Transport, Land-Use and the Environment, edited by Yoshitsugu Hayashi and John Roy. 1996. Transportation Research, Economics and Policy, No. 4. Dordrecht and Boston: Kluwer. 430+xiii. $110.

Bangkok, Thailand, has sure taken alot of heat over the past few years. With traffic jams providing opportunities for commerce, trade, and vehicular maintenance, traffic cops and cabbies learning the intricacies of midwifery, and plumes of noxious fumes rising from the artesclerotic arteries of daily commute, it is frequently lampooned by the international press as a difficult and unhealthy place to do business. Indeed, it is. Poor road infrastructure, inadequate public transit, and bad planning, combined with rising incomes and a voracious appetite for automobiles have combined to create a the sort of monstrosity that results when late 1970s Los Angeles is “morphed” with a 1890s town square.

Sometimes such criticism is dismissed by public officials and journalists in Pacific rim countries as so much Western hypocritical nonsense. But, you won’t find such defensive reactions in this scholarly tome. The two lead papers (by Yoshitsugu Hayashi and Kunchit Phiu-nual) tackle the issue of Bangkok head on and offer no excuses, but instead introduce an agenda for research and reform. The task at hand is for social scientists and civil engineers to unite, and to bring the full power of transportation/land-use modelling, Geographical Information Systems, new glitzy software, improvisation, and whatever facts or figures available to bear on the problem of the multitudinous and complex interactions among transportation, land-use, and air pollution. Although this line of research is nothing new, what is interesting about this volume is its international scope combined with the breadth of approaches used to endogenize transportation networks, land-uses, and environmental variables.

The book grew out of a seminar organized by the Transport and Land Use Special Interest Group of the World Conference on Transport Research Society, held on December 1993 in Blackheath. Australia, and as anyone accustomed to working with gravity models would predict, draws its contributors disproportionately from Australia and Asia. This is no drawback, because it offers scholars and practitioners a window to some international research that would normally be hidden in inaccessible, specialized regional academic journals. The book has a smattering of contributors from Europe, Latin America, and the United States for additional perspective, but the emphasis is on newly industrialized countries whose primal cities are experiencing the pains associated with rapid, unplanned growth.

The book is divided into three sections (1) “Setting up the Problem,” (2) “Policy Implications in Modelling,” and (3) “Alternative Modelling Approaches.”

The first section consists mainly of descriptive papers which lay out the case for more vigorous planning and integrated modelling and simulation. Here you will find numerous international comparisons of traffic congestion levels, land- uses, and pollution in which continental Europe is upheld up as the benchmark against which rapidly growing Asian and Latin American cities are to be judged. Contributors also describe the various policies discussed to deal with traffic emissions. These can basically be categorized as: (1) land use policies (to increase the density and compactness of cities), (2) infrastructure policies (to increase the quality and quantity of transportation infrastructure), (3) pricing policies (to influence consumer modal choices), (4) traffic management (to improve the flow of traffic along existing thoroughfares), (5) environmental policies (to reduce unit automotive emissions), and (6) housing policies (to encourage the construction of multi-unit housing). Presenters make the case that effective planning is often impeded by administrative splintering, where jurisdictional disputes can lead to the adoption of counterproductive policies, and argue in favor of a more cooperative and holistic approach to planning. Only one paper seems out of place in this dense jungle of facts, figures, and anecdotes— J. F. Brotchie, M. Anderson, P.G. Gipps and C. McNamara contribute a rather terse description of the “Brotchie triangle” (which shows the interrelationships between and spatial interaction), but it would seem to be more at home in one of the other sections of this volume or even another book.

Altogether, these papers do an adequate job of describing the gravity of the problems, but not a very good job

of anticipating the modelling approaches, and describing the range of policy choices used to tackle the problems. This problem is to be expected from a collection of conference papers, but unlike many volumes based on selected proceedings, this one lacks an introduction or preface which clearly and forthrightly lays out the nature and purpose of the papers gathered together, how they are connected, and, indeed, why they were even included.

The theme of the following section is to demonstrate how the aforementioned policies may be simulated in various types of transportation, land use -transportation models. This turns out to be the real heart of the book. Studies featured here include a model of Dortmund, Germany, which finds that conventional pricing and traffic management (rather than land use policies) offer the best opportunity to effect emissions reductions in urban transport. John Roy, Leroy O. Marquez, Michael Taylor, and Takayuki Ueda describe the SUSTAIN (Sustainable Urban STructure and Interaction Networks) model and demonstrate that employment dispersion in a number of suburban centers may be a more effective strategy than urban consolidation. William Young and Kevin Gu describe the LAND (Location of Activities and Network Development) package which arrives at exactly the opposite conclusion—that a centralized strategy is the most optimal.

One of the book's purposes is to showcase new transportation, land-use planning software which can be used in systems planning. Regional scientists will be pleased to learn that the software described here is not the clunky, frustrating kind that they have grown accustomed to using in their input/output, transportation planning, and simulation endeavors. The packages are Windows based with attractive Graphical User Interfaces (John R. Roy's SUSTAIN model; William Young and Kevin Gu's LAND package; Lars Lundqvist's CMAWIN) and clearly have the aim of being marketable. They are built with a new generation of visual programming tools and utilize object oriented programming methods. These features are important they are intended to be used by practitioners as well as scholars.

What distinguishes the final collection of papers from the second section is that they deal with ongoing or unfinished research. One can find here descriptions of modelling approaches or bare-bones models that were not far enough along when the conference occurred to be used for policy simulation. Included are descriptions of the RURBAN (Random utility/Rent-Biding ANalysis land-use) model (Kazuaki Miryamoto and Rungsun Udomsri), TRANUS (Tomas de la Barra) which uses Nested Multinomial Logit models, and Roger Mackett's UTOPIA (Urban Transport Operation and Planning using Intelligence Analysis) which relies on artificial intelligence.

The papers in this book employ a mixture of the familiar and the novel. Many of the papers describe land use/transport models with conventional land-use, trip generation, trip distribution, route choice features. But each also introduces a few novelties. The innovations may be in input data requirements, software design, methods of interfacing with geographical information systems, methods of modelling land markets and urban density, assumptions about the urban layout, or methods for generating emissions data from traffic characteristics. The handful of policy simulations demonstrate how sensitive policy outcomes are to modelling assumptions. "Common-sense" policies can lead to perverse outcomes. Short trips are not always to be preferred. Nor are dense monocentric cities always optimal. What is lacking is a synthesis and explanation of the contrasting approaches and results. Hence, one is left alone to pick through the individual pieces to find something of value.

The book was clearly rushed into print, and therein lies its weaknesses. The quality of papers is uneven, and the unifying theme of transport, land-use and the environment is sometimes lost in the labyrinth. Most of the papers describe ways of extracting emissions data from land use/transport models. But, some are policy discussions or microeconomic-analyses. Most are about urban areas, but a few are not even spatial. Some papers are clear and concise. Others are filled with redundancies, and careless errors of spelling, punctuation, grammar or translation. Most of the illustrations are decipherable. But, there are examples of multiple color solid hatchings converted to two tone and maps that resemble Rorschach inkblot tests. Some papers are complete. Others appear to have been hastily written to meet conference submission deadlines. Adding to the mystery and disappointment, the volume concludes with a laconic list of lists to summarize the book's contents.

The cover jacket claims that "as an invaluable source for academics, practicing planners, and graduate students." Slimmed down and focused, the volume might have found its way into some graduate classrooms, and would have been a competitor for scarce centimeters of bookshelf space in personal and academic

libraries. However, the audience for this thick book, though written about an important and topical subject, is likely to be very limited. In charting a path through a rapidly growing area, the book's editors (as well as Bangkok's planners) apparently adopted a hands-off attitude best characterized by the adage that "if you don't know where you are going, any road will do."

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