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Book review

A. Condeco-Melhorado, A. Reggiani, Javier Gutierrez Cheltenham, E. Elgar (Eds.), Accessibility and Spatial Interaction, 2014 (£75 (Hardback))

This book is part of the NECTAR (Network on European Communications and Transport Activities Research) Series on Transportation and Communications Networks Research of which the second author is the series editor. The aim of the series is to disseminate the work of the NECTAR association. This is the latest and fifth book in the series and comprises a series of edited chapters from different contributors. Most of these chapters are revised contributions of papers that were presented at the International Regional Science Association Conference held in 2012.

The book is organised in three parts: modelling advances (4 chapters); social and spatial dimensions of accessibility (3 chapters); and a focus on accessibility as a driver of spatial interaction (3 chapters). An introductory chapter sets the framework for the book. They highlight the relationship between spatial interaction models and accessibility models and arguing that improved accessibility increases spatial interaction between places. The authors note the importance of improvements to land use - transport integration (LUTI), since accessibility improvements can be achieved by addressing either aspect or both. The editors seek to position each chapter as a means of demonstrating the potential that accessibility analysis has for policy studies, planning practice and expanding knowledge in these areas – I would agree that this is achieved.

The chapters in Part 1 focus primarily on modelling applications or methodology matters. Chapter 2 starts with a nice, but brief, review of types of accessibility measures thus demonstrating the potential breadth of analysis in this field. Using a Swedish case study, between 1993 and 2008, three methods to estimate distance decay are compared and their ability to handle the spatial unit. Chapter 3 explores the impact of changing accessibility in both transport infrastructure (in this case a new bridge) land use by modelling the accessibility implications of this dynamic and complex relationship. Finding that where new traffic infrastructure improves' transport accessibility' this eventually leads to changes in land use in the different spatial areas. Chapter 4 uses the City of Zurich as a case study, applying two models – one land use, one transport – to estimate traffic congestion for different transport modes. The methodological contribution is in comparing zone-based and cell-based measurements of location. They test cell sizes from 400 × 400 m through to 50 × 50 m. Chapter 5, this time focussing on the USA, explores the contribution of new data sources – namely from location service devices (geocodes for individuals) as indicators that can map mobility patterns. I was particularly interested in the idea of 'mobility sheds' and its potential for future planning.

In Part 2 the focus moves to add a new understanding to accessibility outputs, offering three quite different perspectives. Chapter 6 uses autocorrelation analysis to look at the extent that accessibility of one place (in this case US counties) depends on the characteristics of neighbouring places. A useful lay description of spatial autocorrelation is provided before turning to spatial coordination of accessibility to socio-economic characteristics. Chapter 7 looks at the effect of national borders (as opposed to topological features) on spatial interaction. While Chapter 8 turns to the micro-scale, focussing on the built environment attributes of street slope and walk speed on the accessibility of the elderly (over 65 years of age). Their case study is based in Portugal.

The final part of the book turns toward economic perspectives. Chapters 9 and 10 examine the relationship between accessibility and productivity. Chapter 9, based in Spain finds better road accessibility a positive for the domestic economy of the province, and (as with Chapter 6) a knock on effect to adjoining areas. Chapter 10, also based in Spain, looks at different location characteristics on productivity including population size, density and accessibility – concluding that accessibility best captures the benefit of location. Chapter 11, back again in Sweden, review others' empirical studies to demonstrate the positive impact of accessibility on market size and knowledge sources.

This book would appeal directly to those working with the study of accessibility, but also to scholars of planning and geography. Some chapters are easier for a wider audience to digest – for example Chapter 3 uses a non-technical description of the modelling framework and it also has a technical appendix. In so doing the authors provide for a wider range of practitioners to engage. This is an aspect we found particularly important in our own work on use and usability of accessibility instruments (te Brömmelstroet et al., 2016) where land use planners were found to have different information forms to transport planners.

In closing I found that the chapters, as a collection, demonstrate both that: accessibility analysis provides a valuable contribution to planning and policy decision-making; accessibility modelling continues to be developed, expanded in its application, and refined. As with many edited books this is a fairly varied collection of papers and most likely to suit scholars embarking on research in this field to gain a useful taster into the different issues of measurement, data and applications. The editors could have added further value by the addition of a final chapter serving to bring the whole collection together and provide a clear agenda for further research

Reference

te Brömmelstroet, M., Curtis, C., Larsson, A., Milakis, D., 2016. Strengths and weaknesses of accessibility instruments in planning practice: technological rules based on experiential workshops. Eur. Plan. Stud.

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