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Anna Nagurney

John F. Smith Memorial Professor and Director of the Virtual Center for Supernetworks

> Isenberg School of Management University of Massachusetts Amherst. Massachusetts 01003



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Forecasting Urban Travel

Reflections on the Book



Congratulations to Professors David Boyce and Huw Williams on the publication of their book and thanks for the opportunity to speak on this panel. Special thanks to Professor Hani S. Mahmassani and to Diane Marek for the arrangements for this special book launch at Northwestern University.

Forecasting Urban Travel is One of the Greatest Challenges of Our Times



The Book is a Masterpiece of Scholarship

Forecasting Urban Travel is a masterpiece of scholarship, meticulously researched, covering 60 years of urban travel forecasting in terms of academic research and practice and including current challenges and future prospects.

Forecasting Urban Travel is a book that is immense in scope, deep in analysis, documentation, and information.

The book is already a classic that will be referred to time and time again.

A theme that permeates throughout is that of scientific integrity, and the thorough reporting of results, including convergence properties of algorithms, such as solution accuracy.



The Book is a Masterpiece of Scholarship

The book is a magnificent achievement on a topic of great importance, given that half of the world's population now resides in cities.



An Intellectual Journey Over Time and Space

The book takes us on a journey over 60 years and is the culmination of a great collaboration and friendship between Boyce and Williams.



Forecasting Urban Travel provides us with the intellectual history of this multidisciplinary field with contributions from natural scientists, engineers, operations researchers, regional scientists, economists, and other social scientists.

Highly Accessible, Fascinating Exposition

Forecasting Urban Travel captures, in a thoughtful, comprehensive manner, innovations from conceptual frameworks to methodological tools, both models and algorithms, advances in computing power, software for practitioners, as well as applications beginning with the four-step sequential model.

Amazingly, the models and algorithms are presented in the volume without mathematical details but additional such background is given in footnotes!

Innovations

As a contribution also to the history of science, this book details the contributors, the challenges that they faced, the discoveries that were made, the organizations and institutions that provided support and financial funding, as well as transitions, sometimes slowly done, into practice.

The book is filled with quotes, illustrating both struggles as well as promise, successes, along with pearls of wisdom.

Lasting Quotes

In the first chapter, Paul Samuelson (1970) is quoted:

"Even if we had more or better data, it would still be necessary - as in every science - to *simplify*, to *abstract* from the infinite mass of detail. All analysis involves abstraction. It is always necessary to *idealise*, to omit detail, to set up simple hypotheses and patterns by which the facts can be related, to set up the right questions before going out to look at the world as it is."

Lasting Quotes

In Chapter 7, in the discussion of the reviews of *Studies in the Economics of Transportation* by Beckmann, McGuire, and Winsten (1956), the reviewer Mansfield (1959) did not seem to appreciate the findings in the book.

As noted in Boyce and Williams (2015), Beckmann wrote a note to McGuire regarding the reviews and stated: "It is fascinating and depressing at the same time. How little we are understood!"

Lasting Quotes

In the book, in Chapter 12, the following excerpt from Donnelly et al, 2010 appears:

At the beginning of the 21st century, clear indications of a paradigm shift in transportation modeling are apparent. A growing number of agencies ... are abandoning established traditional modeling techniques and exploring advanced practices in travel forecasting ... defined as those practices that go beyond the traditional four-step travel demand modeling approach.

Donnelly et al, 2010, argue in their report that visionary champions are the sustaining force behind the adoption of advanced models.

And we clearly have them in Professors Boyce and Williams!



And from the Authors Themselves

The below quotes are from the final chapter in the book:

We welcome newcomers to a challenging and rewarding profession of immense practical significance to the future life in cities.

Where at all possible we must seek out the evidence base for policy and always bear in mind Andreas Schleicher's wise words that pertain to us all: "without data, you are just another person with an opinion."

It's About the People!



Congratulations to Professors Boyce and Williams!

