost pricing of things like low-density subdivision development, water and sewer connections, and even seemingly mundane items like cable TV service, make it cheap—inefficiently so—to build in greenfield areas.

She moves on to some suggestions on what to do in the future to change subsidies and mispricing. The major focus is on moving toward a more market-oriented approach to pricing development

charges, municipal services, and other services. These suggestions are of course in line with the arguments repeated throughout the book: switching from average-cost to marginal-cost pricing would reverse the trend toward low-density urban fringe development, by properly making the cost of building in and occupying developed areas relatively cheaper. Blais offers a slate of tools available to planners who are interested in moving toward a market-oriented approach. She ends the book with a call to action, asserting that changing policy now will be much easier than in 30 or 50 years.

Though the theme is clear, we feel that Blais focuses too much on pricing, essentially arguing that if planners and policymakers just get the price right, all the other urban ills will be solved. This central argument leaves a bit to be desired. Experience has taught us that pricing, though important, is only one item on a growing list of elements that make good city planning. Policy coordination is perhaps equally important, yet largely ignored here. Even in the context of pricing, coordination is important: if one jurisdiction gets the price right and another is off, there will be little hope of containing sprawl. Further, local policies can only be as effective as the support lent by county, regional, or state governments.

Blais also seems to believe that urban core areas have limitless capacity for density. While there certainly is some excess capacity, it is shortsighted to argue most future growth ought to locate in the core. There are transportation and other infrastructure capacity limits that justify and drive growth in the urban periphery. The issue of whether urban schools, hospitals, and emergency services could adequately facilitate the increased densities is never addressed. Additionally, Blais does not address issues of consumer taste, and maybe aptly so. Though the issue is controversial, it would have been interesting to see her dissect the significance of utility, in contrast to cost bases of prices, for example in the consumer value of suburban versus city amenities. Even with the best cost-pricing signals, it seems somewhat one-sided to argue that an entire generation may abandon suburban life for the city.

Although the notion that perverse incentives are a contributing cause of sprawl is not new, Blais does offer interesting new material. Because she is a planner, and not an economist, she works with real prices in real contexts, many of which come from Canada. Unlike many economists who make the same argument as she does, she does not rely on formal mathematics or abstract theory to address what is essentially an empirical question: what is the root cause of urban sprawl? Our view is that she overstates the role of perverse incentives, but reading the book gave us a richer understanding of the nuts and bolts of the issue. For this reason we think the book is well worth reading.

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**International Handbook of Urban Policy, Volume 3: Issues in the Developing World**, edited by H. S. Geyer. 2011. Cheltenham, U.K. and Northampton, Massachusetts: Edward Elgar. 310 + xv. ISBN 978-1-84720-460-8, \$195.

The 22 authors who contributed their ideas to this volume deserve sincere appreciation for their attempt to present a clear and comprehensive discussion on urban policy issues in the developing world. They cover key policy issues that are at the forefront of both urban theory and practice nowadays, including urban fragmentation, evolving urban forms, population as well as labor and capital mobility, communicative planning, urban transport systems, urban agriculture, spatial economic disparities, and sustainability (environmental, economic, and social). Happily, each of the twelve chapters combines both conceptual frameworks and experiential information on actual programs, projects, and practices. Each chapter, while focused on a specific policy issue, starts with a comprehensive review of relevant ideas and theories, provides coherent descriptions and analyses of actual experiences in developing country settings, and comes up with policy findings and conclusions.

A noteworthy feature of the book is the use of well-conceived conceptual frameworks that frame the key policy issues. Using these frameworks, the authors describe and analyze urban realities in a number of world regions to see how the realities conform (or not) to the main elements of the

frameworks. This framework *cum* urban realities approach is useful because it makes it possible to appreciate the wide variety of urban development patterns (and policy needs) in various regions. At the same time, it enables the reader to arrive at some conclusions on how to cope with complex policy issues.

Karina Landman's chapter on urban fragmentation is a good illustration of the conceptual and urban realities approach. She uses the drivers-pressures-state-impacts-response or DPSIR model (developed by the OECD) to analyze and understand the policy implications of urban fragmentation commonly observed in phenomena such as urban sprawl, differentiated land uses, the emergence of gated communities, and the continuing growth of slum and squatter communities. Key drivers that lead to fragmentation are globalization, neoliberalism, and changes in the state of human settlements. Globalization exerts pressures on labor markets that often create a gulf between rich and poor. Neoliberalism questions the dynamics of the market and focuses on state interventions that affect the urban form. The twin pressures of globalization and neoliberalism contribute to rapid urbanization—a process that leads to social and economic differentiation often manifested in increased personal and spatial inequality, social problems like higher crime rates, and the emergence of gated communities, “fortress cities,” and the proliferation of slums and squatter communities.

Some of the responses to the drivers and pressures indicated in the model are highlighted in policies now widely used in the developing world. They include the emphasis on economic and social networks designed to achieve policy coherence, spatial integration (especially in planning and governance), the “compact city” approach that advocates higher densities, and the development of more inclusive forms of cooperation among public, private, community, and civil society sectors. Further analysis of responses leads to a detailed explanation of a number of policies widely used at present such as “smart growth,” “the new urbanism,” “brownfield and greenfield development,” “mixed use development,” and “transit oriented development.” While most of these approaches originated in Western countries, their theoretical validity is also being tested in many developing country contexts.

Another noteworthy aspect of this book is the careful and detailed analysis of the historical evolution of important policy ideas. This is illustrated in the chapter by Alida Steyn and H.S. (Manie) Geyer on urban form. In this well-researched piece, they trace the concern with urban form from the work of early planners like Ebenezer Howard on garden cities and Frank Lloyd Wright on urban design, to more recent work by Jeffrey Kenworthy on urban densification and spatial integration of business and residential areas, and William Rees's “ecological footprint.” Steyn and Geyer elaborate various influences on urban form—transportation, the environment, agriculture, natural disasters, sense of community, preferences on density and social equity, and access to urban services and jobs. Drawing upon the concerns of planners throughout history, they clarify both theoretical and policy concerns in contemporary planning.

Perhaps because thirteen of the authors are based in or work mainly in South Africa, the book contains a lot of information on that region, one usually not covered well in developing world literature. That is a salutary bonus. The chapters on urban transport in Kenya, urban agriculture in a number of African countries, and environmental issues in South Africa provide new information that adds to a more complete understanding of urban policies in those places.

In contrast, however, the discussion of urban policy issues in Asia is less complete. It focuses narrowly on South and South-East Asia, concentrates mainly on the growth of megacities, and fails to point out that the highest rates of urban growth in the region are found in small and intermediate-sized cities that have been neglected by both colonial policies and contemporary urban development strategies. It also barely differentiates between the policies used in technologically advanced countries like Japan, Korea, Taiwan, Hong Kong, and Singapore and those used in less developed countries like Bangladesh, Myanmar, and Nepal. There is not enough attention to the evolution of urban policies in supposedly socialist countries like China and Vietnam that have been quite successful in coping with serious urban problems. It is also completely silent on urban policies in South Central Asia (including Iran and Afghanistan) and Western Asia (including Armenia, Georgia, Iraq, and Turkey). Finally, the book barely touches on Latin America and is almost completely silent on developments in the Caribbean, the Middle East, and Eurasia.

The main strengths of the book, then, are its development of a number of conceptual frameworks and models that serve as excellent aids in policy analysis, the rich historical backgrounds of policies and programs, the comprehensive review of the literature that sheds light on the evolution of ideas

and theories, and the new information on a number of African countries that portray recent events in the development of cities on that continent. As an effort to provide an international handbook of urban policy that covers key issues in the developing world, however, the book does not quite live up to its promise.

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**The Evolution of Great World Cities: Urban Wealth and Economic Growth**, by Christopher Kennedy. 2011. Toronto: University of Toronto Press. 242 + xi. ISBN 978-1-4426-4273-7, cloth, CAN\$55; ISBN 978-1-4426-1152-8, paper, CAN\$24.95.

In this slim volume Christopher Kennedy argues that great cities are exclusively defined by the average value of the assets of their citizens. Relying on the economic historian N.S.B. Gras's (1922) framework, Kennedy further argues that an evolution from commercial center to an industrial city, then a transportation hub, and finally control of financial markets characterizes the historical trajectory of great world cities. In understanding the dynamics of this process, he stresses the importance of investments in infrastructure, but they alone cannot explain success or failure. Instead, he concludes we should draw on ecosystems theories to explain urban growth metaphorically.

After a brief introduction, Kennedy summarizes the chronology of leading, western, financial centers from Venice to New York in a chapter called "Where the Streets Are Paved with Gold." In each vignette, he stresses creative solutions to complex problems. He then sketches a theory of urban wealth. He uses the failure of Seville to emerge as a financial capital to dismiss any relationship between imperialism and wealth; after all, Seville controlled the largest of the early modern European empires. So what then should be the measure of wealth, if imperial greatness is no guide? Kennedy proposes a radically simple solution: the value of the assets of a city's citizens. No need to consider either infrastructural wealth, as it is already included in the value of residential property, or institutional wealth, as all institutions belong to or are the embodiment of people.

He then turns his attention to markets, for he argues they are both the true measure and makers of wealth. Here, breathless sketches of Hong Kong and Dubai bookend anecdotal discussions of the early eighteenth-century speculative crises of the South Sea Company and John Law's *Compagnie des Indes*, on the one hand, and the financial crises of 1929 and 2008, on the other. Leaping over centuries in a single bound, Kennedy conveys the impression that markets are timeless and capitalism natural, which prepares the reader for his concluding ecological metaphor.

So why do some cities succeed, while others fail? To answer this basic question, Kennedy returns to financial centers. He starts with Wall Street's victory over Philadelphia's Chestnut Street in the second quarter of the nineteenth century, because for him the construction of the Erie Canal is the decisive factor. This highlights the importance of a city becoming a transportation hub, prior to or simultaneous with its rise to financial greatness, a point he will illustrate with examples drawn from Paris, Frankfurt, Zurich, and Milan. The innovations in transportation and finance are not enough in themselves; one must also consider how production and consumption are shaped by the urban form. He illustrates this with a discussion of how London was rebuilt after the Great Fire of 1666, then proceeds to an eclectic theoretical discussion of growth, production, and consumption from the Scottish Enlightenment to the mid-twentieth-century Cambridge of John Maynard Keynes and Joan Robinson.

In one of the more telling passages of the entire book, he characterizes Freiburg, Germany, as a failure, and Chula Vista, California, as a success, because the former restricts the use of the automobile and encourages public transit, while the latter built a freeway-dependent suburbia. Without any conscious irony, he illustrates the death of a city by the collapse of Detroit. Kennedy does recognize the role played by racism here, but his approach stresses ecological metaphors. Indeed, citing Alfred Marshall, he argues urban economies are best understood as a series of interrelated biological, rather than physical, processes. He concludes with a Canadian case, Toronto's rise to prominence over Montréal, to illustrate the utility of Arthur Koestler's (1969) model of self-regulating, open, hierarchic order.



This work is not based on any original research. The sources in each of the substantive chapters are dominated by a handful of general works. Of the 482 footnotes, 49 percent are simply "Ibid." and a page number. There is no discussion of any major academic or historiographical debate. Not a single article from a peer-reviewed journal in economic history or urban history appears in the bibliography. Indeed, only one peer-reviewed journal article in history, on Detroit in the *Michigan Historical Review*, appears in the eight-page bibliography. By relying exclusively on general texts written for nonspecialist audiences, Kennedy successfully conveys the misleading impression of a widely held and long-established interdisciplinary consensus. This is important for Kennedy, because he relies so heavily on works first published, or translated into English, in the late 1960s or early 1970s.

The most frustrating aspect of this book is that Kennedy never tests any of his theories. Is the average wealth of a city's citizens a good surrogate for the wealth of the city? Is the value of infrastructure adequately incorporated in the market value of residential property? How do widely varying public policies on housing, transportation, education, health, and social welfare affect the relevant calculations? How do we account for the social capital and intangible cultural heritage embodied in libraries, churches, mosques, museums, universities, and other cultural institutions? Attempting to answer any of these questions would have shown the woeful inadequacy of Kennedy's definition of urban wealth.

I am familiar with two of Kennedy's failures: Seville and Montréal. Seville, to cite Fernando Herrero's sixteenth-century description, was "not a city but a world" (Lovell, 2001). Through their exclusive control of overseas trade, Seville's merchants amassed unprecedented wealth that is still readily visible in the hundreds of *palacios*, and in the extraordinary richness of Seville's monasteries, convents, and churches. Admittedly, its streets are not paved with gold, they saved that to celebrate their faith, but the curbs are made of marble. No one who has actually walked these streets can be in any doubt about Seville's wealth and power in the early modern world. Seville is also home to the Archivo General de Indias, perhaps the greatest historical repository on earth. Instead of visiting the city and its archives, Kennedy relied on two general texts about Spain and snapshots provided by friends of his sister.

As for Toronto and Montréal, Kennedy attributes Toronto's rise to prominence as the result of Montréal's "folly" (p. 197) on insisting in the 1970s that the French language be respected. But the Toronto Stock Exchange surpassed the Montréal Exchange in 1936, not 1976, and the postwar boom was primarily financed through this exchange and by the life insurance companies and chartered banks, whose headquarters and shareholders were disproportionately located in Toronto. The insistence of respect did, however, contribute to a massive increase in the wealth of most Montréalers, who were of course French speaking. In the early 1970s, 85 percent of the city's residents were tenants, by the early 2000s the majority were homeowners. A three-story tenement in central Montréal that was worth \$15,000 in the early 1970s was worth between \$600,000 and \$750,000 forty years later. The wealth of this new generation of condominium owners and coproprietors is vastly superior to that of their tenant parents (coproprietorship is a common form of residential property ownership).

As the successes of these two "failures" show, there is a fundamental problem with Kennedy's radical reductionism. One in five children in London currently lives in poverty, almost twice the rate for the U.K. as a whole. The figures for New York are higher, and dramatically higher for Hong Kong and Dubai. One cannot meaningfully discuss urban wealth if one completely ignores how it is distributed. Furthermore, how that distribution changes over time is central to understanding the quality of life in the city, and surely greatness is as much a qualitative as a quantitative issue.

Why then did such a prestigious academic press as the University of Toronto solicit and then publish this book? I suspect the Press believes that with the proper marketing and distribution, a glowing foreword by Richard Florida, a catchy title, and an impressive cover picture of Paris, the book will sell well to business travelers in airports around the world. Here, at least, Kennedy is right: markets matter.

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