The second part of the book analyses urban mobility policy. The sixth chapter begins by presenting - in a way highly accessible to non-economists - the principles of cost benefit analysis used in economic assessment. He shows the utility of this analysis in providing an objective basis for political choices by identifying the gains and losses for different categories of actors, though without neglecting the limitations of the process. He then strongly criticises the fact that "socio-economic evaluation is used less and less" in favour of more ideological decision-making processes, which fail to achieve their stated objectives. The critical tone intensifies in the next chapter, which denounces two dogmas that govern the production of "planning documents for sustainable cities: more compact cities, public transport as a genuine substitute for the car". The eighth chapter begins a more personal, forward-looking analysis by the author of the possible future of transport systems, against a background of increasing demand for sustainability. This forward-looking analysis is anchored in a positive view of the capacity of those involved in mobility to adapt, beginning with manufacturers or operators of services (and not exclusively mobility services), and including the population as a whole. Technological advances in vehicles and fuels, but also in methods of communication, are likely to contribute. Finally, public action through measures whose effectiveness has been assessed in advance without preconceptions - can also contribute effectively to the achievement of the objectives that France has set itself for 2050 with Factor 4.

The author manages to make sometimes very technical subjects accessible. He recalls some occasionally uncomfortable truths through simple analyses that raise questions about the relevance of urban policy choices made in recent years, purportedly with the goal of combating climate change. Among the most striking

results, we read that Paris' existing municipal transport policy "costs every Parisian 125 euros a year" or that "a scheme for a hundred tramlines, which would cost around 30 billion euros, would reduce car traffic in France by 0.2% and save 200,000 tonnes of oil"...

The strength of the book is obviously that it prompts the reader to think about the choices made in our cities. However, although the author is always quick to remind us of the need to extend the debate on transport to a broader social context, he sometimes seems to forget to apply these precepts to some of his own calculations. This means that a somewhat hasty, even partisan reading (but which runs counter to the current discourse) will find numerous arguments for ditching all public transport schemes, including the TGV, whose contribution to reducing greenhouse gases is described as marginal. This is to gloss over the fact that in the biggest cities, car performance is partly due to the existence of a public transport network that limits congestion levels. At least the transport strikes in Paris taught us that!

Despite these reservations, we can only encourage people to read a book that has the advantage of opening a controversial debate and reminding us of the importance of prior and posterior evaluation, a view we can only share. Of course, this evaluation should not replace political decision-making. However, it will provide grounds on which political choices and priorities can be set.

Patrick Bonnel
Transport Economics Research Unit,
University of Lyon,
ENTPE, CNRS,
France

E-mail address: patrick.bonnel@entpe.fr

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After The Car, K. Dennis, J. Urry. Polity Press, Cambridge (2009). 180 pp., RRP (Pbk) £14.99, ISBN: 978-0-7456-4422-6

In this imaginative book, sociologists Dennis and Urry, postulate the end of the current car system by the end of the twenty-first century and hypothesise alternative pathways towards modernization. First, let's get things straight, Dennis and Urry are not suggesting the end of the car but rather that the car system as currently configured will be surpassed. Given the choice of title, readers expecting radical visions of a velo-topic, masstransited, car-free environments, therefore, will be disappointed. For Dennis and Urry, the car is so overwhelmingly embedded in contemporary life and offers a level of individual flexibility, comfort and convenience, that a wholesale shift to walking and cycling and especially [sic] public bus or train is unlikely.

Chapter 1 describes the dynamic changes that are undermining the very basis of the current car system and draws attention to the digitalisation of society where 'virtual objects' are increasingly being relied upon for mundane everyday activities, creating less ties to place. The second chapter then takes a glance in the rear view mirror to the historic rise of the car and the pathway to its dominance and serves as a valuable reminder on how we got to where we are. Chapter 3 offers a more challenging read, examining the notion of the car system through the lens of complexity thinking. Indeed, understanding 'complexity theory' and some quite abstract concepts such as 'chaos points' and 'self organised criticality' after the relative ease of the two initial chapters is quite challenging).

Abstract concepts become more concrete in chapter 4, however, and the book comes into its own as the authors begin to set out

their stall as to what they believe could induce a 'tipping point' towards a low carbon transport system. They paint a picture of a sensory world with the built environment reworked as 'coded space' negotiated by lightweight (alternative) fuel efficient cars resembling 'computers on wheels'. The digitalisation of space (firstly in the rich north), the authors imagine, will allow social sorting and categorising demands on the use of road space as it is regarded and more of a priced commodity, as a privatised (paid for) space. But Dennis and Urry are under no illusion that the shift towards coded and coerced environments will not be without controversy, rather, the sensing and regulation of traffic will eventually become an inevitable and accepted as part of everyday normalised social practices.

Whilst this may feel a bit too technocentric for some, the authors do maintain that technological determinism is not the correct model, and indeed, chapter 5 offers a more human dimension, turning to the organisation of social life. It describes four transformations in 'organizations' that may typify the post-car system. First that the digitalisation of the system will allow a move away from privately owned vehicles towards more collective access (i.e. from economies of ownership towards economies of access) - a peppering of existing examples are highlighted in the form of car sharing, cooperative car clubs and smart hire schemes that are gaining popularity in Europe and North America. Second, that transformation to policy will undermine infrastructure for cars and will be more favourable towards mixed modes as governments break with 'predict and provide' and adopt 'new realist' approaches to transport planning. Third, the nature of the relationship between home, work and leisure could make car travel less

likely. And finally, the significance of experimental innovators becomes paramount who are agents of 'disruptive innovation' affecting change – memories of Sir Clive Sinclair and the ill-fated Sinclair C5 spring to mind!

Chapter 6 moves away from the imagined life after the car and offers a glimpse of existing examples of world-wide 'post-car mobility projects' that have adopted compact city planning and smart growth to support non-car travel. The usual noteworthy examples are included such as small scale *within* city projects (notably Bremen, Germany, and BedZed, London, UK) through to unfathomable 'display city' mega-projects, Dongtan (China) and Masdar (Abu Dhabi).

The final chapter takes us 'back to the future' and examines scenarios of mobility systems in the context of the processes outlined in the first chapter drawing particular attention to the likely issues of security which will determine the nature and significance of different future scenarios. A stark and gloomy picture is painted of the likely impacts of climate change under the current dominant paradigm, more specifically, the increased likelihood of failed states, disruption to maritime supply chains, insecurities to the supply of fresh water, and problems of food security. Dennis and Urry tacitly acknowledge that only catastrophic events could lead to the dramatic modification or rejection of neo-liberalism which serves to perpetuate these impacts.

So finally, against this backdrop, the authors turn their attention to thinking about the future and what types of scenarios could unfold using three modified scenarios for 2050. *Local Sustainability*, describes a Schumacher type environmental-communitarianism where long distance travel is reduced because of resource short-

ages and where localised low carbon journeys by non-motorised forms of transport and movement come to dominate alongside motorised forms. *Regional Warlordism* (a kind of 'Mad Max' tribalist scenario), sets out a Hobbesian future witnessed by an implosion of mobility where movement is hard to achieve, dangerous outside certain boundaries and relies on ingenuity of skills to maintain decaying car culture. The final scenario, *Digital Networks of Control*, describes an Orwellian style future where collective automation of movement under constant surveillance replaces autonomous separateness with obvious implications for human freedom of movement. Perhaps unsurprisingly, Dennis and Urry postulate that the latter of the three scenarios is more likely, and (disappointingly) they acknowledge, though the first may be more preferable, it seems the least probable.

Overall After the Car is a captivating read and certainly opens up the sociological imagination. It is arguably most stimulating when prophesising future socio-technical systems of organisation. After a century with the car this is a timely book and is convincing in its arguments of likely scenarios for the post-car future. How this will unfold over the coming decades, and the nature and scale of the eventual tipping point that puts us on a critical pathway towards low carbon transport, remains to be seen.

Tim Jones Transport Studies Unit, School of Geography and the Environment, University of Oxford, United Kingdom E-mail address: tim.jones@ouce.ox.ac.uk

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