

## BOOK REVIEWS

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**Economics of Agglomeration: Cities, Industrial Location, and Regional Growth**, by Masahisa Fujita and Jacques-François Thisse. 2002. New York: Cambridge University Press. 466 + xi. ISBN 0-521-80138-9, cloth, \$90; ISBN 0-521-80524-4, paper, \$30.

Masahisa Fujita and Jacques-François Thisse have written a superb volume: *Economics of Agglomeration*. The book overviews 225 years of economic theory about agglomerations and extends the theory in meaningful ways. While Fujita's last book (with Paul Krugman and Tony Venables), *The Spatial Economy* (1999), was a focused effort to push the new economic geography as far as possible, *Economics of Agglomeration* is far more eclectic. It attempts to cover a vast range of spatial theory and does so with remarkable success. Just as it covers the range of spatial topics, it is remarkable in its historical scope. Adam Smith and David Ricardo get significant coverage, but so do unpublished papers by recently minted Ph.Ds. This book should be part of any economist's library and will be a regularly used reference for any urbanist.

But as much as I read the book in awe of its creators' elegance and intellectual power, I was troubled. The book does have one startling flaw, and indeed, it is the flaw of the entire Fujita-Thisse literature: an attention to theory unbalanced with attention to data. The models in the book are presented as part of the history of urban theory, not as responses to empirical puzzles. Theories are evaluated on their novelty and elegance, more than on their ability to actually fit the data. Certainly, there are some attempts to connect with facts, but often these attempts are desultory. The economics profession as a whole has moved away from the specialization in theory and empirics that was more common 25 years ago. Indeed, a strikingly large number of more prominent economists under the age of 45 publish both theory and empirical papers. This is true in spatial economics as in anything else, and this makes me hopeful. Hopefully, when the heirs of Fujita and Thisse write their version of *Economics of Agglomeration* in 30 years, it will be a happier marriage of theory and empirics.

Now that I have presented my cardinal gripe, I return to more pleasant thoughts. The book begins with a delightful introductory chapter that poses the central question of the book: why do cities exist? Given the incredible abundance of land throughout the world, why do human beings choose to live and work in crowded, highly dense areas? The authors ground this question in its historical context and remind us of Alfred Marshall's early focus on understanding agglomerations. They also reference contributions of von Thünen and Isard. Ricardo makes a brief appearance. One of the pleasures of this volume is that it is filled with these two great urban theorists' discussions of

their predecessors. In a sense, the book allows us to witness a dialogue, stretching across centuries, between them and their distinguished predecessors. Of course, while they give their question some historical grounding, mostly by citing Paul Bairoch's numbers on the rise of urbanization, there is otherwise little attention to other stylized facts about agglomeration and its changes over the past 200 years (the rise of the car, the switch to medium densities, the declining importance of natural advantage).

The second chapter is an extended essay on Koopmans and Beckmann, the highlight of which is a spatial impossibility theorem, which shows that there is no competitive equilibrium with finite consumers, transportation, and homogeneous locations. This result is quite pretty and important, primarily because it points us in the direction of heterogeneous locales and noncompetitive forces (perhaps Henderson's developers). The third chapter revisits von Thünen. As the logic of his model lies behind so much of urban economics, it makes sense to marvel anew at this elegant piece of reasoning. Oddly, von Thünen and his emphasis on the tyranny of transport costs seem both remarkably modern and remarkably data-driven. Fujita and Thisse then show us how close the link is between von Thünen and the Alonso-Muth-Mills model. Ultimately, the German's logic still stands as our strongest model of thinking about the spatial structure of a city.

While Chapter 3 looks at the structure of cities given the existence of a central business district, Chapter 4 looks at the roots of agglomeration themselves. I have argued that ultimately all agglomeration economies are simply relabeled savings in transportation costs. All of the benefits of density come from saving the costs of moving goods, people, and ideas (Glaeser, 1998). Fujita and Thisse take a slightly different twist on this, but ultimately use something similar to the goods, people, and ideas. Chapter 5 introduces governments. This chapter is not particularly satisfying, as there is little attention actually given to political economy. The truth is that urban politics is a terrifying morass, with elites engaging in outrageous attempts to self-segregate and representatives of the poor often purposefully engaging in class warfare to scare off their political opponents. Somehow, the elegant world of the Henry George theorem just seems too far away from the actual world of urban policymaking for me to get much from this section of the book.

The chapter on communication externalities is particularly elegant. Intellectual transmissions in cities are particularly important, and we will get nowhere towards understanding Wall Street or Silicon Valley if we don't take these things seriously. This is one of the chapters where I think the authors really break new ground. This is not the definitive word on models of idea transfers and cities, but it certainly pushed the frontier out. I was, however, mildly appalled to see the most quoted sentence that I have ever written: "After all, intellectual breakthroughs must cross hallways and streets more easily than oceans and continents" (Glaeser et al., 1992, p. 1127), credited by Fujita and Thisse to another author (admittedly with a slight paraphrase).

The chapter on monopolistic competition is somewhat undersold by the authors. No problem has proved as difficult for urban theorists as modeling polycentric cities. The elegance of the monocentric model is lost as we try to sort out sensible models that actually describe the sprawl that we see in the world. Chapter 7 is a superb contribution to this literature. Nowhere is there as lucid a treatment of this problem. To me, this was the highlight of the book.

Chapters 8 and 9 address industrial agglomeration. They revisit Marshall and Hoover. These models are a little more classic—elegant and useful, but less new ground is being broken. Chapters 10 and 11 finally arrive at dynamic considerations. Chapter 10 deals with the birth of new cities, and Chapter 11 looks at the connection between

agglomeration and growth. Of course, I was left wondering about urban decline and the role of the housing market, which mediates all urban dynamics. Again, there is much in this last third of the book that is excellent, but I wouldn't have minded a little bit more connection to empirics and to the real world.

This is a terrific book and should be on every urbanist's shelf. These authors are true pioneers. To the extent that the book has flaws, these are opportunities. There is a sense that the theoretical purity of the authors came as a reaction to the muddle headed empiricists of days gone by who would criticize any model for failing to be sufficiently realistic. We are past those arguments and no empirical researcher denies the immense value of models of the Fujita-Thisse style. However, the continuing value of urban theory depends crucially on it having a deeper involvement with the onslaught of empirical work by regional scientists and economists who are trying to provide both the stylistic facts that motivate theories, and the tests that ultimately make theoretical hypotheses accepted.

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**Jobs for the Poor: Can Labor Policies Help?** by Timothy J. Bartik. 2001. New York: Russell Sage Foundation, and Kalamazoo, Michigan: W. E. Upjohn Institute for Employment Research (order from Russell Sage Foundation). 475 + ix. ISBN 0-87154-097-5, cloth, \$55; ISBN 0-87154-098-3, paper, \$17.95.

Timothy Bartik, a senior economist at the W.E.Upjohn Institute for Employment Research, addresses a critical issue in labor economics and employment policy – how to improve the labor market prospects of the traditionally hard to employ segment of the workforce in the United States. This segment includes those with relatively low levels of formal education, training, and labor market attachment. The book highlights the prospective role of the increased use of demand side employment policies (with targeted subsidies and incentives to employers) in the US to improve the labor market prospects of the poor.

The book provides a comprehensive review and informative empirical assessment of US employment programs both past and current. The focus is on labor economic theory and practice, government employment policies and their outcomes, and on detailed recommendations for future policy. All this is supported by quantitative analysis and review of policy experience at the federal and state levels. For employment policy makers and academics studying employment policy, Bartik's book is a significant contribution.

Bartik reviews the limited success of US employment policies that have focused on the supply side of the labor market. He highlights that during the long period of economic prosperity and growth in the mid- to late-1990s there were still pockets of high unemployment and low labor force attachment that labor supply policies could not address. For example, though the unemployment rate overall was 4.5 percent in 1998, it was 8.9 percent among blacks, 7.3 percent in the New York metropolitan area, and 7.1 percent among high school dropouts nationally. Bartik estimates that about 5 million additional jobs were needed to ensure adequate jobs for the poor in 1998 (p. 35).

Bartik argues that reliance on supply side policies has been a mistake. In particular, he highlights the high cost of employment initiatives focused on advancing workers' formal education and the poor record of job training programs to improve the labor market prospects of the poor. Along the way the book tries to debunk (what Bartik calls) "myths" about the US labor market. These include views that, according to the author, have inappropriately deterred the use of labor demand policies. The perspectives that Bartik tries to debunk include that full-time employment will not bring many poor families out of poverty (pp. 37–8) and that the labor supply of the poor and other groups is unresponsive to increased wages (p. 39). His empirical models suggest, for example, that a one-point reduction in the unemployment rate can reduce the poverty rate by between .3 and .9 percent of the population (Chapter 5). The debunking of labor market "myths" contributes significantly to Bartik's recommendation of increased use of labor demand policies in the US to increase the employment and earnings of low-income Americans.

In debunking myths, *Jobs for the Poor* adds useful data and information. Bartik documents the strong importance of labor market experience and attachment. He describes how the benefits of work experience are not only short-term financial payoffs and the alleviation of poverty, but also longer-term contributions to the development of "soft skills" important to future employment prospects for disadvantaged workers. The soft skills include desirable work habits (e.g., getting to work on time) and teamwork and communications skills. Work experience also has the value of providing a significant positive labor market signal to future prospective employers. Bartik argues that increases in labor demand for disadvantaged groups leading to labor force attachment and work experience can have important and valuable long-run hysteresis effects, increasing the permanent employment and earnings of targeted groups (pp. 288–9).

The book also adds useful insight and prescription on the issue of displacement, which is the problem that subsidized workers displace currently employed workers. Bartik reviews the literature and concludes that displacement can be in the range of one-third to two-thirds, that is for every three jobs gained by disadvantaged persons entering the labor market one or two jobs can be lost by disadvantaged persons who are already employed (p. 7). To address the displacement issue, he suggests that labor demand policies be targeted to newly created jobs and to public and nonprofit employment. He also recommends targeting programs and funding to local markets with higher than average unemployment.

Bartik's main point is that in the US today employment policy is not focused sufficiently on stimulating labor demand. Current policy's limited use of labor demand incentives and subsidies are in contrast to employment policies in other industrialized countries. It also ignores prior employment policy efforts with some documented success such as the Works Progress Administration Program (WPA) of the 1930s and early 1940s. Bartik estimates, that in 1997–98 the US devoted .11 percent of GDP to labor supply policies and less than one-tenth of that amount, or .01 percent of GDP, to labor

demand policies. This is in contrast to, for example, Germany's .5 per cent devoted to improving labor supply and even higher share (.55 per cent) of GDP allocated to labor demand policies (p. 29).

Bartik's main prescriptive advice is for the US to move over time to a combined program of aggregate labor demand subsidies and a targeted labor demand program with complementary supply programs. He contends that this "could significantly improve the permanent employment and earnings position of low-income Americans" (p. 3). His specific policy recommendations (see below) are based on principles (p. 293) all supported by empirical analysis in previous chapters. These include targeting of disadvantaged persons who otherwise would probably be out of the labor force or not employed; designing programs to encourage worker transition to the regular job market; focusing on newly created jobs; targeting small and small nonprofit agencies (to help garner political support); making employment subsidies large enough to attract employers to a program with many targeting requirements; and allowing for flexibility to respond to local labor market characteristics.

Bartik's main labor demand policy recommendation is for the creation of a refined New Jobs Tax Credit (NJTC) program (which was used in the US from 1977 to 1978 and is reviewed in detail in Chapter 8). His recommendations with its specific elements most resemble the Minnesota Employment and Economic Development program (funded by the state government in the 1980s and also reviewed in Chapter 8). Under the recommended policy, employers would get a jobs tax credit only for expanding employment in high unemployment local labor markets. The program would provide subsidies for expanding total employment—not just employment of the poor—when unemployment in a local labor market is high (p. 286). During national economic recessions, the NJTC could apply throughout the nation and play a countercyclical role in helping to minimize the depth and length of the unemployment impact of the recession. During national economic peak periods the program could help employment expansion and provide jobs for the poor in depressed local labor markets.

The proposed jobs tax credit program would include stipulations to help ensure that the poor benefit, that displacement is minimized, and that costs and goals are not politically prohibitive. Towards these ends Bartik recommends focusing subsidies on short-run (6-month) employment that will lead to "rollover" of the subsidized hires into regular jobs (p. 287). He also recommends that to improve the political support labor demand subsidies should be targeted at small businesses and nonprofits. The program and employer subsidies he suggests would be administrated in local labor markets to best meet the needs and address the concerns of local areas.

The book makes many contributions to employment policy. One of its main strengths is its comprehensive review of past and current employment programs in the US, both on the demand and supply sides of the labor market. Another is its strong empirical base and detailed quantitative analysis (much of which is presented in 15 appendices, which makes the book more readable and accessible to a broader market). Another strength is Bartik's detailed cost analysis of labor demand and supply policies, including the one he proposes at the end of the main text. Overall the book benefits from an even-handed nonideological approach. Bartik's review of programs and prescription are balanced and pragmatic with the focus on how to achieve jobs for the poor.

The main weaknesses of the book include its limited discussion of the politics of employment policymaking and its rather cursory discussion of the role of discrimin-

ation in US labor markets. Bartik does offer that labor demand policies which provide subsidies to small businesses will be more politically acceptable (than without that stipulation), but does not go much further with his analysis of what it will take politically to gain adequate political support and public funding for his recommendations. He also does not go into much detail on the role of organized labor and progressive interest groups in furthering policymaking efforts and improving job prospects for the poor. But there is only so much one can do in a book.

Still, readers will want to know what Bartik would now recommend in the context of a changed macro economy and labor market in the US since he completed the book. Would his policy recommendations stay the same? Would he suggest continued targeting of all those un- and underemployed and would this still result in benefits directed to the poor? What happens when the costs of Bartik's recommended policies are closer to the \$19 billion per year he estimates during a serious recession, compared to \$4 billion during periods of low national unemployment? How will policymakers and advocates be able to build an economic and political case for focusing efforts on jobs for the poor in the context of a weak overall economy?

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**Social Empiricism**, by Miriam Solomon. 2001. Cambridge, Massachusetts: MIT Press. 175 + xi. ISBN 0-262-19461-9. \$32.

This is an interesting book, not one that I would recommend as an addition to the library of most regional scientists, but nevertheless a book that provides a perspective that is all but missing in regional science. Let me assure potential readers that the book is not representative of what has become known as social theory; the rhetoric is a little strained and elusive at times but manages to present most of the ideas and interpretations in an accessible fashion.

The promotion for the book claims that the author has constructed a new epistemology of science; whether this will prove to be the case will depend, in large part, on the reaction to the interpretations that are presented. For reasons to be discussed below, the book draws on only a small subset of science – what is usually referred to as hard science – with little attention to issues in economics, statistics, mathematics, or even regional science. After a review of tensions between various science communities, the book proceeds to craft the new perspective. The concept of “decision vectors” is introduced to capture the way in which scientific outcomes are presented, received, debated, and finally accepted. This process would include the formal channels of meetings and publication as well as some informal processes that may rest, for example, on the a priori biases of those reading the results of a piece of research. Solomon is thus formalizing the process by acknowledging that factors such as peer pressure, deference to authority figures in a field, or the nature of competition between competing theories can all play a role in the way in which new research is greeted.

The discussion then moves to consideration along the axis of dissent-consensus, drawing upon examples of scientific debate as varied as continental drift, natural selection, and cancer virus research. This is all tied together as social empiricism in a penultimate chapter prior to a concluding piece on epistemic fairness.

In attempting to evaluate the book, I noted that it took me much longer than I anticipated to read it; I missed the connections with a field with which I was familiar. During this same period, I happened to read three other books that provided helpful perspectives on the case Solomon was trying to build. These included the biography of Nash (Nasar, 1998), a book on causality (Pearl, 2000) and a delightful, informal history of statistics (Salsburg, 2001). Salsburg's tour of the history of statistics revealed some wonderful opportunities for Solomon to apply her techniques to uncover the structure of dissent and consensus. Nasar's discussion of the operations of the Economics Nobel Prize Committee provides a fascinating case study to explore social empiricism in action in the social sciences. Pearl's more formal review reaches to analytical modeling and the inferences drawn therefrom; in regional science, there have been some examples whose history of acceptance or rejection would be valuable to follow. One in particular would be Wilson's (1970) introduction of entropy into spatial modeling and the more recent development of the new economic geography.

A history of regional science in terms of debates between competing paradigms offers some rich opportunities to assess from whence we have come and the degree to which, in aggregate, we have a set of theories, models, and analytical tools that provide a degree of coherence enough to justify a separate identity. Solomon offers one template into which this history might be cast; whether it is adopted in preference to others is less important than the need for such an analysis. Succeeding generations need a sense of the history of the discipline, enlivened with appropriate vignettes that provide color and commentary about the individuals entangled in the debates.

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**Mobility in Space and Time: Challenges to the Theory of International Economics**, by Nicole Pohl. 2001. Contributions to Economics. Heidelberg and New York: Springer-Verlag. 234 + xii. ISBN 3-7908-1380-X, \$50 (paper).

What drives the geographical allocation of economic activity? This question is not only at the center of policy but also at the heart of economic theory. According to Nicole Pohl international economic theory thus far does not adequately reflect the incentives

and the driving forces of mobility. Nor does it adequately take account of the time dimension in decisions on mobility. It is much too narrowly focused on incentives transmitted by prices. Instead, the multidimensionality of decisions on mobility requires an interdisciplinary, or, as Pohl puts it, a modern approach. In addressing these issues her book does not present a coherent new theory, but rather is a treatise on methodological issues in the economics of mobility. Starting from a description of the many motives and determinants of mobility (which are regarded as time-dependent) Pohl checks various theoretical approaches to the phenomenon mobility to see whether they are realistic. Some she finds more, some less realistic.

Consequently, the book is in three parts. In Part A Pohl describes the microeconomic foundations of mobility. International economics concentrates on (international, or regional, for that matter) interdependence transmitted by prices as well as trade and transportation costs. In doing so, she argues, international economics not only neglects the topology and morphology of countries but (probably) also (over) emphasizes the importance of (political) borders, i.e., nations. At any rate, the variables that international economics focuses on fall short of the variables that really matter, as the latter are more complex than traditionally assumed by the theories.

Moreover, other aspects may be increasingly relevant as trade costs decline. In particular culture, geography, organizational aspects within firms, institutions, and social capital, that is, the rules of the game, the role of habits and their interpretation by which a society is characterized, as well as politics, all may be relevant, and thus may contribute to the fact that other countries or regions are considered more or less distant. One must acknowledge that individuals are not all alike (i.e., heterogeneity) and that they may change their minds as new information comes in (i.e., the role of time). Moreover, the decline in information costs is only partial. First, tacit knowledge of local circumstances still makes for advantages of proximity; second, information is not only transmitted by the price mechanism; and third, though information sometimes has public good characteristics, it is frequently not sufficient to possess information but also necessary to be able to interpret and actually use it.

According to Pohl this calls for a more general theory of mobility that not only accounts for all these factors but is also not invariant with respect to time. Based on this insight, she develops a catalogue of criteria that theories on mobility should meet. In particular, she criticizes equilibrium theory as it cannot account for dynamics (for instance, due to learning), and, generally speaking, as it suffers from "a lack of microeconomic foundations" (p. 39).

In Part B Pohl contrasts her findings in Part A with how mobility is usually dealt with in international economics, in particular in the new trade theory and the theory of multinational corporations, or, if one adds a spatial dimension, the new economic geography. Transportation costs and imperfect competition make for centrifugal and centripetal forces, which are not only taken up by international economics, but also by regional and urban economic theory. Taken together, trade costs and economies of scale may be responsible for forward and backward linkages that establish centers of economic activity and give rise to cumulative causation. They make it attractive to locate close to the market, which in turn enlarges the market and makes being there even more attractive. However, depending on trade costs centrifugal forces may be strengthened, giving the periphery an advantage vis-à-vis the center, as costs for nontradable inputs are lower than elsewhere. Yet critical mass phenomena may explain path dependence and lock-in effects and thus make economies less responsive to changes in circumstances than might be expected

when focusing on costs of distance per se. The time dimension is addressed by the option theory of waiting when new information is being generated and disseminated which may alter decisions about whether to stay or to go. Despite these achievements Pohl criticizes international economic theory on various grounds, in particular for its maximizing approach which concentrates on economic costs of distance in the narrow sense of the term. According to her it lacks novelty, imitation, and learning, as well as nonmarket interaction by means of cultural and institutional frameworks. The latter may not only shape individuals' capability for mobility but may also change it over time.

Part C presents an overview of alternative approaches to traditional ones in international economics, which she considers more realistic as they integrate several aspects of mobility neglected by traditional theory. She considers three theoretical approaches as promising. They need to be further developed and refined to address issues of mobility, however. The first is evolutionary economics, as it explicitly deals with externalities, networks, and personal ties. However, neither is this idea new nor is the approach fundamentally different from those already mentioned. In fact, a number of contributions to the new economic geography are inspired by biology, evolutionary theory, and evolutionary economics in particular. The second approach, (evolutionary) game theory, however, would do even better in terms of realism, as it allows for heterogeneity among agents and updating with respect to information, and thus displays the sequential character of decisions when focusing on local externalities. Still, many determinants are treated as exogenous which Pohl argues are endogenous. This applies in particular to politics, though public choice theory brought some of these issues to the attention of economic theory. These advances notwithstanding, she argues that rules and institutions, as well as the formation of expectations, networking, and matching, in short social capital which may differ locally and across groups of individuals, does not get the attention it deserves.

The third approach (and which Pohl thinks scores best in this respect) is the theory of sociodynamics, which employs stochastic and nonlinear differential equations to display mobility. In detail, the approach differentiates between the micro- and the macrolevel. At the microlevel individual decisions are based on a multidimensional utility function. Change is represented by probabilistic transition rates of relevant variables, which also depend on macrovariables, so that in fact a feedback mechanism is implemented. The dynamics on the macrolevel and thus the macroeffects of individual behavior are captured by the master equation. However, though rich in variables, this approach solves the problem only superficially. Not only does it feature many variables, but how they relate to one another seems to be already known by its proponents. Just like the methods mentioned earlier, it thus fails to address issues of innovation and creativity. In addition it is (at least in its current state) still underdeveloped with respect to the economics since the methods are actually borrowed from physics. As Pohl herself admits "... the state of the art in this field still leaves many questions as regards its application to economics..." (p. 136).

Though Pohl emphasizes novelty, creativity, and information in decisions on mobility, she gives the Austrian school of economics surprisingly little attention in her book. Many contributions to Austrian economics also criticize much of economic theory for being concerned with passive maximizers, optimality, and equilibria; and they explicitly allow for creativity and acknowledge that creativity cannot be explained. Nevertheless, as the Austrian school stresses, pattern predictions are possible.

The pure fact that international economics neglects many details need not imply that it does not have much to say about mobility. Pohl doubts whether the framework provided by international economics is useful, as it rests exclusively on the differences that national borders account for. However, this focus probably must not be taken too literally. Immobility may have several causes. Nevertheless the tools developed by international economics can be useful, for instance, when it comes to the consequences of the immobility of resources.

Moreover, the task may not be to enrich models by as many influences as possible, but to apply Occam's Razor. Pohl concentrates on how realistic the assumptions of theories are and whether they capture all factors that exert an influence on mobility. However, there is also good reason to state a theory in its simplest terms and not to make unnecessarily complicated assumptions—even when neglecting many details. On the one hand this might be considered a drawback, in particular with respect to how realistic models are. On the other hand it is an advantage as the theory is more focused and cause and effect can more easily be identified. Assumptions may be unrealistic or even ignorant in many respects (for instance as regards the many motives human behavior is driven by) yet the theories may explain well macro-patterns. What matters is the model's performance with respect to what is to be explained. In this respect there is surely some room for improvement. Pohl's book provides not only a critical survey, but also some suggestions along the lines of which the international economic theory of mobility may be developed further.

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**An Introduction to Geographical Economics: Trade, Location and Growth**, by Steven Brakman, Harry Garretsen, and Charles van Marrewijk. 2001. New York: Cambridge University Press. 350 + xxiii. ISBN 0-521-77039-4, cloth, \$90; ISBN 0-521-77967-7, paper, \$33.

This book is designed as a course text on *geographical economics* – also known as the “new economic geography” within the discipline of economics (but rarely recognized that way within the discipline of geography). In reality, however, it seems the book's intentions are twofold: on one level it is a general, yet thorough, introduction to what it calls geographical economics and at another level it is, in fact, a specialized text for students who are fairly well prepared in microeconomics. Fulfilling either intention would be difficult enough, but these authors have gone a long way in achieving both in this interesting volume.

It is well designed as a course text. The first two chapters are introductory. The first describes a series of empirical observations, such as the presence of geographical concentrations in the world economy, the distance decay effect in international trade, and the rank-size distribution of some collections of cities, that set the tone for the book's focus on *geographical economics*. While the first chapter introduces the types of problems that may be addressed by geographical economics, the second chapter provides some specific definitions and classifications of related forms of analysis—economic geography, regional science, urban economics, trade theory, and development

theory—that also are used to address many of the same problems. In addition, some flavor of the modeling approach of geographical economics is provided in Chapter 2, which leads to some (unavoidable) awkward cross-references to later chapters in the book.

The heart of the book and its introduction to geographical economics is in Chapters 3 through 6. The basic structure of Krugman's core model of geographical economics is described in Chapter 3, as is the importance of its two essential foundations: the Dixit-Stiglitz "love-of-variety" preference function and increasing returns to scale. The core model is a two region, two sector (farming and manufacturing) economic model. Its purpose is to account for locational (region/sector) patterns that can arise in such a seemingly simple world. As Chapter 3 describes, however, there are several sector/place variations that can arise, especially when transport costs are added to the mix of conditions. Chapter 3 is where this book is at its best as a course text; it provides key definitions and describes important results of the model in verbal and tabular forms. In addition, it presents the structure of the core model in diagrammatic form (p. 61), with that figure used as a reference in textual elaborations of the model's components.

Beyond simple cases, problems in geographical economics (and in economic geography, for that matter) become analytically intractable, largely because of the likelihood of multiple equilibria and even indeterminacy. Chapter 4 provides some description of the use of simulation in evaluating geographical economic models. As might be expected, this chapter is the most mathematically intensive in the book, and perhaps could have been presented in a more descriptive way or placed at the end of the volume. Chapter 5 contains some empirical evidence for the efficacy of the geographical economics approach to selected empirical regularities. As the authors admit, however, consistent empirical verification of the core model of geographical economics is difficult to discern beyond its accounting for certain "stylized facts." Chapter 6 describes some of the extensions to the core model that can improve its empirical validation. Non-neutral physical geography and more realistic accounting for transport costs are described in their effect in accounting for the city-size distribution and geography of Western Europe.

Chapters 7 through 10 bring back the issues raised in the book's first chapter – now to be considered in the context of extended models of geographical economics. Chapter 7 concerns the rank-size rule, Zipf's Law, and congestion, while Chapter 8 addresses multinational corporations and foreign direct investment. International trade is taken up in Chapter 9, the best of the book's more advanced parts. As developed by Krugman and some others, geographical economics is really an extension of the new trade theory that relies so heavily on the Dixit-Stiglitz preference function for analytical tractability. Since Ricardo, trade has been treated most often as a two country-two commodity system, which, of course, is the same system posed in the core model of geographical economics. As the book's authors emphasize, trade and location are two sides of the same coin. Because the Dixit-Stiglitz-Krugman-Helpman trade models have been around for more than 20 years now, their contributions are well defined and therefore provide the authors with some good linkages for the models in geographical economics. The applicability of geographical economics to economic development, as presented in Chapter 10, is not so easily argued. While the dynamics of a two-region model can be worked out, what may be the crux of *development* – the shift from agriculture to manufacturing – is assumed away by geographical economics' use of a two-sector economy as an initial condition.

The last chapter of the book contains some *pro forma* policy recommendations and summarizes the scope and contribution of geographical economics as a means of analyzing the geography in economies. Disciplinary distinctions, raised earlier in Chapter 2, are brought up again and the chapter finishes with some comments on geographical economics' staying power – where it will be in the future.

On its own merits, the book should be welcomed as a course text. The authors provide sets of exercises at the end of each chapter; they place technical material in boxes so that more advanced students can benefit from details while less advanced students can maintain their grasp of the general flow of arguments. They provide a web site that is useful in working problems from the exercise sets and provides additional information and web links for those interested in extensions of material in the book and related lines of inquiry. Instructors using the book should expect students to have knowledge of intermediate microeconomic theory, a first course in calculus, and statistics to the level of applied regression analysis. What remains to be seen is the number of courses that are developed in which the book could be used. Many departments have courses in regional or urban economics – the book could not be used as the sole text in those. Nor is it likely to be adopted by instructors in economic geography courses, who would find it too narrow in scope. One audience that should welcome this book is, however, economic geographers who are interested in developments in economics related to their own research. This book should be of significant interest for that group, who will likely find it naïve in its geography but will profit from its explanation of the microeconomic foundations of research in *geographical economics*.

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**Rural Dimensions of Welfare Reform**, edited by Bruce A. Weber, Greg J. Duncan, and Leslie A. Whitener. 2002. Kalamazoo, Michigan: W.E. Upjohn Institute for Employment Research. 498 + x. ISBN 0-88099-240-9, cloth, \$45; ISBN 0-88099-239-5, paper, \$27.

Why an entire book devoted to welfare reform in rural areas in the United States? After all, only about a fifth of the nation's poor and under a quarter of all food stamp recipients reside in rural areas. According to the editors and many of individual chapters in this interesting volume, most of the research on welfare reform has focused on urban areas, but there may be reason to expect that successful welfare reform is more difficult in rural areas. However, relatively few of the chapters focus only on welfare and poverty in rural areas. More typically, they compare rural (or nonmetropolitan) areas to urban (or metropolitan) areas. Indeed, the book might be better titled *Rural versus Urban Dimensions of Welfare Reform*. Moreover, as the book makes evident, the similarities between rural areas and urban areas are probably more important than the differences. However, by demonstrating this, the book makes a useful contribution.

It is a collection of over half the papers presented at a May 2000 conference in Washington DC, which was sponsored by the Rural Policy Research Institute and the Northwestern University/University of Chicago Joint Center for Poverty Research. As is common in collections of conference papers, the quality is somewhat uneven.

However, with only a few exceptions, the chapters are interesting, informative, and well written. Not surprisingly, as suggested by the relative lack of cross-referencing among the chapters, there is little evidence that the authors learned much from one another. As a result, there are some inconsistencies in the conclusions reached in different chapters and even in some of the definitions used—for example, in defining what constitutes a “rural” area. Moreover, there is considerable repetition across the chapters, especially in discussions of the barriers to employment faced by rural welfare recipients. These are fairly minor quibbles, however; this is a good book.

The volume has 17 chapters, divided into four sections, and in addition the editors have written helpful introductory and summary chapters.

The three chapters in the first section provide a useful backdrop by contrasting the policy and economic environments in rural and urban areas. They compare trends in poverty, welfare receipt, employment, earnings, and so forth. The next two sections, which mainly concentrate on the AFDC/TANF population, form the heart of the book. (AFDC/TANF—Aid to Families with Dependent Children/Temporary Assistance for Needy Families—is the nation’s major cash assistance program and most participants in this program are female-headed families.) The first section compares urban and rural welfare caseload trends in specific states, and sometimes in specific locations within these states, noting that, as intended, AFDC/TANF caseloads have fallen dramatically since Congress passed major welfare reform legislation in 1996. Several chapters in this section also examine barriers to further reductions in caseloads, especially in rural areas.

A major goal of welfare reform has been to increase employment among the welfare population. Thus, the book’s third section focuses on welfare-to-work policies and their comparative success in rural and urban areas. It also examines other labor market issues.

While the book’s second and third sections concentrate mainly on the AFDC/TANF populations, the two chapters that make up the fourth section examine recent dramatic declines in food stamp caseloads and compare their implications for rural and urban areas. The findings here suggest the reduction in food stamp caseloads is more an urban than a rural phenomenon and rural trends in food insecurity and hunger do not differ greatly from urban trends.

Many of the book’s chapters begin with a presumption that successful welfare reform is more difficult in rural areas. Why might this be the case? One possible reason is that unemployment and poverty rates are somewhat higher in rural areas and earnings and wage rates are somewhat lower, suggesting that jobs might be less attractive and more difficult to find for welfare recipients. Moreover, it may be more difficult to get to those jobs that exist. Another reason, suggested by many authors in the book, is that the single parents who make up the bulk of the AFDC/TANF population have more difficulty in making childcare arrangements in rural areas. One more factor is that because of low population density and the resulting absence of possibilities for scale economies, it is more costly for rural welfare agencies to provide support services (for example, training courses, help in job search, and health care); and because of greater distances and poorer public transportation, it is more difficult for rural welfare recipients to access these services.

Nonetheless, information provided in many of the chapters suggests that, except for especially isolated and depressed rural pockets, it is not apparent that the picture is much more bleak in rural than in urban areas, especially in central cities. For example, on the basis of a fairly sophisticated statistical analysis, Signe-Mary McKernan and her coauthors conclude that recent welfare reform efforts “do not yield poorer outcomes

in nonmetro areas than in metro areas” for employment of single mothers (p. 281). Other chapters suggest that since the 1996 welfare reform legislation, outcomes related to welfare use and poverty have not been very different in nonmetropolitan areas than in metropolitan areas. An extensive empirical analysis by Robert M. Gibbs suggests some reasons why:

Urban and rural industry and occupation mixes are becoming more alike; aggregate rural unemployment rates are usually within a few tenths of a point of urban rates; earnings for rural high school dropouts are as high as those for urban dropouts; and the share of good-paying jobs among low-skill occupations is not substantially different in rural and urban areas. (p. 70)

There are other reasons why the effects of welfare reform in rural areas may not differ very much from the effects in urban areas. Although public transportation is probably poorer in rural areas, it is not evident that central city residents can commute to decent jobs, which have increasingly located in the suburbs, more easily than rural residents can. For example, in interviews with welfare recipients in Minnesota, Lisa Gennetian and colleagues found that rural recipients were actually less likely to report transportation as a barrier to employment than their urban counterparts (p. 296). In addition, both Gennetian et al. and Ellen Shelton et al. (p. 359) found that rural Minnesota welfare recipients were less likely to report childcare as a barrier to employment. Also, in their concluding chapter, the editors point out that “rural residents often have more extensive and stronger informal personal support networks, which can compensate to some extent for the weaker formal support services in helping single mothers make the transitions into paid employment” (pp. 457–8).

Several chapters note that one intriguing difference between rural and urban areas is that rural families tend to stay on welfare for shorter periods of time but return to the rolls more frequently. In an especially interesting analysis, Henry Brady and his coauthors use administrative data from California to help explain why. Their findings indicate that in counties where employment is highly seasonal—for example, those highly dependent on agriculture—individuals support themselves by working during the season and receiving welfare during the off-season. Thus, welfare subsidizes seasonal employers, as well as their employees, by helping ensure availability of a work force when it is needed. Brady et al. predict that because the 1996 welfare reform legislation imposed lifetime limits on the number of months individuals can receive welfare, these arrangements will become increasingly less feasible in the future.

In another interesting chapter, one of the few in the book to find evidence that welfare reform might be less successful in rural areas, Lisa Gennetian and her colleagues contrast the findings for urban and rural counties from a randomized evaluation of the Minnesota Family Investment Program (MFIP). MFIP required the heads of long-term AFDC families to participate in employment and training services and provided financial incentives to encourage them to take employment. The evaluation findings indicate that while the program increased employment in both urban and rural counties, the effects were larger and longer lasting in the urban counties. Moreover, statistically significant earnings increases were found only for the urban counties. Interestingly, the authors suggest that one possible explanation is that “because rural [AFDC] recipients [in Minnesota] have more recent work experience and more of

a sense of welfare stigma, they generally may be more likely to go to work in the absence of MFIP" (p. 298).

With the exception of one or two somewhat technical chapters, this book is very accessible and thus can be read usefully by virtually anyone with an interest in welfare and poverty issues. Despite the fact that the title contains the word "rural," the reader can learn almost as much about these issues in urban areas as in rural areas. Indeed, perhaps the best thing about the volume is the prominence it gives to geographical diversity and similarities in poverty and welfare problems.

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**Property Taxation and Local Government Finance: Essays in Honor of C. Lowell Harris**, edited by Wallace E. Oates. 2001. Cambridge, Massachusetts: Lincoln Institute of Land Policy. 345 + x. ISBN 1-55844-144-1, \$20 (paper).

The papers in this volume were commissioned for a conference on "Property Taxation and Local Government Finance" sponsored by the Lincoln Institute in January 2000. The conference also honored C. Lowell Harris for his more than six decades of contributions to the study of public finance in general and property taxation in particular. The result is an excellent survey and exposition of current views about the economic effects of property taxation. The volume opens with excerpts from a day-long interview of Lowell Harris at the Lincoln Institute on August 5, 1999 that highlights his career from his first days at Harvard in 1930. In the closing pages, Harris briefly shares his thoughts on the current state of property taxation and promising questions for research.

In his introductory chapter, Wallace Oates presents an overview of the papers and offers some additional thoughts on property taxation and local government finance. Regarding the economic effects of property taxation, Oates sees validity in the competing views set out in Chapters 2 and 3 by William Fischel and George Zodrow. Fischel argues that property taxes are nondistortionary user charges for local public services that facilitate efficient local government decisions. In contrast, according to the so-called "new view" explained by Zodrow, property taxes are levies on capital that distort both local government decisions and investment in housing and other reproducible capital.

Oates also expresses his views on other issues: the reasons for dissatisfaction with the property tax, local government's need for its own tax, the consequences of various constraints and limits that states have imposed on local property taxation, and the need for fiscal equalization. He concludes that there is need for "... local fiscal systems that can encompass *some* fiscal equalization from grants, but at the same time retain a basic role for the local property tax in making decisions concerning the extent of local public programs" (p. 30, italics in original). Localities need to be able to vary property taxes in making *marginal* decisions about whether to extend or curtail local programs. Unfortunately, some states have imposed restrictions and limits (described in the essay by Arthur O'Sullivan) that prevent the property tax from being used in this manner.

To support his claim that the property tax is a benefit tax, Fischel argues that local governments are essentially municipal corporations whose stockholders are homeowners who want and vote for the mix of spending, taxes, and land use regulations that maximizes the value of their homes. He further argues that both the benefits and costs of public services tend to be capitalized into property values. This capitalization turns the property tax into a benefit tax because spending will increase property values, and therefore receive homeowner support in the voting booth, only if its benefits equal or exceed its costs as measured by taxes imposed.

But capitalization and homeowner/voter sensitivity to the effects of taxes and spending on property values do not imply that the property tax will in fact function as a benefit tax. For that to be the case, the marginal benefit of local spending must equal its marginal tax price, both in the aggregate and for each homeowner individually. At best, one might expect marginal benefit to equal marginal tax price for the decisive (median) voter. Further, the property tax can function as a benefit tax only if it can be varied to finance *marginal* spending; but in many states the property tax is no longer an independent source of revenue because of restrictions and limits documented in O'Sullivan's essay.

In Chapter 3 Zodrow considers in detail differences between the benefit view and the new view of the property tax, focusing on how one might determine empirically whether one is more descriptive than the other. There is certainly some evidence that property taxes and local public spending are capitalized, beginning with Oates's study of the capitalization of local taxes and spending (1969). However, as Zodrow notes, capitalization can occur under the new view, so capitalization taken by itself is not evidence that the property tax is a benefit tax (p. 97). Similarly, Zodrow explains that validity of the benefit view cannot be established by Tiebout-sorting and the widespread prevalence of zoning ordinances, although Fischel refers to such as support for the benefit view. Although Zodrow is cautiously optimistic that progress can be made in distinguishing between the two views, he concludes that "much further empirical investigation must be done before the validity of either view can be established" (p. 105).

Thomas Nechyba, Dick Netzer, and Richard Musgrave also weigh in on the question of whether the property tax can be viewed as a benefit tax. It is fair to say that all agree that the question remains unresolved. In his comments on the Fischel and Zodrow chapters, Nechyba speculates on why the disagreement persists, but also notes that the question may be the wrong one to ask. "There may not be one right model. The different assumptions underlying the two different views are likely to hold to varying degrees from one setting to another; one view may be more appropriate in one case than in another" (p. 119). In any case, any reader of these essays will surely agree with Nechyba's conclusion that they "are wonderful introductions to the debate, and provide insights into why these disagreements persist, and where the future of the debate may be heading" (p. 114).

The essays discussed above examine current theory of the incidence and allocative effects of property taxes. For these essays alone, the book would be well worth acquiring and reading. But the remaining essays should be equally interesting to anyone involved in research or teaching about property taxation. I will briefly highlight some of the topics they consider.

John Wallis reviews the history of the property tax in America, with data going back to 1800. He examines and offers explanations for the continuing importance of the tax at the local level and its small and diminishing role at the state level.

Jan Brueckner explains how property taxes may promote urban sprawl. One inducement to sprawl is the inclusion of structures in the property tax base, which reduces the intensity of land development relative to what would occur if structures were not taxed. More important, under property-tax financing of infrastructure, fringe landowners pay less than either the average or the marginal cost of new infrastructure. In contrast, landowners close to urban centers pay more than average cost. Development is thus encouraged on the fringes rather than in the centers of urban areas.

Arthur O'Sullivan examines the US experience with limits on property taxation. He explores both the possible reasons for the imposition of limits and their economic consequences. He concludes that the limits imposed in connection with the tax revolt of the 1970s and 1980s decreased both the growth of property tax revenue and the share of income absorbed by property taxes. But evidence on how limits have affected local governments' input and output choices is mixed and inconclusive.

Property taxes remain the primary source of *locally collected* funds for schools. But property tax bases are distributed unequally among school districts. The resulting resource disparities give rise in turn to disparities in educational opportunities and outcomes. William Evans, Sheila Murray, and Robert Schwab survey recent research on the effects of court decisions and other measures aimed at reducing these educational inequalities.

Although the property tax continues to be the main local tax in our federal system, there have been persistent efforts to reduce its role through a variety of measures labeled "property tax relief." William Duncombe and John Yinger describe these programs and discuss recent trends in their use. They explain why relief programs "typically provide less relief than advertised," and how "property tax relief programs that appear quite different can in the end have equivalent impacts on property tax burdens" (p. 243).

Therese McGuire explains that even if we agree that the property tax functions mainly as a benefit tax, it is a desirable and needed tax only if we conclude that local governments need to levy any taxes at all. It is fair to say that she and other authors agree that efficiency is served by local government autonomy in making some taxing and spending decisions. Local governments therefore need to levy taxes, and the property tax is the best available tax for that purpose.

Accompanying the essays noted above are insightful comments by Robert Inman, Karl Case, Jon Sonstelie, Susanna Loeb, David Bradford, and Steven Sheffrin. In the final analysis, this volume is important because all of the contributors to it have also been major contributors to research on local public finance over the past several decades.

In sum, although the authors differ somewhat in their analyses of the effects of property taxation, on balance their essays support a favorable view of the property tax. There are basically two reasons for this. First, compared to relevant alternative local taxes, the property tax promotes relatively efficient taxing and spending decisions. Second, the tax is equitable, again as compared to relevant alternatives. It tends to align tax payments with the value of benefits from local government services and therefore scores well from a benefits-received perspective. And from an ability-to-pay perspective, the tax is progressive in that the average rate of tax is borne by property owners.

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**Institutions and Systems in the Geography of Innovation**, edited by Maryann P. Feldman and Nadine Massard. 2002. Economics of Science, Technology and Innovation Series, Vol. 25. Boston: Kluwer Academic Publishers. 368 + viii. ISBN 0-7923-7614-5, \$125.

In 1994 Maryann Feldman published her highly respected book *The Geography of Innovation* (Feldman, 1994). Since then numerous scholars have explored the interdependent relationship between space and innovation. Now, Feldman and Nadine Massard present a compilation of 16 contributions written by 23 scholars, that focus on an aspect of this relationship which is becoming more and more important: the role of institutions and (innovation) systems. The editors intend to present empirically based and theoretically founded answers to four questions:

- What is the influence of the nature of knowledge and its consequences on proximity effects?
- What are the sources of externalities: are they public institutions or private ones?
- Are there unequal absorption capacities that differ between firms and systems?
- What are the mechanisms of knowledge spillovers and transmission?

No specific school dominates the arguments and interpretations, although several authors cannot hide a certain sympathy for evolutionary economics. What makes this volume worth reading is the interesting and stimulating mixture mainly of French and US researchers. Its structure is an appropriate one: after a useful introduction, six chapters are on theory, then five are on empirical studies, and four are on policy considerations. Some authors are leading researchers on innovation, economic implications, and space from the last decade (Audretsch, Feldman, Maskell, Antonelli); others have just begun to appear on the scene, at least from the dominant Anglo-American perspective (which very often ignores scientific findings written in French).

Several chapters are worthy of more detailed assessment, because they are representative of the whole book and provide significant added value. To start with theory, three chapters are especially important. In Chapter 3 Dominique Foray and Jacques Mairesse deliver a convincing and well-written discussion of the knowledge dilemma and its consequences for the geography of innovation. Developing a short and vivid parable of "Rachid" (a fifteenth-century astronomer who built a new telescope, working in Fez) and "Joe" (Joe de Risi, a student at Stanford who posted a document called *Mguide* on the web that enables the reader to build a micro array robot), they explain why and how a gradual reduction of the geographic constraints happened in recent decades. This is valid not only for the codified knowledge of the "Joe" type but also for the much more tacit one of "Rachid." The authors' conclusion is that in some cases locational advantages have disappeared because marginal costs of information

distribution are negligible, but in other cases locational advantages remain important because additional knowledge is necessary to receive added value from a long-distance transfer of information or codified knowledge.

The impact of globalization and communication technologies on innovations is explored by David Audretsch in Chapter 5 with consideration given to the role of small firms. He describes and explains two paradoxes: First, scientists as well as policymakers early acknowledged the increased (not decreased) importance of geographic proximity and regional agglomerations, at least for high-tech development, that is always associated with the creation and commercialization of new knowledge. Thus, neither geography nor distance is dead. Second, small firms and especially start-ups emerged as engines of innovation, employment creation, and economic development. Audretsch explicitly addresses intra- and intersectoral knowledge spillovers within a region – and in doing so he is criticizing part of Paul Krugman's work on new economic geography. Taking the case of biotechnology as empirical proof for his hypothesis, Audretsch makes clear that knowledge spillovers tend to be spatially restricted and – contrary to Krugman's opinion – that they are measurable.

In Chapter 7 Michel Bellet, Nadine Massard, and Philippe Solal revert to a more global perspective on innovation and space when they interpret National Innovation Systems (NSIs) in the light of two much older concepts and their protagonists: Friedrich List's work on *The National System of Political Economy* and the American protectionist school of Henry C. Carey. In their inspiring paper, the authors make clear that, despite the passage of time, the basic elements of both concepts can be found in current interpretations of NSIs. They describe the evolution of the French NSI and are able to show that the "notion of NSI remains more a descriptive framework than a complete analytical tool" (p. 138) – a conclusion with which we agree.

The second part of the volume focuses on the role of spatial proximity in innovation processes and is based on empirical studies. A core message is that spatial proximity matters but there is a complementarity, rather than an opposition, between local and nonlocal relationships. Christophe Carrincazeux analyzes the role of geographical proximity in the organization of industrial R&D. His analytical framework is based on Pavitt's critical interface concept and Breschi and Malerba's sectoral approach to innovation. By distinguishing between technological and combinatory complexity in innovation processes, Carrincazeux demonstrates that the cooperating partners vary between different sectors. Users play a crucial role in machinery and electrical equipment for example. Traditional sectors tend to be relatively production-oriented, whereas high-tech sectors make use of pure research or science. With respect to proximity, Carrincazeux concludes that the more complex the knowledge base, the higher the frequency of localization in proximity to potential R&D partners. Where the knowledge base is less complex, geographic proximity no longer constitutes the most important factor for a firm's innovation processes. His paper provides a sound theoretical background and interesting methodological approaches.

John Cantwell and Camilla Noonan examine the location decisions of foreign-owned innovative activity in Germany and classify the German regions within a locational hierarchy. By examining patenting by foreign and indigenous firms, they demonstrate that activity differs by region, with each group of firms creating regional advantages in different technological sectors. Foreign firms' research was related to the existing knowledge base of domestic firms in six high-order research locations. They conclude that spillovers in these regions seem to operate mainly through exchanges in and around core technological systems. The firms make use of the diversified know-

ledge structure so that relationships are realized between actors in different fields of specialization.

Pierre Mohen and Julio Miguel Rosa analyze barriers to innovation in service industries in Canada. They aim, first, to assess the barriers to innovation as perceived by Canadian firms in the service sector (communications, financial services, technical business services), and, second, to test whether there are complementarities between those obstacles to innovation. If there are, a systematic approach in economic policy is needed in order to increase firms' innovative capabilities. The results show that the perception of impediments to innovation varies according to industrial affiliation, size of firm, the perceived competitive environment, and whether or not a firm conducts R&D. The authors identify two types of complementarities, one between cost and risk and the other between internal and external governance. This means for policy formulation that removing one of these obstacles will probably require a solution to its complement.

Michelle Gittelman's paper on knowledge spillovers in biotechnology analyzes the differences in the institutional set up and the transfer of knowledge from research to industry in the United States and France. These differences lead to different roles of the research institutions. In the US, universities act as entrepreneurs as a consequence of the relatively weak interest of the government in the commercialization of federally funded research. So US universities actively build up patent portfolios and maintain a stake in the firms that spin off their research. In the case of biotechnology, the institutional setting fosters intensive networks among university laboratories, firms, and individual scientists. In France, technology transfer still follows more the linear innovation model in which knowledge is produced in the public sector and is passed to firms via patents and licenses. As a result French research institutions take a more passive role towards the inventions that emerge from their own laboratories. The technology transfer offices act primarily as brokers between laboratories and firms. This institutional comparison gives a meaningful explanation for the strong geographic variation of knowledge spillovers in a science-based industry.

Together, the five selections in Part 2 give an interesting overview of knowledge spillovers. Interestingly, the theoretical and consequently methodological approaches differ greatly: the first three papers are more econometric, the fifth is basically qualitative, and the fourth paper does not fit very well the heading of Part 2 because of its stronger policy orientation.

In the policy section, an important paper is Muriel Fadaïro's contribution on technology externalities and innovation policies within the European Union, which makes clear that the EU research programs are rather efficient when positive externalities are considered. The paper by Mario Maggioni on high-tech clusters confronts theoretical results with findings of the policy-oriented literature. The theoretical results are based on a model of firms' location and cluster development. Interestingly, Maggioni develops a tentative taxonomy of science parks. He distinguishes science parks based on three different regional and management functions (development, reconversion, and delocalization). Each type uses different measures and incentives to foster regional development. He interprets science parks as managed innovative industrial clusters where the achievement of critical mass, the promotion of cooperation, and the coordination of investment decisions are regulated by specific policy actions.

In the last chapter Peter Maskell discusses future challenges raised by globalization. His basic assumption is that globalization and the ongoing creation of a world

market have required fundamental changes in the way regions can defend and enhance competitiveness: the economic future of most regions is related to their ability to create or access and utilize knowledge. A crucial task is safeguarding the educational infrastructure and institutional framework for market exchange favoring knowledge creation. Regional economic development depends on nonmarket institutions like the specific stock of social capital, governance arrangements, and the industrial structure.

Of course, this book is not perfect. We would have appreciated more about regional innovation systems as the now widely accepted addition to NISs. Publications by Phil Cooke and others are not considered explicitly, although at least some chapters try to interpret the NIS concept regionally. Unfortunately, apart from their affiliation, the book gives no information on the contributors, which is a pity because not all of them are well known in the Anglo-American (and German) world of regional science. In some parts of the book the editing could have been more careful. While a compilation of 16 contributions runs the risk of varying quality, quality disparities between the chapters are not too serious in this volume.

The book clearly reveals that research on the issue it addresses “should shift away from asking if geography plays a role to explore how the role of geography varies by situations and communications” (p. 51). Considering this and arguing as economic geographers, we hope this volume is another small step towards fruitful cooperation between economists and economic geographers (*not* in the sense of Paul Krugman!) as the two disciplinary groups that should have the relationship between space, economic development, and innovation at the core of their research.

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**The Dynamics of Knowledge Regimes: Technology, Culture and Competitiveness in the USA and Japan**, by Dengjian Jin. 2001. Science, Technology and the International Political Economy Series. London and New York: Continuum. 321 + xiv. ISBN 0-8264-5453-4. \$89.95.

Underneath much jargon in the hefty text, readers may uncover a key sober question: why do different countries consistently perform better in some sectors than others in international markets? This book has a straightforward answer: due to differences in culture, interpreted as a bundle of principles (such as independence vs. dependence, contract vs. connection), that influence the type of knowledge generated in a country, which in turn gives competitive advantage to nations in specific techno-

logical sectors. A comparison of the USA and Japan, which the author carries out competently by a survey of secondary empirical materials, illustrates this chain of causation well. The following two long sentences capture the essence of the argument.

In the USA, the contractual cultural paradigm has led to the dominance of explicit, separate, and propositional knowing and the organizing principles of standardization, quantification, depersonalization, and decontextualization, which in turn have contributed to American competitiveness in databases and other information services, professional services, consulting, banking, insurance, warehousing retailing, fast food, soft drinks, hotel management, and formalized marketing research. In contrast, the cultural paradigm of connectual man has led to the dominance of tacit, connectual, and contextual knowing in Japan, which in turn has created competitive advantages in incremental improvement, synchronization, organic customization, which are of vital importance for Japan's competitive success in automobiles and consumer electronics. (p. 185)

The book has a clear structure, with three parts. Part I emphasizes the importance of a sectoral approach, and presents data on competitiveness of Japanese and US industries systematically. Part II is devoted to laying out the knowledge regime perspective. Emphasis is placed on the mutually reinforcing nature of culture, technology, organization, and institutions; in jargon, "the coevolution of cultural paradigms, governance mechanisms, and technological trajectories around the attraction of axial organizing principles forms the broad-scope isomorphic structure of knowledge regimes" (p.60). In Part III, governance mechanisms for knowledge creation is the focus of discussion, with contractual governance corresponding to the US setting and connectual governance corresponding to the Japanese scene. Emphasis tends to be placed on human resource aspects at the expense of underplaying the financial aspect of corporate governance.

In Part IV, four chapters are devoted to contrasting organizing principles, namely quantification vs. contextualization, spontaneous vs. organized technology fusion, modularity vs. connectivity, and people-independent and people-dependent systems integration. It is evident that the first of the contrasts in each pair applies to the US and the latter to Japan. Lastly, a rather pompously titled chapter "The Great Synergy of Civilizations" evokes Samuel Huntington and Francis Fukuyama. This leads the author to declare the twenty-first century a "new era of great synergy among cultures which will enable human beings to enjoy a much greater level of diversity and richness in organizing principles far beyond the limits of any single nation" (p. 280). It is clear that the author is not a believer in globalization leading to convergence, and his analytical framework gives sufficient grounds for this position. But it is not at all clear where lies the basis for his belief in "synergy of civilizations" as distinct from century-old attempts by nations and businesses to borrow and emulate each other's institutions and practices.

In many ways, the book manifests an over-ambitious project, as indicated by a list of seven questions that it purports to investigate. The questions range from a historical explanation of why a certain knowledge regime emerged in specific countries, to the future of national competitiveness in a digital economy and public policy implications for enhancing the performance of a nation's system of knowledge creation. None of

these issues is handled fully, leaving the reader with a feeling of incompleteness and insufficiency.

But perhaps the major flaws are not in these fuzzy boundaries of an ambitious project, but in the core of the analytical framework the book presents. First, the book title contains the term “dynamics” but the analytical framework of the knowledge regime is largely static, emphasizing mutual reinforcement of elements in the model. There is a notion that changes in the environment or technology (e.g., digitization) have given the US knowledge regime an edge over the Japanese counterpart, but how such an exogenous shock feeds into the dynamics of the knowledge regime is neither theorized nor analyzed. The author accords central importance to culture, and since there is no explicit empirical discussion of how culture may impact institutions and vice versa, the reader is again left with a rather static perspective.

Second, the author, like Michael Porter (1990) and more recently Peter Hall and David Soskice (2001), recognizes that competitive advantage of nations lies in specific sectors and not in a national economy as a whole. Unfortunately, the book goes beyond this to state that “the knowledge regime perspective is able to bridge the gap between the macro-level analysis of culture and micro-level studies of firm behavior” (p. 281). This, the book does not do, as the knowledge regime framework imputes macro-level factors to explain sectoral differences. Nowhere is there a mention of business strategy, an explicit identification of which is the only way to explain differences in firm behavior within a sector.

Lastly, all the contrasts in the four organizing principles presented in Part IV are ideal types, subject to hybridization and practical applications in either country of study. The author recognizes this in the case of quantification vs. contextualization (Chapter 7), when he puts forward the Toyota Production System as a result of synergy between standardization (the essence of Taylorism) and contextualized learning. In discussing modularity and systems integration in Chapters 9 and 10, however, no such synergy is recognized. In reality, as firms face differential speeds of change in multiple technologies, product and organization architectures in an industry are likely to swing from being modular to integral, and back to modular. Such dynamic notion of organizing principles is not captured in the book.

The author’s imputed intention to provide a rigorous scholarly investigation is marred by an odd mix of heavy academic jargon and populist style (“it is once again high time for Japan to learn the American way” (p. 237)). But the book remains a provocative read, not least because of a wealth of interesting quotations from the likes of Seymour Martin Lipset and F. Hayek.

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**Geographic Data Mining and Knowledge Discovery**, edited by Harvey J. Miller and Jiawei Han. 2001. London and New York: Taylor & Francis. 372 + xvi. ISBN 0-415-23369-0, \$100.

This book is the latest one in a series entitled *Research Monographs in Geographic Information Systems*, a series edited by Miller and Han. It is the result of a workshop held in March 1999 on "Discovering Geographic Knowledge in Data-Rich Environments," and contains fourteen essays organized into five parts. The titles for the parts are: "Overview of Geographic Data Mining and Knowledge Discovery;" "Geographic Data Warehouses and Data Depositories;" "Techniques for Geographic Data Mining and Knowledge Discovery;" "Geographic Knowledge Discovery and Geographic Visualization;" and "Applications of Geographic Data Mining and Knowledge Discovery."

The first part contains two chapters. The introductory one by Miller and Han sets the tone of the book and introduces the acronyms that are used subsequently throughout the book. Everybody knows what NCGIA stands for, but GKD stands for Geographic Knowledge Discovery, KDD stands for Knowledge Discovery from Databases, DW stands for Data Warehouse, OLAP stands for Online Analytical Processing, SQL stands for Structured Query Language, of course, CHAID stands for Chi-square Automatic Interaction Detector, CART stands for Classification and Regression Tree, and ANN stands for Artificial Neural Networks. Other acronyms are introduced but this list is enough to provide a flavor of the tone in this first chapter.

We are told early on in the chapter that a lot of data are collected today without any specific aim in mind. In the authors' own words: "These data are also collected in an open-ended manner without specific questions in mind" (p. 5). The objective of the essays in the book is to present methods for exploring these large databases for "interesting patterns" (p. 4). One of the widely used techniques to search through large databases is cluster analysis, and the use of cluster analysis is identified as a first step in data mining. It is a little disturbing to me that there should be no definitive prior aim in searching these large databases. It is a little disturbing also that people do gather data without any specific purpose. As I read through the remaining chapters, two issues remained in my mind: whether I could be convinced that this is indeed the case, and whether something interesting results from these two tasks. In this chapter, the unique character of geographic databases is also explained.

The second chapter in this first part by John Roddick and Brian Lees is entitled "Paradigms for Spatial and Spatio-Temporal Clustering Mining." Their main point is summarized in Figure 2.3 (p. 45). Starting with a null hypothesis based on a prior conceptual model, data are mined and this leads either to rejection or acceptance of the null hypothesis. If the null is accepted a new conceptual model is developed along with a new null and the data are mined again. If the null is rejected, the conceptual model is supported and reinforced, the null is modified to reflect the reformulation, and the data are mined again, etc. There are problems along the way dealing with incompatible data gathering and time and space granularity. The latter term means the level of resolution at which data is gathered.

Part II contains three chapters. There is a GIS market that has evolved in harmony with Information Technologies (IT) in general (Yvan Bédard et al., p. 54). We are told by Bédard et al. that data warehouses are structured according to the "multidimensional paradigm" (p. 58.) This means that data contained therein can be

accessed in many different ways. Data warehouses contain data marts (p. 60). This chapter introduces new acronyms HOLAP, MOLAP, and ROLAP, which stand for hybrid, multidimensional, and relational analytical processing, respectively. These represent tools or ways to access data warehouses. There is recognition that spatial data warehouses require more storage than nonspatial data warehouses.

The next chapter in this part takes the reader through a typical use of a data warehouse. A lot of set computation occurs in the use of data to construct, for example, different levels of aggregation to represent the data. The whole idea of this chapter is to produce a map from data contained in data warehouses or to visualize the data. The final chapter addresses the use of the internet as a vehicle to access data warehouses, and demonstrates an example of obtaining data from the internet from several sources. The emphasis is on access to data via the internet by all who are interested. This chapter contains cute cartoon-like pictures to make some points and some attractive colored maps.

Part III contains four chapters. The main issue addressed, as the title suggests, is techniques for data mining. One argument made is that spatial proximity is an integral part of geographic data structures, astute use of which can improve location prediction of myriad processes. Neighborhood effects are stressed as issues that data mining algorithms must exploit. I was drawn to the chapter on Spatial Clustering Methods. Clustering algorithms are classified into four types: partitioning methods, hierarchical methods, density-based methods, and grid-based methods. Clustering can become a complicated affair as grouping cases together when there are multiple dimensions can be accomplished in many different ways. There seems to be something missing as one reads from page 191 over to page 192. Nevertheless, the discussion at this point is about how an Expectation Maximization (EM) algorithm uses a Gaussian distribution function to predict cluster membership. In section 4 of this chapter density-based clustering methods are discussed and they have obvious applications to spatial databases. In one cluster technique known as DBSCAN (density-based spatial clustering of applications with noise, p. 199) two parameters are used: a distance from each object and the minimum number of objects within that distance. The success of classifying similar objects together then depends on the choice of values for these two parameters. Various improvements can overcome some of the problems of selecting appropriate parameter values but at a cost of greater computational time.

One approach to clustering including spatial data clustering is to detect outliers. This is the topic of Chapter 9. Outliers are not only extreme data points, but also include points that are few in number but fall in the middle of a bimodal distribution, for example. Several methods for detecting outliers are discussed and compared in this chapter.

Part IV of the book deals with geographic visualization and contains two chapters. The first topic addressed is a marriage among exploratory data analysis, knowledge discovery in databases, and geographic visualization. An approach termed the GeoInsight (p. 248) approach is advocated, which is based on system integration at three levels: conceptual, operational, and implementation (p. 248). In a second chapter, visualization is offered as a vehicle to understanding and discovering patterns in databases. A series of tools is available to represent data, including graphs, pictures, and maps.

This leaves a final Part V that deals with applications and contains three chapters. The applications deal, respectively, with the extraction of information from topo-

graphic maps, mining remotely sensed data using neural networks, and mining mobile trajectories. The chapter on neural networks describes fuzzy ARTMAP. ART stands for “adaptive resonance theory” and the network as it is referred to “performs unsupervised clustering on analog and binary input patterns” (p. 320).

In conclusion, I would have to say that this book is uneven in the quality of the chapters. Some are better than others. The chapters in Part III are of most interest to a wider audience. Chapter 8 on spatial clustering is useful for more than the community who met at the workshop in 1999 to present the papers contained in this volume. There are typos in the book, and the most glaring is on page 131 where a reference to Gould misspells his name as Could. There are split infinitives throughout the text, and one has the impression that many of the essays were not well edited. At \$100.00 US, this is an expensive book. This is deterrence to many people especially potential new practitioners.

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**Supernetworks: Decision-Making for the Information Age**, by Anna Nagurney and June Dong. 2002. New Dimensions in Networks Series. Cheltenham, UK and Northampton, Massachusetts: Edward Elgar. 348 + xviii. ISBN 1-84064-968-2, \$95.

Although the subtitle specifically mentions decision-making, the main focus of this book is on descriptive models. The authors set out a framework for analyzing and solving equilibrium problems that involve noncooperative agents, either atomic (individual firms) or nonatomic (infinitely divisible users). Such situations frequently arise in economics, finance, and transportation, and are the subjects of most of the monograph. The authors’ approach, which is consistent with their previous and current research, is based on four paradigms: user optimization, finite-dimensional variational inequalities, projected dynamical systems, and networks. It draws heavily on the concepts found in the traffic assignment literature and its various extensions.

The book is divided into four parts. Part I argues the relevance of “supernetworks” (networks with nonphysical links) in the “Information Age,” making a clear distinction between system- and user-optimized behavior. The next three parts are composed of individual chapters devoted to specific models, an exception being Chapter 12, which deals with paradoxical situations and hints at policy-making. Each application chapter (with the exception of Chapter 12) follows a simple and consistent pattern: a model, its equilibrium conditions, a variational inequality formulation, mathematical properties of the formulation (existence and uniqueness), a convergent algorithm, and computational results. Throughout the book, boundedness of the domain and continuity of the cost mapping are imposed in order to ensure that the set of feasible solutions is non-empty. In order to achieve global convergence of both proposed algorithms, monotonicity of the cost mapping involved in the variational inequality formulation is assumed. I recall that, in the specific context of optimization, such a condition is akin to convexity of the objective function. A stronger condition, strict monotonicity (related to strict convexity), ensures that the solution is unique. I discuss the application chapters in some detail.

In Chapter 4, “Supply Chain Networks and Electronic Commerce,” the authors represent a supply-chain environment as a three-layered network involving

manufacturers, retailers, and consumers, with inter-layer connections corresponding to either physical or electronic links. For given cost (production, handling, transportation, transaction) and demand functions, a Nash equilibrium between the manufacturers can be represented as a variational inequality. Under conditions slightly stronger than those required for the Cournot-Nash oligopoly, it is shown that the cost mapping underlying the variational inequality is monotone (respectively strictly monotone), and hence that the solution set is convex (respectively unique). A numerical example is solved using a modified projection method, whose convergence only requires the cost mapping to be pseudomonotone and Lipschitz continuous.

Chapter 5, "A Multilevel Perspective for Supply Chain Dynamics," introduces a time dimension to the analysis of Chapter 4 and proposes a dynamical system of agent behavior. By discretizing the dynamical system, one obtains an adjustment process that provides an alternative to the modified projection algorithm for determining an equilibrium solution. In Chapter 6, "Dynamic Financial Networks with Intermediation," the methodology is applied to dynamical financial markets involving intermediaries between fund managers and loan markets, thus subsuming the financial model presented in Chapter 5. These intermediaries play a Nash game formulated as a finite-dimensional variational inequality.

Chapter 7, "Multicriteria Network Equilibrium Modeling," is the first of a series of chapters devoted to multicriteria modeling. More precisely, Nagurney and Dong assume that a user's utility is a weighted sum of the criteria utilities, and that the population is partitioned into finitely many user groups, each group being endowed with its own set of weights. At equilibrium, the flows are assigned to minimum-cost paths in the "supernetwork." Each criterion's utility is assumed to be flow-dependent. Under the additional assumption that this dependence is governed by a unique function (up to a constant term), one can prove monotonicity results. A numerical example involving standard commuting versus telecommunicating, with four criteria (time, cost, opportunity cost, risk) is solved using a projection algorithm. Although the sufficient condition ensuring monotonicity is not met for the data of the example, the algorithm nevertheless finds an equilibrium solution. A discussion of the failure to meet the restrictive condition and the algorithmical implications would have been welcome. In Chapter 8, "A Space-Time Network for Telecommuting versus Commuting," the authors incorporate a time dimension into the framework developed in the preceding chapter. Chapter 9, "Urban Location and Transportation in the Information Age," considers a continuum of users who decide on location (residential and employment) and travel pattern, both of which subject to congestion. Note that this continuous location model should not be confused with the more classical combinatorial version.

Chapter 10, "Supernetworks of Producers and Consumers," provides "extensions of ideas found in Parts II and III," namely a Nash equilibrium of producers facing demand markets where both producers and consumers may have different optimization criteria. In Chapter 11, "Multicriteria Decision-Making in Financial Networks," the authors consider a multisectorial portfolio selection problem, where the trade-off between revenue and risk is itself a function of either revenue or risk. The resulting Nash game is modeled as a variational inequality over the transaction network.

Chapter 12 deals with "Paradoxes and Policies." In traffic assignment theory, it is well known that the addition of a link may result in a travel time increase for *all* users of a transportation network. It is not surprising to encounter similar paradoxes in related equilibrium models. One such counterintuitive situation occurs in a model of

pollution markets, where “The addition of a zero emission link results in an increase in total emissions with no change in demand” (p. 277). These paradoxes can be side-stepped by inducing a socially optimal solution through marginal cost pricing.

Although this is not the core subject of the monograph, I would have liked to see some discussion of new directions adopted in recent years with respect to decision-making within an equilibrium environment. When marginal cost pricing is not implementable, one has to resort to “second-best” prices that induce an optimal policy, taking into account the user-optimized behavior of the agents. Such “bilevel programs” or MPECs (“Mathematical Programs with Equilibrium Constraints”) are related to Stackelberg games and, although extremely challenging from the computational point of view, constitute the logical step from descriptive towards prescriptive models.

In conclusion, the book adopts a point of view that will not be to everybody’s taste. Indeed, it is short on both economic and game-theoretic concepts, and there is some confusion between static and dynamical models. For instance, the authors should better explain whether the projected dynamical system is “the” model or a computational scheme. In the first case, the relation of user behavior to the dynamical system should be motivated; in the second case, it should be acknowledged that there exist much more efficient algorithms for solving finite-dimensional variational inequalities than the proposed extragradient or Euler schemes. Notwithstanding, this book provides a fair argument for the use of equilibrium models to represent systems involving several layers of independent agents. Since the topics addressed are important in the current “Information Age,” this book is certainly relevant.

The exposition of the material is straightforward and makes for a comfortable reading for anyone familiar with the basics of nonlinear programming. This should be the case of graduate students in economics, operations research, mathematics, engineering, or business. Appendices B and C cover the basics of variational inequality and dynamical systems required to understand the various chapters.

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**States of Nature: Science, Agriculture, and Environment in the Spanish Caribbean, 1760–1940**, by Stuart McCook. 2002. Austin: University of Texas Press. 201 + xiv. ISBN 0-292-75256-3, \$50 (cloth); ISBN 0-292-75257-1, \$22.95 (paper).

Although it is common to think of agricultural research as a modern scientific endeavor, people have manipulated and transported their food sources for millennia. Early farmers apparently cultivated rice (*Oryza sativa*) some 10,000 years ago in the Himalayan foothills, and domestication spread in the succeeding millennia to much of South and Southeast Asia. In subsequent periods, people brought rice seeds and techniques to more distant places – modern-day Sri Lanka, the Malay archipelago, the Philippines, and Indonesia. In each of these settings, farmer selection led to a profusion of varieties adapted to local conditions. By the 18<sup>th</sup> century, there were probably tens of thousands of distinctly identifiable varieties of rice cultivated in Asia. Similar stories can be told about the domestication and spread of other agricultural plants and animals, in all parts of the world.

The identification of agricultural research as a “state project” is also old. In China, as early as the 11<sup>th</sup> century, the imperial government took an active role in the dissemination of early-maturing varieties of rice (originally from Vietnam) in the lower Yangtze valley (Barker et al. 1985, p. 55). Governments throughout history have identified an important public role in increasing agricultural productivity, reflecting an unusual coincidence of interests between landowning elites, farmers and agricultural laborers, and urban consumers.

In Stuart McCook’s *States of Nature*, the author describes the arrival of “modern” agricultural research in the Spanish Caribbean and carefully shows how the research system reflected and, at times, advanced the projects of colonialism and modernization. From early botanical surveys to later varietal improvement programs for export crops, McCook points to recurring tensions between the interests of “pure science,” the (occasional) inclination to help local people, and the more constant pressure to meet the interests of commercial export agriculture.

The book, which is modest in length (141 pages, excluding the copious and helpful notes), begins with an introduction that situates the analysis in a literature on the history of science and particularly emphasizes that agricultural research in the Caribbean became a “creole science” – one that borrowed heavily from European and North American scientific forms, but which evolved its own unique characteristics. The first chapter then shows how early research was embedded in a view of the natural world as messy, untamed, and disorganized. Early botanical collectors and agricultural modernizers imposed on the natural environment their own criteria of order and utility. McCook’s work in this chapter, and in the succeeding chapter, recalls some of James C. Scott’s work in *Seeing Like a State* (1998) in bringing discourse analysis to agricultural science.

In the succeeding chapters, McCook describes the historical development of a “creole” research system in the Caribbean. Essentially, the argument is that researchers focused from the beginning on the potential and actual “usefulness” of the natural environment, where “usefulness” inevitably reflected the economic context of colonialism. But where initial efforts focused on the imposition of varieties and techniques from outside the region, scientists eventually realized that the ecology of the Caribbean imposed its own constraints. Thus, local breeding work in sugarcane was needed to address disease and pest problems. The social context of agriculture also posed constraints, and some researchers worked to meet the needs of local populations – out of recognition that export agriculture depended, ironically, on sustaining local communities.

The experience of Caribbean agricultural research systems in some respects parallels that of research in other parts of the world. From at least the 19<sup>th</sup> century onward, scientists have recognized that agricultural technologies are highly location-specific. Varieties and crops that perform well in one place do not necessarily perform well in other places – even when there are superficial similarities. In that sense, almost all successful agricultural research involves a “creolization” – a blending of general knowledge with local knowledge.

McCook offers some fascinating accounts of lesser-known figures in agricultural science and economic botany – Europeans, like the Swiss botanist Henri Pitter, and Latin Americans, like the plant pathologist Carlos Chardón. Perhaps for purposes of brevity, however, there is little material to introduce the reader to these figures; I found myself turning to outside sources to supplement the background information provided in the book.

At times, the author appears a little overeager to impose a theoretical framework, perhaps at the risk of oversimplification. Thus, he writes:

For much of the nineteenth century, botanical research in Latin America was dominated by foreign naturalists. They extracted botanically interesting plants in much the same way that foreign corporations such as Grace & Company extracted guano from Peru or the United Fruit Company extracted bananas from Central America. They contributed little to the development of local communities of botanists. The valuable collections acquired on their brief visits to the tropics were brought back to Europe or North America, where they were classified and stored. Their findings were published in European and North American journals. (p. 26)

Even if the second half of the paragraph is true, and the foreign botanists were contributing little to local scientific communities, it seems a bit of an overstatement to characterize them as operating an extractive and exploitative industry. Moreover, although much of the botany of the 19<sup>th</sup> century was justified on the grounds of economic utility, it seems in hindsight that much of the plant collecting and taxonomy work was of little or no commercial significance. Perhaps the scientists of the day were tempted to overstate the commercial value of their work; even then, scientists might have engaged in rhetorical excess in order to finance their work.

Overall, however, McCook does a nice job of offering a balanced assessment of the role of agriculturalists, botanists, and other researchers in this period. He concludes the book by noting that botanists and other natural scientists were among the first to press governments in the Caribbean to conserve plant and animal diversity in the face of ecological and economic pressures. It might have been useful, in this vein, to note that some of the countries where natural ecologies have been best protected are those where agricultural research has historically been most active and effective (such as Costa Rica).

This book would be a good choice for anyone with an interest in the history of agricultural research or in the environmental history of the Caribbean basin. It would also make good reading for political scientists or historians interested in how government agencies are formed and how they evolve.

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**The Second Wave: Southern Industrialization from the 1940's to the 1970's**, edited by Philip Scranton. 2001. *Economy and Society in the Modern Society series*. Athens, Georgia: University of Georgia Press. 310 + xiv. ISBN 0-8203-2218-0. \$50.

Beginning in World War II and for the next three decades, the southern United States made great strides in moving toward the economic mainstream. This book examines this period in a collection of papers originally presented at a conference sponsored by the Georgia Institute of Technology in 1998. Editor and conference organizer Philip Scranton stated that the intent of the interdisciplinary conference was to examine the era through a series of in-depth case studies largely missing from the academic literature. While the resulting book is more piecemeal than cohesive, the case studies effectively illuminate numerous aspects of southern industrialization from World War II through the 1970s. The industries scrutinized in this collection are wide-ranging, and include aircraft, carpets, textiles, petrochemicals, pulp and paper, and automobiles. Some chapters focus on the internal dynamics of industrial development, while others examine how the state, local boosterism, race relations, and other phenomena influenced the trajectory of southern industrialization.

The reader does come away with two general impressions of this period in the South's industrial history, however, upon reading the collection. The South's relative economic deprivation before World War II was often attributed to its position as a "colonial economy." The colonial economy thesis was always somewhat suspect, and these case studies show that it is simply not applicable in explaining the path of economic development after World War II. Another common characterization of southern industrialization, in this case for the period examined in the book, was that it reflected a development strategy coined by historian James Cobb (1993) as the "selling of the South." According to this thesis, southern industrial development after World War II revolved around state governments attracting outside corporate investment (and expertise) by emphasizing the region's low wages, low taxes, weak unions, and lax environmental regulations. The case studies also show that this thesis is only a partial and incomplete conceptualization of the period. Two papers demonstrate that contrary to common perceptions, indigenous industrial communities based on networks of technological and organizational knowledge were an important part of the fabric of southern industrialization. At least three papers illustrate that institutional actors, and particularly state governments, did not always follow the path of creating the strongest probusiness climate for runaway businesses of the manufacturing belt. In fact, "progressive" ideas about state involvement were often viewed as necessary for creating a climate in which southern industries could grow and thrive.

The first three essays are the only ones in the book that are interrelated; they all focus on industrialization in the Atlanta area, and more specifically on the defense aircraft industry. They examine the federal government's decision to locate a federally-owned but privately operated aircraft manufacturing facility in Cobb County, Georgia, just outside of Atlanta, during World War II, and the later purchase and use of it for producing defense aircraft by the Lockheed Corporation. While the chapter by Richard Combes discusses how the aircraft industry worked to create a technologically sophisticated workforce in an area where the labor force was inexperienced and considered low skilled, the chapter by Thomas Scott focuses on the successful attempts of local boosters to convince the federal government to locate its huge aircraft plant in Cobb County. The boosters positioned themselves as "progressives," fully aware that the high

wages associated with the huge new plant would change the area's long-standing economic relations. However, the local boosters simultaneously downplayed views that might reveal enlightened perspectives on racial integration or unionization of the workforce. (While the plant eventually became unionized and employed some African-Americans, African-Americans made only minor inroads into the more highly skilled, highly paid occupations.)

The potential for highly paid employment in the aircraft industry attracted the attention of the Atlanta Urban League, discussed in the third chapter by Karen Ferguson. She examines how the Urban League created a broad training campaign promoting industrial employment at the aircraft facility, but she characterizes the campaign as somewhat elitist. The training program crafted by the Urban League bought into the common perception at that time that African-American southerners, supposedly more attuned to the more flexible rhythms of agricultural life, needed instruction on how to function in the industrial workplace. The Urban League encouraged and even cajoled African-Americans to embrace middle class respectability and a higher level of discipline. This focus on respectability ultimately diminished the potential impact of the Urban League's training and employment program, which benefited only a small segment of the African-American workforce.

Only Ferguson's case study deals directly with the Civil Rights Movement and the efforts of African-Americans to reap the benefits of southern industrial growth. I had hoped that the relationships between changing race relations, economic development, and the labor market would figure more prominently in the rest of the chapters. However, these relationships receive little discussion until Gavin Wright's "Afterword." Wright provides statistics indicating that antidiscrimination laws in employment coupled with a changing labor market resulted in significant African-American participation in the textile industry, which he views as a largely undiscovered but important result of the Civil Rights movement. (This reviewer wonders, however, if the victory was not somewhat hollow over the long term, given the dramatic decline in textile-related employment in the southern states over the last 30 years.)

Randall Patton's chapter on the carpet industry in Dalton, Georgia and William Boyd's chapter on the paper and pulp industry both refute the commonly held idea that industrial expertise was largely exogenous and had to be imported from outside the region. In Patton's discussion of the tufted carpet industry in northwest Georgia, networks of technical knowledge were home grown, and the carpet industry remained concentrated in the Dalton area because of this local knowledge base and local institutional support for the industry. Dalton's upstart carpet manufacturers were able to capture almost the entire domestic US carpet market in a period of less than 20 years. In William Boyd's discussion of the paper and pulp industry, regional institutions of expertise and knowledge, geographically more extensive than the local networks examined by Patton, were important in paving the way for a more highly-organized management of timber resources. Formal state and multistate institutions for cooperation in fire control and timber research were created, and in order to prove to small landholders the benefits of utilizing new forest management techniques, several states funded research projects to demonstrate the long-term economic viability of the techniques. With demonstrated successes, the southern US rapidly became the national leader in timber production, although this achievement had troubling implications for biodiversity in the future. Craig Colten's contribution on the petrochemicals industry examines the tension experienced by the Texas state government as it attempted to balance the growing influence of the petrochemical companies and the conservation-

oriented demands of the state's hunting and fishing lobby. Rather than resisting state efforts at industry regulation pertaining to water pollution, the industry worked with the state government to develop the regulations. The regulations were weak and contradictory, however, targeting upstream pollution sources rather than pollution in the coastal estuaries that was more directly attributable to the petrochemicals industry.

One of the book's most interesting contributions looks at changing systems of labor control in southern industry. Toby Moore's examination of the dismantling of textile mill villages is a richly textured analysis of the period from the 1940's through the 1960's when most company-owned mill villages were sold off. Not only did the villages become a drain on profits; the automobile freed workers from geographical restraints on residence. In addition, industrialists worried that the mill village system was beginning to generate a separate and uncontrollable "class" of people amenable to union organizing and prone to mob violence and manipulation by populist politicians. By the end of this period, mill village paternalism had been replaced by the "social control of the mortgage note" (Moore, p. 115).

If there are weaknesses in the book beyond the lack of a thread tying the chapters together, which is largely unavoidable in a collection of this sort, some articles could have benefited by referencing more directly relevant analytical frameworks to help the reader interpret the large amount of information. The collection would have been more well rounded if at least one contribution had focused on gender relations, and if more attention had been paid throughout to racial dynamics. Nevertheless, this solid volume provides new insights and highlights the complexity and contingency of southern industrialization from the 1940s to the 1970s, a period when experimentation was sometimes combined with tried and true development strategies. Ultimately, these strategies were quite successful, paving the way for the "third wave" of southern industrialization after the 1970's, as the South became an even more important region for "traditional" manufacturing while the country rushed headlong into the information age.

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**Frigid Embrace: Politics, Economics, and Environment in Alaska**, by Stephen Haycox. 2002. Corvallis: Oregon State University Press. 180 + xii. ISBN 0-87071-536-4, \$21.95 (paper).

In this provocative "historical commentary" (p. ix), Stephen Haycox shines an unflattering light on Alaska's fervent adherence to the conquest myth of the American West. As the northern extension of the West, he argues, Alaska is the nation's only remaining wild stage on which "to act out for the last time the central creation story of American culture" (p. 5), the conquest of nature on the last frontier. He argues that Alaska's society and economy, combined with its remoteness and dependence upon a

single natural resource industry, oil, have produced an “oppositional mode of thinking” (p. 18) in many Alaskans. Haycox primarily explores two of these oppositions: between Natives (Alaska’s original peoples) and nonNatives (nonindigenous settlers) and between much of Alaska’s society and the people and institutions involved in protecting the environment. He explains these tensions, this “culture of antagonisms” (p. 15), by weaving empirical threads into a theoretical frame drawn from historians of the West and of the North, particularly the work of Canadian historian Ken Coates.

Haycox, who is both a professor of history and the writer of an opinion column for the *Anchorage Daily News*, brings the tools of both crafts to this book. He does not intend the volume to be an academic treatise, although it is grounded in scholarly work; instead, it is an engaging blend of historical characterization and cultural critique. He distills complex information about major political events or trends, and he places the data in a context that makes clear the reasons for the eventual consequences. Haycox has fashioned a compact account of Alaska’s political and economic progression that begins in 1880 and follows the path through territorial days, struggles for statehood, and more than 40 years of conflicts over federal environmental and public lands policies.

Haycox offers evidence that for many decades after the acquisition of Alaska from Russia in 1867, most Americans shared the ideas of conquest and extraction of wealth. However, by the second half of the Twentieth Century, the nation had begun to express a growing sensibility about nature and about the effects of environmental degradation on humans and other creatures. Congress demonstrated this concern in new pollution control legislation, in the Endangered Species Act, and in changes to federal public lands policy. In 1971, it enacted the Alaska Native Claims Settlement Act in response to Alaska Natives’ demands and in recognition of pending oil production at Prudhoe Bay. This legislation reshaped the economic and social roles of Alaska Natives. It was followed in 1980 by the Alaska National Interest Lands Conservation Act, which established millions of acres of national parks, refuges, and other conservation system units. For many Americans, the image of Alaska as “last frontier” had been replaced by Alaska as “last wilderness.” Much of Haycox’s analysis addresses the collision between these two views of Alaska’s environment.

He applies Coates’s theoretical arguments to explain Alaska’s “culture of opposition” (p. 15), including the diverse elements that contribute to its physical and perceptual remoteness from the mainstream of American life. He adds to this oppositional thinking another factor: greed. In combination with false notions of Alaska’s history, he argues that the Alaska Permanent Fund Dividend program, an annual payment to state residents based upon a portion of the earnings from the state’s oil-revenue-endowed Permanent Fund, has generated a sense of entitlement and a population substantially of “migrants whose primary interest is not the creation of a society for their progeny, but self-aggrandizement, primarily economic self-aggrandizement” (p. 18). When either nature or people are perceived as interfering with access to resources from which to extract wealth, the result has been conflict and vilification.

Haycox condemns a century of discrimination against Alaska Natives, and his discussion of shifts in federal policy, including Congress’s enactment of the Native Claims Settlement Act, is among this book’s strongest elements. He documents how racist treatment of Alaska Natives set in motion the politics leading to settlement of Native land claims. Haycox demonstrates how persistent oppositional attitudes toward Alaska Natives, complicated by hostility to the federal government, continue today and are expressed in the legislature’s resistance to compliance with requirements in federal law that protect subsistence uses of renewable resources by rural communities.

Understanding the processes of Natives' not-yet-complete emergence as full participants in Alaska's social, economic, and political life is essential to understanding Alaska's present and its potential futures. Haycox contributes significant insights on these issues.

Native groups, their leadership and institutions, defy generalization. As Haycox notes, not all Native corporations – major private landowners and business entities established by the Claims Settlement Act – have conducted their work in ways that are sensitive to the environment. However, he does not scrutinize these activities to the degree that he does nonNative political values and economic choices. Much of this record is not yet clear; but the course chosen by Native corporations, whether opposing the environment or using their lands as stewards, will be a key determinant in the larger Alaska society's eventual relationship with nature.

Haycox asserts that most Alaskans are so preoccupied with removing impediments to economic development, that they have abandoned any pretense of environmental restraint in the pursuit of extractable wealth. He implies that many Alaskans have abdicated their responsibility, and are squandering their opportunity, to establish a more sustainable relationship with nature that builds upon the lessons of the West and upon new insights into the environment's role in the welfare of human communities. In this stubbornly oppositional political climate, environmental protection is largely left to the federal government. But while Alaskans resent the long-distance role of Washington, DC, many seem inured to the dominance of absentee capital over their resource-extraction economy.

Haycox observes that Alaska's economy is built around extraction of natural resources; and the state has no real alternatives, despite diversification by some Alaska Native corporations into business activities outside the state. He focuses on Alaskans' preoccupation with resource extraction and the replication of American material culture in order to underscore his central point: Alaska has carried the myth of the West to an extreme, largely because of its economic reliance upon oil. Dependence on forces beyond Alaskans' control "generates insecurity, and motivates Alaskans to support economic development, irrespective of environmental implications" (p. 164).

The record supports Haycox's claim that, overall, there has been little political will within Alaska to protect the environment. However, there have been many hard-fought battles. The policy flow has often been contested by coalitions of interests that have sometimes influenced legislative action. For example, the creation of Chugach and Wood-Tikchik State Parks – both conservation gems – and the legislative bar to oil and gas leases in Kachemak Bay are apparent anomalies, and Haycox's analysis would be more complete if it explained how these events occurred in an overall trajectory of culture, economy, and politics that are at odds with ideas of nature as more than extractable wealth.

More than understanding the "last chapter in the westering saga" (p. 2), Haycox seeks the development of a "collective memory" with which to generate "a regional identity, one which is sensitive to the history and nature of the place" (p. 174). *Frigid Embrace* challenges us to consider how the human-nature dichotomy has impeded a more sustainable relationship and how this insight might help us, Alaskans or not, imagine a different future.

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**Lakota Culture, World Economy**, by Kathleen Ann Pickering. 2000. Lincoln: University of Nebraska Press. 173 + xv. \$39.95.

The role that cultural characteristics play in influencing spatial patterns of poverty is gaining attention in regional science and allied fields. Rather than attributing variation in poverty levels to “culture of poverty” explanations, however, as was fashionable in the sociological literature of the 1960s, more recent studies emphasize the importance of cultural ties in the maintenance of social networks within different communities. Such networks are regarded as a form of social capital, which helps members of a community to cope with poverty and economic uncertainty. Pickering’s book makes an important contribution to this emerging literature by exploring the linkages between culture and economy on the Pine Ridge and Rosebud Reservations in South Dakota. Based on nearly a decade of field research and more than 250 personal interviews, the book explores how Lakota culture in the two tribal areas shapes and mediates the experience of the Lakotas in the world economy.

The book begins with a brief history and overview of the Lakota economy in the two study areas. By conventional standards, the two reservations are among the poorest areas in the United States. Yet one of the points raised early on and throughout the book is that conventional definitions of wealth and poverty, based on cash income and accumulated assets, may not be appropriate measures for the Lakota culture. Because Lakota cultural practices mandate that financial assets are used to support one’s extended family and community, accumulation of savings for personal use is not a typical practice. As the author notes: “It is common for people to fill the short-term needs of the entire family rather than to accumulate long-term assets for themselves or their nuclear families. To the extent savings are accumulated, they are used for community ‘give-aways’ or public displays of generosity, not for direct future personal consumption” (p. 7). Similar discrepancies between conventional expectations about economic behavior and Lakota cultural practices are noted throughout the book, and include, for example, differences in attitudes toward the importance of participation in the workforce and the use of credit to finance business enterprises.

The following chapters explore the role that Lakota culture plays in conditioning and shaping the Lakota experience in the market and nonmarket economies, consumption practices, and economic aspects of social identity. Within the market economy, for example, the Lakotas have limited access to wage employment and often face poor working conditions. Family and community networks are found to provide a crucial safety net which enables tribe members to cope with the uncertainty of wage work off the reservation and, if necessary, allows tribe members to leave unacceptable working conditions. Lakota cultural practices also shape the behavior of Lakota businesses on the reservation. In some instances, cultural obligations conflict with conventional, commercial business practices. For example, the expectation that wealth will be redistributed to family and community means that Lakota businesses are often obliged to provide free goods and services for family members and reduced prices for tribe members. Consequently, Lakota businesses often have difficulty competing with nonIndian businesses in the area because the nonIndian businesses do not have to meet such obligations.

In addition to participation in the formal economy, most Lakotas also engage in alternative economic activities, primarily via home-based microenterprises. These microenterprises typically entail production of traditional Lakota goods such as beadwork but may also include nontraditional activities such as babysitting or car repair.

Such activities are often crucial for a family's economic survival, given the uncertainties associated with wage labor or small businesses. While many of these activities may appear to be outside the purview of the formal economy, Pickering emphasizes that external market pressures dictate many aspects of microenterprise activity, particularly the prices charged for traditional goods and the pace at which such goods are produced. Concerning production scheduling, for example, a home-based quilter may put in weeks or months of 12-hour work days prior to a major festival event. Market pressures have also tended to commodify goods that are part of Lakota religious tradition, leading to production of religious objects such as tobacco prayer bundles for sale in tourist shops.

By demonstrating that culture influences nearly every aspect of Lakota economic behavior, the book makes a strong case for regional scientists to pay greater attention to how cultural practices influence the position of marginalized groups within the global economy. For researchers interested in economic globalization, the book provides a useful antidote to arguments suggesting that globalization inevitably results in cultural homogenization. Instead, it suggests that globalization may actually accentuate the role of cultural factors as key determinants of the means by which marginalized groups cope with the vicissitudes of the world economy. Although the book does not specifically reference work by regional scientists and others on the effects that federal policies such as welfare-to-work have on marginalized groups, it clearly contributes to this literature as well, by demonstrating the many incongruities between economic "needs" as defined by Lakota cultural practices and those defined by federal policies and programs. Finally, for researchers concerned with the regional determinants of income and poverty levels, the book provides a valuable reminder that conventional measures such as per capita income may not capture important differences in cultural practices across economic regions.

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**OECD Territorial Reviews: Hungary**, by Organisation for Economic Co-operation and Development (OECD). 2001. Territorial Economy Series. 205. ISBN 92-64-19531-9. \$40, €45 (paper, payment allows electronic download).

It is a big advance that the OECD recently discovered the importance of space and place and the significance of regions and spatial disparities. Publications of the OECD have followed far too long theories that assume spatial disparities are transitory, irrelevant for theoretical discussions and economic models, easily changed by regional policies, and therefore negligible. These "space-blind" approaches have met their Waterloo during the first years of the transformation process in the former socialist countries of Central and Eastern Europe, when it turned out they are based on unrealistic assumptions and their explanatory power tends to zero.

The founding of the "Territorial Development Policy Committee" in 1999, which is responsible for producing "territorial reviews on the regional and national level," marks a great change and progress in the work of the OECD. This book on Hungary consists of seven chapters dealing with the topics of transition and territorial disparities, spatial policies, institutional reform, regional policy and fiscal decentralization, Hungarian regional policy, EU accession, and Budapest – where the issue is

governance in a politically fragmented area. The book addresses a great variety of important issues of the transformation process and supports its arguments and recommendations with a number of informative tabulations, maps, and diagrams. Such a compilation of data, legal measures, and government policies is rarely found elsewhere and will be appreciated very much by any student interested in the economic and social macrostructures of Hungary. Very informative are the chapters about social and economic policies, social safety nets, the reform of the healthcare system, active labor market policies, institutional reforms, the framework of territorial governance, the evolution of local public finance, the regional policy framework, Hungarian regional policy, and EU accession, as well as the assessment of various programs such as PHARE (Poland and Hungary Action for the Restructuring of the Economy). It is certainly to the benefit of Hungary that it was the first transformation country studied and represented by the OECD in this new way.

However, as soon as it comes to the interpretation or explanation of spatial disparities in the economy and society, readers trained in geography, history, or regional science will find this book a little bit disappointing. Throughout the text it becomes quite clear that it was written by authors who are not very familiar with geographical theories dealing with spatial disparities, relations between centers and peripheries, growth poles, urban systems and hierarchies, spatial division of labor, the role of knowledge in the transformation process, or the historical legacy of spatial structures. The authors are quite helpless in dealing with spatial disparities, they seem to be convinced that spatial inequalities are negative per se and something that can be leveled off by regional policies. This remnant of neoclassical economic theory is documented by phrases such as: "More worrisome is the uneven spatial distribution of growth. The economy is strongly fragmented spatially" (p. 85); "There is a risk that this skewed distribution of activities will persist and even increase" (p. 12); "Spatial disparities are not new in Hungary" (p. 29); "Imbalances clearly exist between the capital and the metropolitan areas" (p. 44). Therefore, the authors also seem to misunderstand the goals of the Széchenyi Plan, which was designed by the geographer Z. Cséfalvay when he was deputy secretary of state in the ministry of Economic Affairs. That plan never intended to achieve spatial equality, but aims at a balanced spatial distribution of infrastructure and jobs, which is quite a different thing.

Discussing the spatial distribution of direct foreign investment, the authors regard the proximity to Germany and Austria as the main factor (p. 87). If spatial distance were so important as the authors assume, the German investors (who lead both in number of investors and amount of investment) would have gone in far greater number to Poland or the Czech Republic instead of Hungary. Much more important than proximity were the special social, economic, and scientific relations that had been established since the early 1960s due to the earlier liberalization of Hungary. Thousands of former Hungarian refugees of 1956 and Hungarian Germans expelled after the Second World War and living in Southern Germany and Austria contributed a great deal to the fact that Hungary attracted so many small and medium-sized joint ventures.

Another disadvantage of the book is that it almost completely neglects the historical and geographical factors that influenced the varying success of the transformation process in the different regions of Hungary. Expressions like "During the command era . . . spatial equalization was ensured by the system of full employment" (p. 85) give the uninformed reader the wrong impression that social and economic problems (such as poverty, discrimination against Roma, alcoholism, suicide rate, and so on) or spatial

disparities emerged only in the phase of transition. Due to their neglect of the historical dimension, the authors seem to miss completely the large spatial and social disparities existing during the communist system, and do not inform the reader which spatial disparities existed already before the transition and which emerged or were revived only in the 1990s. In reality, the western border areas of Hungary and villages below 3000 in population were severely discriminated against by the central planning authorities during the communist period, and the capital city agglomeration and the "new socialist" cities received most of the resources.

Some spatial and social disparities were larger in socialist times than in the 1990s; it was only forbidden to talk or publish about them. Also, the social problems of the 1990s, mentioned in the book, are not new. Hungary had already in the 19<sup>th</sup> century one of the highest suicide rates in the world, alcoholism is a heritage of the former period rather than a new phenomenon, and the discrimination against Roma in employment was quite pronounced in socialist times. A large proportion of Roma was never employed and many were dismissed by State firms already in the 1980s. Already in 1990 the rates of gainful employment of male Roma were 25–30 percent lower than in the total male population in the same age groups, and the employment of female Roma was more than 40 percent lower than in the total female population. Many reasons for the uneven development of regions in the 1990s can be traced back to developments that took already place in the 19<sup>th</sup> or even 18<sup>th</sup> century, and the disparities between Eastern and Western Hungary were probably larger in former centuries than today.

Another problem of the book is that it relies heavily on information and interpretations provided by various institutions of the Hungarian government, the World Bank, and the OECD, and neglects, with very few exceptions, the excellent empirical and theoretical research by Hungarian scientists on the transformation process. The book offers many interesting facts, but very few interpretations and explanations of spatial structures. The valuable data deserved a scientific interpretation by experts. It seems the authors were not very familiar with publications on Hungary published in other languages than English. Out of 101 publications cited, 94 are in English, one in French, and only six in Hungarian. How would French officials of the OECD react if a comparable book on France almost completely ignored the research on France published in French? Unfortunately for the authors, the research frontier on the transformation process in Hungary was predominantly not published in English, but in Hungarian, German, and other languages. Really amazing is the fact, that with one exception, the bibliography cites none of the leading Hungarian experts of the Academy of Science or the Hungarian universities specializing on Hungary's transformation process for many years. The main advice to the OECD for further "territorial reviews" would be to rely more on scientists who know the geography and history of the relevant country. A training in economics, law, or political science does not suffice to interpret spatial disparities and to recommend regional policies.

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**OECD Territorial Reviews: Italy**, by Organisation for Economic Co-operation and Development (OECD). 2001. Territorial Economy Series. 204. ISBN 92-64-18712-X. \$40, €45 (paper, payment also allows electronic download).

**OECD Territorial Reviews: Bergamo, Italy**, by Organisation for Economic Co-operation and Development (OECD). 2001. Territorial Economy Series. 220. ISBN 92-64-19528-9. \$40, €45 (paper, payment also allows electronic download).

The two volumes consider recent regional developments in the Italian economy and in the local area of Bergamo, near Milan. Our review is also organized in two parts, one for the national economy and the other for the local area.

### *Italy*

The study of the territorial economy of Italy is organized in three parts. The first chapter takes a look at economic development in postwar Italy and at the disparities that characterize it. The chapter focuses on the evolution of territorial economic policies since 1992, a turning point in Italian politics. Finally, the third chapter looks at the development of a new governance structure and at the progressive shift of resources and functions from the center to the periphery.

The first part of Chapter 1 contains a summary of the process of economic development during the period 1952–92, with convergence during the high growth period being followed by divergence from the early seventies onwards. A thesis of the OECD study is that the structural shift was induced by the lack of policy coordination and planning, poor project evaluation and monitoring, and an ineffective governance system. A natural consequence of this interpretation is that improvements in the design and implementation of policies and in the governance system, such as those that took place during the 1990s, can be expected to reduce regional disparities and especially the gap between the developed North and the underdeveloped South.

A problem with this interpretation is that it lacks solid empirical grounds. Was the shift from convergence to divergence between the North and the South due to poor policy coordination or to the abolition of regional wage differentials, which penalized Southern industry despite partially offsetting tax breaks? Perhaps both factors did matter, but we have no idea from this study about their relative importance. One could also argue that income redistribution, via public employment and public transfers, was very important in reducing interregional mobility and generating negative supply effects, by increasing the reservation wage in the South.

The chapter contains an interesting analysis of economic trends at the LLMA (local labor market area) level, clearly an improvement on the more traditional regional studies, and it shows the existence of important variation within regions. As expected, this analysis leads to the discussion of Italian industrial districts, the highly successful local agglomerations of small and medium firms that have attracted so much attention in recent years. These districts over the years have extended from the Central and North-Eastern areas of the country to the North-West and the South, where they have shown a relatively weaker performance. These differences in the performance of local districts are possibly related to local politics, as argued in the study, but may also depend on the general economic climate of the region, with stronger incentives for growth in the North than in the South. Again, one is bound to think of national rather than territorial policies, and of their asymmetric effects in different parts of the country.

The second chapter is a very detailed review of the evolution of economic development policies. It starts with the *Cassa per il Mezzogiorno* (Development Fund for the South of Italy) and includes an instructive discussion of the policies implemented by the industrialized northern areas of the country, of the new European regional policy

and of the Mezzogiorno Development Plan 2000–2006. It also discusses spatial and social policies. The last chapter focuses on the development of a new governance structure over the decade starting in 1990, when municipalities and provinces were granted additional authority. Devolution and tax reforms, which increased the resources managed directly by regions, have been accompanied by the development of institutional partnerships between the central and local governments, private industry, unions, and local interests. New ways of allocating public funds and monitoring projects are also emphasized. This description is useful and interesting. We know very little, however, about the implementation of these new policies and their effects on the local economies. The reader is prompted to ask whether all these plans have had or will have any real effect on local economies. Take for instance the territorial pacts between local industry, unions, and local authorities to foster economic development in Southern Italy. In spite of the few years elapsed since their establishment, we know very little about their economic effect. One reason is that implementation takes time. Another reason is that in Italy ideological considerations often prevail over serious policy evaluation based on a control and a treatment group.

Rather surprisingly, the OECD study does not mention the introduction of the Euro and its potential effects on the territorial economy. Does it matter? One could argue that the exchange rate between the developed North and the underdeveloped South has been constant since well before the introduction of the common currency and conclude from this that the Euro does not matter for regional disparities. A different view is that without the stabilizing effects of a flexible exchange rate regions could be hit asymmetrically by aggregate and national shocks, especially if localization patterns lead to further regional specialization.

Overall, this volume provides a useful study of territorial Italy, with an emphasis on recent policies and on the emergence of a new governance structure regulating the relationship between the central and the local government. The evaluation of these developments is positive. Unfortunately, this assessment is grounded on general considerations, and the hard facts in support are still to come.

### *Bergamo*

The province of Bergamo belongs to the most dynamic economic-administrative region of Italy, Lombardia, and it is less than 50 km from the Milan metropolitan area. While this proximity has positively affected local economic growth, the gravitational dependence on a larger urban agglomeration could have acted as a constraint to the development of area's full economic potential. To better identify the current territorial and economic reality and to capture weaknesses and strengths of the Bergamo area, the OECD study is carried out in three sections: the first deals with the socioeconomic structure, with particular attention to regional performance, competitiveness, and human capital; the second focuses on policy issues and local coordination between economic and institutional agents; the last is a comparative analysis with similar areas in other countries in the developed world with the purpose of better evaluating successes and failures in the decision-making behavior of local agents.

The data in the first section of the study show strong path-dependency in local economic performance, because the structure of the local economy maintained its strong emphasis on industry during a period of deindustrialization at the regional and national level. As a matter of fact, the service sector is not well developed, despite the growth of firms and employment in absolute terms.

Since the early 1980s, three things have reinforced the industrial vocation of this area: the increase of firm size in a country where micro enterprises dominate the production system; the increase in foreign investments and the growing presence of multinational firms; the growth of patents. Nevertheless, the rate of firm creation has remained low and the service sector remains underdeveloped in tourism, which suggests that the exploitation of local amenities could be a potential factor in local development in the future.

The OECD report focuses on two economic ingredients that nowadays are always in the agenda of policy-makers: competitiveness and local human capital. An index of the first is based on the export rate of the area and the second is measured by the level of education of the labor force. Note, however, that competitiveness is something more than the simple export rate, because the endowment of export-led activities does not guarantee per se a competitive advantage. A more realistic measure of local competitiveness should also consider broader indicators of local supply, including for instance the endowment of infrastructures, the structure of rents, and agglomeration economies. The analysis of local human capital is well done and we particularly like the emphasis on labor market effects of the low educational attainment of workers.

The second section of the study suggests spatial and economic policies to tackle the uncovered weaknesses of the local economy. This analysis stresses the limited collective rationality of local institutional agents, their scarce capability to plan strategically, and the conflicts between different levels of government. The failure of firms, municipalities, local agencies, and other institutions, belonging to higher decision levels, to coordinate are viewed as one of the key obstacles to the evolution of the economy. The authors present clearly the institutional context within which agents need to design their policies, with respect to both the formal environment (laws and institutions) and the informal one (local beliefs and social norms). To reduce the transaction costs of coordination and to boost local cooperation, the study proposes the introduction of a set of incentives to redesign local governance. In order to better fit these policies to the territorial and economic context of Bergamo, however, it would be useful to better analyze the local patterns of spatial interaction involving labor and consumption activities, and to link forecasts of demographic trends to local planning.

The third section of the study is, at a first glance, very stimulating because it offers a cross-reading of the spatial and economic characteristics of three similar local areas: the city of Providence, Rhode Island (USA), close to Boston, the city of Coventry, West Midlands (UK), close to Birmingham, and the area of Akron, Ohio (USA), close to Cleveland. Cross-area comparisons, however, are not a trivial activity and can be misleading when carried out without a definite set of guiding factors. From our viewpoint, to understand the performance of a local development strategy through benchmarking, one needs to collect information about the relative stage of regional development (are these areas at the same stage?), the external macroeconomic environment, the role of public policies, the degree of economic openness, and the importance of macroeconomic shocks. A comparative analysis would also need to add to these basic ingredients information on the institutional context, so as to capture the learning capabilities and the routines adopted by local collective agents involved in the development process. Overall, we find the exercise carried out in this section slightly incomplete.

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**OECD Territorial Reviews: Teruel, Spain**, by Organisation for Economic Co-operation and Development. 2001. Territorial Economy Series. 236. ISBN 92-64-18605-0, \$48, €54 (paper, payment also allows electronic download).

**OECD Territorial Reviews: The Valencian Central Districts, Spain**, by Organisation for Economic Co-operation and Development. 2001. Territorial Economy Series. 178. ISBN 92-64-18698-0, \$38, €42 (paper, payment also allows electronic download).

Experts throughout the world agree on the importance of implementing territorial development policies. These two books focus on the design of strategies to enhance development in a rural area – Teruel – and an intermediate area – the Valencian Central Districts (henceforth, VCD). Both start by outlining the main challenges facing the two regions, and then consider in great detail the best strategies for meeting those challenges and promoting development. The authors describe their methodology as “the use of case studies as a key complement to the statistical analysis and the comparative review of policy approaches and instruments, which normally constitute the central elements of OECD research in any policy field” (p. 179 of book on Teruel). So the books are the result of qualitative case studies complemented by findings of quantitative analysis and benchmarking tools and, taken together, they provide policy-makers with a very accurate picture of the two regions.

The idea underlying the strategic recommendations presented here is that certain economies perform better than others not because of the availability of one particular asset or form of capital, but because of the ability to exploit it properly. The difficulty is to identify and transform stocks into flows, and this is the issue that the two books examine. In the case of the rural area, Teruel, the book describes ways to raise confidence in the region and to boost its image. The key word is *regeneration*, and the key element in regeneration is tourism. In the intermediate area, the VCD, the book addresses ways to promote self-reliance by expanding cooperation and increasing the range of business advisory services on offer, together with improvements in the education systems. In sum, the fundamental objective in the strategies in both regions – and it is a point that both books are at pains to stress – is to give added value to already existing products rather than to create a greater volume of goods and services.

One of the strongest points in both books is the general framework used to describe rural and intermediate regions. The titles mention only the names of the places under review, but the books actually range far wider and give an excellent overview of the trends and policy challenges in areas of the general type. The structure of the two books is exactly the same. Part I presents the profile and identification of rural or intermediate regions, their factors of growth, and their factors of decline. It describes certain development strategies and examples of successful practices in order to give an idea how leading regions of these types have managed their development processes. Both rural and intermediate regions have defining characteristics, and the first part of each book presents them clearly, identifying the factors that enhance growth and pinpointing the most useful policy instruments. So the books fulfil two challenging objectives: to identify general strategies and instruments to be implemented in regions of a particular type, and to make specific recommendations for the localities under consideration.

Another strong point of the two books is the fact that the regions are particularly well chosen. Teruel and the VCD are highly representative examples of the two types.

Both books have a second part giving detailed overviews of the two regions, and discussing their respective assets and liabilities. Teruel is a low-density, remote area in the northeast quadrant of Spain, which has undergone a continuous process of depopulation throughout the 20<sup>th</sup> century, due mainly to the loss of employment opportunities in agriculture. Its geography is inhospitable – a very high average elevation, low rainfall, and an extreme temperature range – and the largest city, Teruel, with only 28,000 inhabitants, does not provide the specialized functions of a typical medium-sized city. These conditions are typical of many rural areas. Paradoxically, though, to judge from standard, commonly used statistics such as GDP and unemployment, it would appear that all is well in Teruel and that the region does not qualify for regional and rural development support under Objective 1 of the EU Structural Fund. The real problem is the absence of real growth in income and employment, which is masked by population decline, together with serious weaknesses in the productive structure: widespread, small-scale family holdings with low land productivity, very few local industrial businesses, and a low share of services with a lack of tourist facilities. To add to this negative scenario, the province of Teruel has an underdeveloped brandname image and a very poor communication infrastructure: for example, the city of Teruel is the only provincial capital in Spain that has no direct rail connection to Madrid. The problem with infrastructure is that the province does not offer the demand potential that would justify establishing a high-level rail network and service. It is therefore difficult to access the potential resources in the region and to consolidate an acceptable level of quality of life, since shortcomings in infrastructures are insurmountable obstacles to resource exploitation and socioeconomic development. This is a major problem, and one that faces most rural areas.

The VCD is an intermediate region, with a population density close to the OECD average, a balanced geographical distribution of many small and medium-sized towns throughout the area and a large industrial sector. It has clusters of small and medium-sized firms and industrial specialization in textiles, clothing, and toys. This means that it is locked into sectors in long-term decline, where competitiveness now depends on the quality of goods, design, and innovation. The advantage of this business sector is its strong entrepreneurial spirit; it has founded a dynamic consortium that has submitted several applications for development projects at the EU level. But weaknesses remain: the lack of local cooperation (companies' general attitudes focus mainly on competition rather than on cooperation), inadequacies in business services, and a tourism sector that relies on mass tourism along the coast, which in turn is the cause of serious environmental problems. The book is an accurate representation of the problems and challenges facing an intermediate region, and illustrates two of the characteristic patterns of the Spanish economy: first, migration flows are negative in the region's inland districts but positive in the coastal districts, putting excessive strain on the environment; second, employment is precarious, due to the high number of seasonal, temporary, and part-time jobs, a problem that has been aggravated by changes in labor legislation in recent years.

In both books, Part II presents a regional audit of the areas, their geography, population, labor market, economy, social capital, and infrastructure, together with a consideration of their strengths and weaknesses, and excellent comparisons with other regions of the same type. The Teruel book also contains several very interesting SWOT (strengths, weaknesses, opportunities, threats), providing a background report on the socioeconomic situation of the area and current development strategies. This is the point of departure for an assessment of regional policies and strategic recommendations as

well as their impact on the area, an issue addressed in Part III. In this part, both books do an excellent job in presenting policy recommendations. The Teruel book suggests local authorities focus attention on two main areas: the upgrading of the agri-food industry through niche marketing of local products, and the development of a strategy for sustainable rural tourism. The idea is based on the use of amenity-based development strategies that focus on harnessing natural and cultural amenities, largely through tourism, environmental protection, and related industries. In the case of Teruel the problem is not the congestion of attractive places but rather how to guide the economy towards niche markets and to meet quality standards, trying to serve more sophisticated consumer preferences (i.e., the export of amenity-related products) and to cater to the growing interest in ecology (i.e., the inflow of tourists, residents, and enterprises).

According to the Teruel book, the attitudes of local actors are resigned and fatalistic; they seem unable to innovate or create a dynamic atmosphere for development. The book stresses the need to introduce modifications in institutional structures and to change attitudes within the local population. This is a difficult, long-term task that requires outside assistance, including not only funding but also the provision of training. Another problem faced by Teruel, in common with most rural areas, is that the various sectors alone do not reach the critical mass required to break out of the local market, although together they have the potential to mobilize a very interesting and viable range of local products. Other strategies that would be steps in the right direction are linking agriculture products to the local tourism market, closer cooperation between producers through efforts such as joint marketing, storage, and distribution, and the search for effective mechanisms to communicate product differences to consumers.

One of the aspects that the VCD book emphasizes most strongly is the need for closer cooperation and coordination between the various levels of public administration. It also states that "a stronger lobbying activity is required to be built around well-defined projects and be kept focused on the complementarity of interests more than on the competition between the different VCD areas" (p. 15), so that the VCD can be recognized as a territorial entity. Cooperation is also needed at an inter-city level. Cooperation of this kind is extremely important and can allow small and medium-sized towns to enjoy facilities and services that they would never be able to afford on their own. Indeed, this cooperation would be even more successful if the various towns in the network were specialized. The book makes the point that local productive systems should focus on qualified technical high schools in order to facilitate knowledge and skills transfer; it stresses the need to create a consortium among firms to internalize collectively the expertise that is missing, and also the need for agencies to adapt and transfer technologies and information to small firms. In the field of tourism, the strategic recommendation for planners is that they should be continuously creating resources with new and original initiatives able to meet shifting demand, that is, turning local features into tourist attractions, and promoting ecotourism. This should be done through the development of a brand image and a distinctive profile for local products. Finally, throughout this process it is important not to overlook the role of civil society in ensuring sound local governance, since institutional reform is needed in order to obtain cooperation among municipalities and to set clear objectives for the medium and long term.

Both books are interesting and follow the same general approach, though their final products differ slightly. For instance, the book on Teruel is not merely a set of figures and a list of conclusions, but does justice to the feelings of the people in the

area, reflecting the fact that the book is the result of an extensive series of meetings between international experts and governmental and nongovernmental local actors. The dialogue established with these local actors is aptly expressed in the text: "it is extremely difficult to convince farmers and small firms locked into traditional activities of the enormous amount of time and money it can take to create something intangible like an image or a brand and that in the end this can be worth more than all the company's tangible assets" (p. 126), which is, in my opinion, the main problem of the province. The authors conclude that a major campaign of internal communication to inform and work with producers on the ground is needed, in addition to subsidies. The book's aspirations are realistic: "it is important to keep in mind that there are no magic solutions" (p. 113); "some parts of the province possess more inherent advantages in terms of natural and cultural features and entrepreneurship and geographical conditions, and will therefore inevitably be more adaptable than others" (p. 174). My major quibble with the VCD book is the highly theoretical presentation of the challenges facing the region as well as the recommendations for its development. Though the recommendations are practical and well founded, the study seems to be a compendium of problems and a recipe of possible solutions, without really considering the impressions of the entrepreneurs living in the area, or at least, not reflecting them in the text.

The titles of the books are misleading, merely referring to the regions under consideration. This is a pity because both books offer more than just specific conclusions referring to these particular regions; they provide very full analyses of the challenges and development strategies for rural and intermediate regions in general. The ideas that the books express are partly applicable to any region of the same general type, and this, in my view, is their most valuable contribution. These general overviews and the many examples of best practices in structurally comparable regions in the OECD area will be stimulating reading for all readers interested in how to design strategies to improve development at a regional level.

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**Tourist's Experience of Place**, by Jaakko Suvantola. 2002. New Directions in Tourism Analysis Series. Aldershot, UK and Burlington, VT: Ashgate. 297 + ix. ISBN 0-7546-1830-7, \$74.95.

Jaakko Suvantola's book is a detailed qualitative analysis of the tourist's experience and is based on a doctoral dissertation completed at the University of Adelaide in 1997. It is a well documented interpretation of tourism, often written in the first person. The author welcomes criticism due to the subjective nature of the study (p. 4) and I accepted this challenge. After an introduction and literature review in humanistic travel geography, the book recounts the travel experiences of a variety of travelers. These experiences serve to explain the "experience of place."

Chapter 1, Introduction, sets the stage for the remainder of the book. Noting that the tourist experience has been studied more often in other social sciences besides geography, Suvantola suggests a humanistic approach may be best to handle the task.

He notes that his analysis is based on personal experiences and those of friends, and also on a study of travel brochures.

Chapters 2–4 provide the essential literature review for the dissertation. At 65 pages it summarizes the exhaustive contemporary bibliography. These chapters are thorough and relevant for the study. Chapter 2, *Humanistic Geography Revisited*, includes major sections of *Post-Humanistic Geography*, *Existential Space*, and *Places as Lived World*. In the review of humanistic geography, the author introduces “The Other,” the social group other than your own. For a review of *Existential Space*, there is a discussion of mathematical, physical, socioeconomic, behavioral, and experiential space. An explanation of the multidimensional aspects of tourism is enhanced by the content of this literature review. Chapter 3, *Travel Research and Humanistic Geography*, sets the stage for linking qualitative travel research and humanistic geography. Since travel requires some level of movement in space, the linkage is obvious. Chapter 4, *Qualitative Traditions in Travel Research*, is a delightful read. Travel results in personal fuzzy feelings and are often hard to quantify. But I enjoyed the author’s comparison of travelers and tourists, especially since I have called myself both. It is interesting to note that while travelers and tourists may perceive themselves as different, the destination host sees the foreign visitor as an individual with a unique set of expectations.

Chapter 5, *Charting Shared Experiences*, could also be called the typical “data chapter,” where the author introduces his friends and fellow travelers. Using interviews and tape recorder, the “data collection” phase of the study was augmented by personal memories, recollections, and travel diaries. Suvantola accepts that this type of data collection is open to debate but argues that one can learn from even a singular experience and the themes central to it. A debate over qualitative versus quantitative analysis may ensue here, since two people may have a similar preference for tourism (e.g., *I like Bali and you like Jamaica*) but have different experiences.

Chapters 6–9 describe the tourist experience. The reader is introduced to the literature on motivations to travel in Chapter 6, *Travel as Reach*. These include push factors (e.g., negative conditions at home), pull factors (e.g., exotic beaches), but also escape and search motivations. An escapist desires just to get away, while the searcher has some goal in mind. The rest of this chapter describes the “geography of dreams” and serves as the foundation for understanding typical travel brochures. Here, I note the paucity of consumer (tourist) behavior research that would be essential for a quantitative study, and yet is equally important for this qualitative one.

The material in Chapter 7, *Tourist Discourse and Tourist Space*, accurately describes the tourism industry and how the industry has modified the destination as a commodity. I find it important to note that even the backpacking “travelers” are directed by guidebooks and their attempt to disassociate themselves from the typical tourist does not matter to the local citizens. In fact, Suvantola observes that just as seaside resorts have been created to attract tourists, hostels and attractions are opening in the back country.

Chapter 8, *Sightseeing*, explores the on-site experience. Often, as the author explains, our exposure to a destination is limited by a few “totems” (p. 177) that may be pre-influenced by travel guidebooks. Personal photography may augment one’s experiences. Chapter 9, *The Encounter With the Other Culture*, illustrates the experience of meeting the local citizens. Figure 9.1 (p. 211) describes the experiences of an individual’s travels from home and back again. This on-site experience begins with the initial recognition of being somewhere different and either a euphoric or disillusioned

experience with The Other. Depending on the individual and preconceived information, the experience may be a good one or a disappointment.

Chapter 10, Integrating the Experience of the Other and Home, returns the visitor to home. This important recollection phase of the experience is influenced by all the previous elements of the trip. Chapter 11, Home, Reach and the Experience of the Other as the Experience of Place, is the conclusion and is followed by the bibliography.

All in all, this book would serve geography and leisure studies graduate programs as a supplemental reader in introductory tourism behavior courses. The middle section (Chapters 6–9) is a valuable resource and a must read for graduate tourism students. It is important to stress the interdisciplinary value of this book since many faculty and students in programs other than geography ones should recognize the value of the content.

While this study is not based in economic theory, I am inclined to note the failure of the author in citing Clawson and Knetsch's (1966) recreation experience theory (i.e., recreation includes anticipation, travel to, on-site, travel from, and recollection). The tourist experience described by Suvantola is not unlike the five phases of recreation experience proposed by Clawson and Knetsch. Despite this omission, Suvantola's book is a worthy addition to the tourism library.

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