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Book review

Low Carbon Mobility Transitions edited by Debbie Hopkins and James Higham, Oxford, Goodfellow Publishers, £85 (hardback) £34.99 (downloadable)

This book is a welcome reminder of how transport connects all human activities, not just the obvious: land use, national and household economies, but our health and wellbeing, identity and the whole future of the planet. The chapters describe different ways of reducing greenhouse gas emissions from travel with a variety of solutions. They also remind us of how travel decisions are conditioned by society, image and previous contexts, with choices often limited by actors benefitting from the status quo and how this needs to change and quickly.

Transport is responsible for 23% of all greenhouse gas emissions and, unlike other sources it continues to grow absolutely and relatively (Higham and Hopkins pp. 1–10, 266–276). However, it is often omitted from proposals to meet carbon targets, despite offering many opportunities for reduction of emissions and innumerable benefits in health, equity and community by doing so.

There are several repeating themes throughout the book, picked up independently by different contributors. Many show optimism, but justified pessimism predominates as researchers go beyond what can be done, to investigate the reasons why emissions from travel continue to grow despite the dire consequences faced by the planet if we do not stabilise global warming to less than 2°.

Several authors stress how technological solutions have always been favoured by transport planners, including making vehicles more fuel-efficient and adopting new fuels. The chapters about Finland (Kivimaa and Temmes, pp.137–152) and Brazil (Kuhnimhof and Weiss, pp.165–177) discuss the potential of swapping bio-fuels made with local materials for fossil fuels, even more inviting to governments when they hope to develop industry based on technological and knowledge advantage (Kivimaa and Temmes). However, Bongaerts, Nawijn, Ejgelar and Peeters (pp.233–245) point out that for aviation, while developing bio-fuels may offer possibilities, they have high costs in land and water use and the first and most effective priority must be reducing the demand to travel. Chapters by Morgan and Beeton (pp.189–204) and Tyfield and Zuev (pp.246–254) explore some of the institutional barriers to increasing the fleet of electric vehicles in Scotland and China respectively including finding space for the charging points (Tyfield and Zuev) and only having limited constitutional powers regarding transport in a devolved region of a nation state. Kagawa, Nishijima and Nakamoto (pp.255–265) demonstrate how government subsidies can promote fuel efficiency through targeted replacement of the car fleet, but require consideration of total lifetime emissions.

The grounds for optimism include a renaissance of urban cycling andrail (Newman, pp.153–164; Schwanen, pp.205–218), signs that Western young people show less inclination to buy cars or learn to drive (Delbosc pp.30–44), a move towards more urban living and higher urban densities reducing the need for carbon-intensive travel (Newman pp.153–164; Joshi, Joseph and Chandran pp.137–152). Yet, when cities grow too large, they require the use of faster travel to remain functional (Newman pp.153–164; Joshi, Joseph and Chandran pp.137–152: Kuhnimhof and Weiss, pp.165–177). There are numerous examples of how providing for the car is divisive (Joshi, Joseph and Chandran), affects the quality of life (Tyfield and Zuev, Kuhnimhof and Weiss), personal health (Macmillian and Mackie) and in some cases aggravates existing racial tensions (Seeliger and Kane pp.83–90). Simple changes such as providing for people, not vehicle movements (Tyfield and Zuev), or using car-free days (Joshi, Joseph and Chandran; Seeliger and Kane;) to re-democratise the street space can help reorientpolicy.

New developments in ICT can encourage car and bike share and make public transport more accessible. Barr and Shaw (pp.12–29) describe how collaborative building of an app with ‘aspiring greens’: empty nesters and young professionals encouraged the use of trains rather than planes for holidays. Gössling (pp.219–232) explains how ICT can encourage modal switch and make existing mode use more efficient, but also how social media can promote identities dependant on speed and excess travel.

This pessimism echoes though the chapters. We learn that individuals are often incapable of changing the factors influencing their traveland health (Macmillian and Mackie pp. 45), that hyper-mobiles whose excessive flying can demonstrably reduce their and their families' health and well-being are unlikely to heed the warnings (Cohen pp. 66–76) and that pressures of advertising and image constantly promote car ownership and use (Joshi, Joseph and Chandran. Tyfield and Zuev). Even where cultural roots lead to more sustainable ways of travelling, as with Chinese migrants in Australia (Kerr, Klockerand and Waitt pp.77–82), they will gradually adopt the unsustainable habits of the host nation.

Several of the contributors refer to Transition Theory (Geels and Schot, 2007) and the need to nurture niches of innovation and align regimes to new goals in a different landscape (Kivimaa and Temmes; Morton and Beeton; Schwanen). Imran and Pearce (pp.104–118) explain the importance of path dependency in shaping futures through the example of Auckland New Zealand, where the local authority's pro-public transport policies have often been thwarted by national pro-road policies. Although resisting and challenging the orthodoxy in bad times has lessened the damage, public transport now needs to build coalitions as powerful as those promoting roads in order to survive.

In the most theoretical contribution, Hall (pp.91–103) maps the processes and necessary conditions for transition to become policy. The lack of progress towards more sustainable travel may be partly explained by consumers' and policy-makers' lock-in to socio-technical systems and practices associated with eco-modernism and efficiency. He contrasts the policy paradigms of Eco-Efficiency, which attempts tomaintain the current patterns of consumption with fewer energy and material inputs, with Sustainable Consumption, which aims to reduce consumption. Bongaerts, Nawijn, Ejgelar and Peeters illustrate Eco-Efficiency at work in the aviation industry, where reliance on improving fuel efficiency continues despite ample evidence that any fuel savings are totally dwarfed by continued and predicted growth in passengers and distance flown. Stroebol (pp.178–187) finds the

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competitive regime of neoliberalism, means tour operators prioritise company profits and growth over sustainability.

As the editors argue compellingly, reducing greenhouse gas emissions is urgent and vital for the continued existence of humans on earth. Not only should transport be included in plans to halt our dependence on fossil fuels, moving to lower-carbon travel can bring enhanced well-being to individuals and communities. For this reason, it is appropriate for undergraduates who, hopefully, will be part of the change needed to plan transport and places fit for people and planet. Open-minded experts wondering how we have become so locked into techno-solutions will also find this book thought provoking, particularly readers unfamiliar with Transition Theory and its applications to transport.

The condensed, independent chapters give examples from around the world of what can be done and explanations about why it is so painfully slow to happen. For readers seeking greater depth, the book acts as a useful springboard for further reading, both by exploring previous work by the authors or using their reference lists for other sources. Reading this book, particularly the second time, has alerted me to the need to challenge so many hidden assumptions in the transport decisions made by individuals and policy-makers.

References

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