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Book review

Driver acceptance of new technology: theory, measurement and optimisation, In: Reagan M.A., Horberry T., Stevens A., (Eds.), 2014, Surrey, Ashgate £75.00 (hardback), ISBN 978-1-4-094-3984-4

This is the latest volume in the *Human Factors in Road and Rail Transport* series, which reports on state-of-the-art science that can be applied to increase vehicle and driver safety and enhance driver satisfaction. The book relates almost entirely to the automotive domain, though it does include some examples from motorcycling and from mobile machinery operators in order to widen the focus slightly. The relevance of the book for those with an interest in transport geography is that new driver-assistance or vehicle-support technology can make transport by road of both goods and people not only safer, but also more reliable and predictable, more satisfying for the driver, and also in some cases faster. It therefore has the potential to contribute significantly to major changes in flows of goods and people and, ultimately, of the spatial distribution of communities, service hubs and manufacturing locations.

The contributors are mostly researchers into human factors with a particular emphasis on transport and driver behaviour, and are therefore very skilled at the micro-level. While this is extremely relevant to the book's purpose it has the effect of omitting the larger picture of the consequences of new technology on travel patterns and of mode choice; this latter is, however, an area that is of major interest to those concerned with the geographical dimensions of transport, travel and mobility.

The book has a very logical framework, dealing firstly with the fundamentals of definitions, including acceptance, and then covering measurement, case studies and optimisation. The links between sections are generally clear and whilst there are some divergences of approach between contributors with different standpoints the editors helpfully identify these in the Conclusions (Chapter 22) and summarise the contribution of each author. However, despite the structure, the book to me lacked the sense that it was an integrated whole; perhaps because the field of study is relatively new so that it can ultimately only be a collection of not completely-related papers.

For transport geographers the most relevant sections are the case studies in Part IV (Chapters 10 to 16), certain chapters in the section on Optimising Driver Acceptance (Part V), and the concluding chapter (Part VI). These contain discussions of the practical and policy implications of driver acceptance or non-acceptance, and analyses of government policymaking, including, in Chapters 20 and 21, policy making under different conditions. Chapter 16 links policy and safety, whilst Chapter 21 looks at the regional variations in the acceptance of new technology. There is an interesting discussion in the editors' concluding Chapter 22 about variations in acceptability; with the point being made that acceptance depends on the individual, so that issues such as gender, age, culture and personality are likely to be important. This is a key factor for how the spread of new technology progresses, and therefore of its effect on geography.

I missed any significant discussion on professional drivers' acceptance of new 'monitoring technology'. In cultures where there is a very strong resistance to change a reluctance to accept new technology may have a non-trivial influence on the geographic effects that can arise from it. If, for instance, professional transport drivers did not accept the new technology, did not use it, or perhaps, in some extreme cases, even vandalised it, this could result in the data that is used by commercial transport provider organisations, or by policy-makers, being inaccurate. This might then lead to further negative consequences: one might be a waning of the public transport mode relative to private modes if public transport were to fail to take advantage of technological facilities that are available to private motorists. Even without negative implications of this nature there can still be geographic consequences as industries react and perhaps restructure in response to the effect of new driver technology, particularly if costs are involved in its introduction. An interesting article on this in relation to part of the US trucking industry appeared in 'The Atlantic' a little over two years ago and is available online (Baraniuk, 2013).

I was also slightly disappointed that the book lacked a sense of excitement which might have been appropriate given that new driving technology appears to be reaching a point, principally through the dawn of 'driverless' cars, where the impact on society may be very great indeed. I have recently been reading 'The Motoring Age: The Automobile and Britain 1896–1939' (Thorold, 2003) that is not an academic study but is nonetheless a detailed yet comprehensive account. What struck me most clearly from that was the concept that the new technology of the automobile, from 1899, had tremendous style: it was extremely attractive to some, a major threat to others, it opened up new geographical vistas for people, and it changed settlement patterns. Could perhaps the new driving technology of the early part of the 21st century do the same? Likely important effects of automatic and 'driverless' vehicles, such as potential multi-tasking, are touched on in the Conclusions but not analysed in any depth. However, one part of the current book under review, Chapter 18, does relate to emotional dimensions of design in relation to the acceptance of new driver technology, although it does not follow-through with a discussion of the consequences of that.

In conclusion, this is a book that transport geographers should be aware of, and it will form a useful reference on the subject of driver acceptance, but they will have to look hard to find much in it of real relevance to their subject.

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