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Book review

Sustainable Railway Futures: Issues and Challenges, edited by Becky P.Y. Loo and Claude Comtois, 2015. Ashgate, Farnham UK and Burlington VT. £65.00, (Hardback) ISBN 97814095230

This is a useful contribution to the literature on railways, transport and sustainability, although the latter term appears ambivalently applied. On page 3, the book's aim is stated as 'to provide a comprehensive overview of the key issues and challenges of developing railways as a sustainable transport (both passenger and freight) mode in modern societies'.

The work has six sections, the first and last of which, essentially conceptual elements, comprise just one chapter each, individually written by an editor (Loo and Comtois respectively). The central four sections, illustrating a diverse range of case studies, are each made up of three chapters; thus fourteen in all.

In her introduction, Becky P.Y. Loo argues that railways in particular, in modern societies (a qualification that has some resonance), possess the potential to minimize negative impacts of transport and to support continual (sic) growth and development of the economy. She argues that a (new) railway era has 'potentials of "reviving" itself against the broad conceptual framework of sustainability' (p. 8). And this is where a little confusion (at least for this reader) sets in. Is this a series of contributions on the holistic sustainability benefits of railways as a transport mode or about sustaining railways?

The book's central four sections are organized 'along the major dimensions of sustainability, that is, the geographical (Section II), environmental (Section III), social (Section IV), economic and financial (Section V) dimensions' (p. 8).

The declared theme of Section II, *Transforming Place and Space: Geographical Dimensions*, is 'to promote a better integration of the railway systems with, firstly, the surrounding environment, society, economy, and secondly, other connecting or nearby railway systems' (p. 8). Thus in chapter 2 we find Jean-Paul Rodrigue's work on intermodal transport focusing on 'the main structuring effects' (in terms of urban and regional spatial structure) of rail terminals, calling up previous research from North America, while John Black's piece addressing issues and challenges of railway integration at the national scale (chapter 3), concentrates on systems in Australia, Indonesia and Japan.

The last chapter in this section, Roger Vickerman's EU-level focus, argues that railways should recapture 'the ascendency in middle distance transport, up to 1000 km, in densely populated regions, where [they] can compete effectively …' (p. 70).

Section III: *Save Our Earth!: Environmental Dimensions* assumes that environmental benefits of railways depend on modal shifts away from less environmentally-friendly modes rather than from newly-generated traffic induced by new or improved railway infrastructure (p. 9). The focus of this section is therefore on modal shift. Robert Cervero considers transit-oriented development (TOD: the coupling of public transport investments with urban development), drawing on case studies from Stockholm, Copenhagen and Singapore. The relative success of these places emphasizes the importance of a cogent and coherent vision of the future city (p. 89). Cervero concludes that TOD will find particular acceptance in previously less-developed countries that are rapidly modernizing and industrializing, just those places where radical transformations in urban landscapes are considered to be most urgently needed.

Moshe Givoni in chapter 6 revisits his own model of airline and railway integration, reviews the literature on air-rail substitution to highlight the dominance of competition rather than complementarity, and employs two examples to illustrate the potential for integration. The transfer of freight from road to rail transport is the theme of Antoine Frémont's contribution (chapter 7). He concludes that the diversity of modal profiles across countries precludes the elaboration of a unique model for such transfer. However, he argues, in the face of the flexibility that road transport can draw upon, 'massification' is the main tool required to render combined rail-road transport competitive.

Section IV: *Equity and Accessibility: Social Dimensions* addresses issues concerning 'the social sustainability of railways' (p. 10) and its impacts on equity and accessibility. Linna Li and Becky Loo's *The Promotion of Social Equity through Railways* contends that there is a clear potential role for railways in promoting social equity. To realize such a role many challenges need to be overcome, not least establishing a long-term vision for appropriate infrastructure (re-)construction investment. Together with issues of integration, design and affordability, it is concluded that the key element for promoting railways' social sustainability potential is to balance equity with efficiency. In chapter 9 David Chapman employs examples from China, the US and Western Europe to explore the changing roles and participation of local actors in governance and planning in the UK. John C. Spychalski examines conditions that have driven the creation and evolution of regional and local railways and shaped their operational and commercial policies, practices and performance in North America, concluding that such railways comprise a vital sub-set of the national network.

Three chapters that examine various models or 'strategies that aim to turn railways from a liability into an asset' (p. 11) comprise Section V: *Making Ends Meet: Economic Dimensions*. Tin Kin Ho's chapter 11 addresses issues of developing and exporting modern railway technologies, employing experience from China, France, Germany and Japan. In chapter 12 Simon Tang and Hong K. Lo employ Hong Kong to show how an integrated railway and property development model can secure both the financial viability of a railway development project and the provision of a quality rail transit service through public-private partnerships. In the final case study chapter, Brian Slack looks at the strategy of enhancing inter-modalism to render railway operations financially viable. He considers US experience and queries how transferable this is, particularly to Europe.

Section VI: *Looking Forward* comprises Claude Comtois' concluding chapter addressing key issues relating to railways' potential to revitalize (themselves). It examines the resilience of rail systems through a conceptual framework and large-scale exemplification of the challenges facing that resilience.

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Overall, we find a book comprising a series of twelve diverse case study chapters topped and tailed by two largely conceptual pieces that appear to emphasize different interpretations of the 'sustainable' in the book's title.

While the usual caveats regarding the unevenness of contributions to edited works apply, the reader might also conclude that the first four sections of the book, as emphasized in the editorial introduction, largely relate to the wider, holistic dimensions of railways' (potential) sustainability credentials, while in the final two sections (and, implicitly, in one or two of the conclusions of previous chapters) it is the sustaining of railways themselves that is the focus of attention.

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