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Research in Transportation Business & Management

Editorial for themed issue on 'Managing the business of cycling'





1. Introduction

Cycling is receiving increased attention as a means of addressing urban transport problems. The fruits of the consistent work on developing cycling may be seen in a number of cities in developed and developing countries, such as Portland (USA), London (UK), Bogotá (Colombia), and Hangzhou (China). There is still a need to tackle the many challenges of providing and managing more efficient and effective transport systems that provide adequately for bicycle users.

The integration of cycling as a more frequently used mode for all types of trip purpose requires skills in a range of disciplines, including engineering for infrastructure design, as well as planning, ethics, the law, psychology, sociology and health. This themed Volume draws together current research and sets it in the context of the business and management of cycling. Three papers are concerned with public cycle hire schemes (Jennings, in 2015–this issue; Ó Tuama, 2015–in this issue and Ricci, 2015–in this issue). Van der Spek and Scheltema (in this issue), outline issues in relation to the design and management of parking and Schliwa et al. (2015–in this issue) consider the nascent field of cycle logistics and its future potential.

This editorial sets these papers in the broader context of the subject matter concerned with managing cycling. Four themes are identified as follows: governance strategy and policy; management and operations; marketing; and integration of cycling with other modes.

2. Governance, strategy and policy

National government sets policy direction at the most aggregate level and directs a whole range of inputs and outcomes including, most importantly, funding. The standing of cycling has recently, for example changed quite dramatically in the UK with the announcement that the government supported an amendment to the Infrastructure Bill which allows the Secretary of State to set a Cycling and Walking Investment Strategy. The amendment now places cycling in the same bracket as larger scale investment in strategic roads and railways. While such legislation paves the way for funding streams, it remains clear that fiscal exigencies may still militate against appropriate funding levels.

This section reviews four areas of great significance in terms of management, at the national level, of the policy and legal environment in which cycling exists. It firstly discusses planning and its relationship with the environment and health. It then goes on to discuss the issues of liability in law and how the law is administered. Finally, it considers important issues in relation to the regulation of motor vehicles.

2.1. Planning, the environment and health

The fifth assessment report of the International Panel on Climate Change (IPCC, 2013) suggests that substantial and sustained reductions

of greenhouse gas emissions are required to limit further climate change. It emphasises the need for immediate action because the evidence suggests it is extremely likely that the main cause of observed warming since the mid-20th century is human activity, and further greenhouse gas emissions will cause further changes in the climate system and further warming. Managing a way forward for transport, which is heavily fossil fuel dependent, will require action in a whole range of related areas of international, national, regional and local policy and strategy. A significant and long term influence on travel comes from the way that cities and other areas are planned. Their form, and the nature of the infrastructure that is provided, will either assist in promoting, or help prevent, increased use of means of travel that are less carbon intensive.

Decision making in relation to infrastructure has generally been firmly guided by the outcomes of analyses of benefits versus cost. Davis (2014) summarises studies which estimate the benefits of investment in infrastructure for cycling in the UK and elsewhere and finds that the benefit to cost ratio is high, and these high benefits are created by savings resulting from positive health outcomes resulting from physical activity. Woodcock et al. (2009) use the term co-benefits for strategies that not only reduce carbon emissions but at the same time increase human exertion, which hence have a positive impact on health.

Davis and Parkin (2015) note the importance of land use planning as a mechanism that influences travel and suggest that the historical approach of engineering and adapting urban space for maximum flexibility of the motor car needs to be re-considered. The future requires that we manage urban form in a way that maximises the shorter term benefits to human health as well as the longer term benefits of the earth's climate 'health'.

2.2. The law

Davies (1999), p 800, suggests that 'Law provides one of the great normative forces of social conduct.' In this sense the law acts as a controlling influence in the way that people manage themselves in relation to each other. Roads are a contested space, particularly in urban areas where there are competing demands amongst different types of user of the space.

One particular area of continuing contention is in relation to presumptions of liability after a collision has occurred. In the UK and the USA for example, after a collision, an adversely affected road user has to prove the liability of another road user in order to claim compensation. This is not the case in much of Western Europe where there is an assumption of liability placed on the user of the more damaging vehicle. The legal system which has developed generally across most of Western Europe is based on Roman jurisprudence and this developed the concept of 'no fault liability'. Such liability results because a person was in control of a potential source of danger to other people or their property, and not from a failure in diligence. No fault liability, also called stricter or presumed liability, would not overturn the basic tenet of law that someone is innocent until proven guilty of negligence. Nor would it adversely affect a motor vehicle driver where a vulnerable road user is proven negligent: but it does place the onus of responsibility for proof onto the driver of a motor vehicle rather than on the vulnerable user. It should also be noted that cyclists would be presumed liable in collisions with pedestrians.

Presumed liability overcomes the following problems: a vulnerable road user not being able to give evidence, particularly when there is a fatality; witnesses not being available, or, when they are available, being unreliable; limited investigation being undertaken by the police; and children being legally unaccountable. Some (CTC, 2015) argue that presumed liability helps to develop a culture of mutual respect between road user important than appropriate infrastructure provisions. Others (Hembrow, 2012) suggest that clauses in the law are far less.

2.3. Application of the law

The management of alleged offences within the public highway, particularly where they involve vulnerable roads users, has long been a contentious issue in sentencing policy. Advocacy organisations often point to deficiencies in the legal framework, for example its lack of recognition that it is unacceptable to endanger or intimidate other road users, lack of rigour and accurate advice on descriptions of greater culpability (for example 'dangerous' driving) as opposed to lesser culpability (for example 'careless' driving, which carries a lesser penalty). Suggestions include ending an assumption of lesser culpability where the outcome is a maiming or death, and that offending drivers should not be treated more leniently than those who kill or injure through non-traffic crime (CTC, 2014).

Even within an existing legal framework that may or may not be flawed, there is evidence that legal authorities charged with bringing road traffic related cases to court may not treat their management of the processes of prosecution with the same diligence as other types of crime. An inspection by the justice inspectorate in the UK found a variation in equipment and training amongst the first police responders at a fatal road traffic incident, lack of up to date training, lack of a coherence in specialist services provided to prosecutors, lack of uniformity in precharge decisions and the fact that in 58.3% of cases there was no continuity of prosecutor. The inspection recommends the prescription of minimum standards and a common model organisational structure for handling fatal road traffic incident cases (CJJI, 2015).

2.4. Construction and use regulations and vehicle management

The nature of heavy goods vehicles has been brought into question in recent times particularly in locations, such as London, where there is currently a high degree of mixed traffic in heavy volume and relatively high speed conditions. In 2013 there were 489 cyclists either killed or seriously injured in London (TfL, 2014). Heavy goods vehicles (HGVs) were disproportionately involved in fatal collisions with cyclists in the period from 2010 to 2012, with 45% of fatal collisions involving an HGV, despite such vehicles making up only 3.5% of motorised vehicle kilometres travelled in London. The collisions are typically associated with heavy goods vehicles turning left at junctions or moving to the left lane.

There have been moves, therefore, to manage the risk at source by improving the direct vision of a lorry design to protect cyclists, pedestrians and other vulnerable road users. This was proposed in the revision to the EU directive 96/53 on the weights and dimensions of trucks. Problems with the current lorry design include the following: inefficient aerodynamics; lack of direct vision at the front and side of the cab because of the poor shape; the high position of the cab; the current shape tending to knock cyclists and pedestrians over and into the path of the wheels; and lack of impact absorption at the front. The will of the European Union Parliament and the Commission is for new designs to be allowed by 2017/2018, which allows time for transposition into national laws. However, the European Council has suggested that new designs should be banned until at least 2023, which means that they probably could not enter the market until 2025–2028. There is, however, no logic in delaying implementation, because this prevents voluntary adoption of new cab designs by those manufacturers willing to act more quickly.

It is heartening, however, to realise that there are initiatives by those who currently own and operate trucks to manage their use of these vehicles more tightly in order to reduce risks to third parties. Delmonte et al. (2013) found in the UK and London in particular that, inter alia, road safety was not considered in the same way as health and safety on construction sites, and there was little understanding of the impact of construction activity on road safety. A resulting industry wide initiative (CLOCS, 2015) is being undertaken to improve safety through vehicle design, ensure that road safety is recognised as being equal to health and safety on construction sites, and encourage wide adoption of best practice.

CLOCS Manager is the system developed to enable collisions and near misses to be logged and to capture road incident information in order to ascertain contributory factors, incident hotspots and trends. The CLOCS Manager system also allows construction clients to manage their contractors' compliance.

3. Management and operations

Perhaps the most obvious example of provision for cycling that requires direct management and operation is public bicycle hire schemes. After a discussion of cycle hire schemes, attention is turned to road space management and then to bicycle parking management.

3.1. Cycle hire schemes

The growth in number and scale of public cycle hire schemes is a feature of the first decade of the twenty-first century. Their history can be traced to the 'White Bikes' of Copenhagen in 1965 (Beroud & Anaya, 2012) and through three generations of development they now typically encourage short period hire (through the pricing mechanism) and return to different self-service docking stations from where they were hired. Their characteristics therefore lend themselves to a multiplicity of urban journeys and can act as a replacement for car, bus or other public transport trips, or walking.

Ricci (2015-in this issue) is concerned, however, that, despite their popularity, no bicycle sharing scheme has been fully and independently evaluated to understand its impacts, or the processes by which they have been introduced and by which users make their decisions to use the scheme. She asserts that there is a lack of clearly stated objectives about what schemes are meant to achieve, and evaluation that has taken place focusses on a limited range of outputs and outcomes. What is known though is that schemes appear to attract the same type of users: younger, more affluent and educated white employed males. The reason for use is often stated at its most bold (and also bland, but perhaps obvious) as being for 'convenience'. Exploring more deeply, attributes are widened to include time and cost savings and enjoyment. The barriers to wider uptake relate to such matters as lack of cycle infrastructure and road safety concerns. Depending on the country and the operating regime, other factors include the mandatory requirement to wear a helmet and overnight scheme closure.

Ricci found that schemes struggle with financial and socio-economic viability. Operators have to work hard to develop a core membership that regularly uses the scheme and they need to ensure a good volume of occasional or casual users. An assessment of the London scheme suggests a benefit to cost ratio of 0.7. She concludes that the future of such schemes will rely on clear political, policy and public support for sustainable travel and cycling in particular.

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