

# Part 1 | Fundamentals of Transport Geographies



# 1 | Introducing Transport Geographies

Jon Shaw, Richard Knowles  
and Iain Docherty

The importance of travel and transport to the functioning of our economies and societies is hardly in doubt, but the very ordinariness of transport systems often means that they are taken for granted. In the developed world at least, transport networks and systems generally work well and often it is only when something goes badly wrong that headlines are made. In the weeks during which we have been finalizing the manuscript for this book, for example, newspapers have made much of various North West European transport systems being compromised by bad weather and threatened by industrial action that caused British Airways to cancel hundreds of flights before a last-minute deal was struck and the strikes averted (BBC, 2007).

The tendency to take transport for granted has also been evident in the world of academic geography (Goetz *et al.*, 2003). Certainly it was recognised as an important element of geographical inquiry in the nineteenth and early twentieth centuries and was again popular in the wake of the quantitative revolution in the 1960s and early 1970s (Hay, 2000). But various factors, including the advent of cheap oil and a reluctance on the part of transport geographers to engage in significant theoretical debates, led to too many human geographers significantly downplaying transport matters in their analyses of social and economic patterns and systems (Hall *et al.*, 2006; Keeling, 2007; although see Harvey, 1982). In reality, the significance of travel and transport in the objects of geographical inquiry never diminished: greater levels of mobility are an attribute of an increasingly globalized world space economy (Hoyle and Knowles, 1998). Johnston *et al.* (1995: 13) have noted that ‘when the history of the late 20th century is written there seems little doubt that mobility . . . will be one of its touchstones’.

Increasing numbers of human geographers are now returning to this view, most notably in joining with scholars from other disciplines reacting against ‘static’ social science to posit a ‘new mobilities paradigm’ (Sheller & Urry, 2006; see also, for example, Crang, 2002; Cresswell, 2006; Kesselring, 2004; Larsen *et al.*, 2006;

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Thomsen *et al.*, 2005; and Hall *et al.*, 2006 for a collection of papers bringing together transport and economic geography). The central argument here is that social science has in the past ‘trivialized or ignored’ the movement of people (and other things) to the point that transport became a ‘black box’ of neutral processes and technologies that permit but do not really explain social and economic phenomena (Sheller & Urry, 2006: 208). Indeed, Sheller and Urry continue to suggest that ‘accounting for mobility in its fullest sense challenges social science to change both the objects of its inquiries and the methodologies for research’. The rising significance of transport flows and spaces within academia offers perhaps the most promising opportunity in recent years to reposition transport geography at the heart of the mainstream human geography endeavour.

And, of course, the nature of transport flows and spaces is constantly changing. Whereas once people travelled by foot or public transport almost exclusively out of necessity, nowadays vastly more travel is by private car or aeroplane for leisure purposes. Many journeys are arguably unnecessary or could be made by other modes. The emergence of widespread Information and Communications Technologies (ICTs) is also having a considerable effect on contemporary journey patterns. For many activities, ICTs are the ultimate expression of time-space convergence: will we travel as much if we can effectively bring other places into our homes by substituting e-mail, videophones and ‘e-tailing’ for commuting, visiting friends and going to the supermarket?<sup>1</sup> Evidence to date suggests the answer to this question is both yes and no – ICTs lead us to make more and different/increasingly complex journeys, and/or to work and interact from home at least part of the time (Banister and Stead, 2004; Helminen and Ristimäki, 2007; Kwan, 2006). As such, location remains important, not only because access to the Internet remains geographically and structurally uneven but also because virtual encounters can be rather soulless compared with the tangible reality of being together (Knowles, 2006; Urry, 2002).

## Transport Geography

So what is transport geography and why is transport of interest to human geographers? Transport geography is in essence the study of the spatial aspects of transport (see Black, 2003; Goetz *et al.*, 2003; Hanson and Giuliano, 2004; Hensher *et al.*, 2004; Hoyle and Knowles, 1998; Keeling, 2007; Nuhn and Hesse, 2006; Rodrigue *et al.*, 2006; Tolley and Turton, 1995; White and Senior, 1983). Transport is inherently spatial – it develops because people and goods have to get places. People are rarely located in the same places as the things they want or need, and transport systems are, at their most basic, an expression of a need to link supply and demand; they are the manifestation of people’s desire to access goods, services and each other.

There are two aspects of the nexus between transport and geography that have traditionally attracted study. One is the geography of transport systems themselves. These occupy a large amount of space, their form, layout and extent being determined by a range of factors such as topography (mountains, rivers, etc.), economic

conditions, technological capability, sociopolitical situations and the spatial distribution of the places they link together. The USA, for example, has an extremely large amount of road space (Pucher and Lefevre, 1996), reflecting (among other things) its wealth and an emphasis on individual freedom that promotes the private car as the dominant means of transport. The East of the USA has more and denser infrastructure than the West, largely because it has more people and the terrain is easier to build on. In contrast, the former Soviet bloc has far less well developed road networks but significantly more extensive public transport systems, the result of a socialist culture that promoted communal travel. This is now changing after the fall of the Iron Curtain, subsequent economic growth and political and social transformation. Medium-term outcomes of this change are likely to be more roads and contracting public transport networks, and this new transport geography will in turn impact on the social, economic and environmental geographies of Eastern Europe and beyond (Kovacs and Spens, 2006; Taylor, 2006).

Indeed, the impact of transport is the second traditional area of study for transport geographers. A core interest of many geographers is explaining the location of phenomena over time and across space, and transport is one of the most powerful factors affecting and explaining the distribution of social and economic activity (Hoyle and Knowles, 1998; White, 1977). There has, for example, been a longstanding interest in the relationship between transport and economic development, although the precise nature of this relationship remains elusive (Banister and Berechmann, 2001; Eddington, 2006; SACTRA, 1999; see also Black, 2001 on this and other issues). How much will the construction of a new road lead to the economic regeneration of – that is, the location of new economic activity in – a given area? How far are differences in the quality of transport infrastructure responsible for uneven development between cities, regions or countries? Part of the difficulty in answering such questions lies in the complexity of social, political and economic circumstances surrounding individual cases. We know that transport improvements can be an enabling factor when deployed as part of a range of complementary initiatives, but in certain circumstances the opening of, say, a new road link can have negative consequences for the economy and society of a peripheral place or less developed economy if it enables much easier access to the wider variety of goods and services available in the ‘core’ (see Hilling, 1996).

At a much broader scale, concern about the transport sector’s contribution to global warming has become a popular topic among social and natural scientists (Baggott *et al.*, 2005; Black, 1998; Maddison *et al.*, 1995; HM Treasury, 2006). Until as late as the 1980s it was not widely understood that the environmental impact of transport stretched much beyond the local nuisances of noise, poor air quality and the like, but a series of scientific papers presented at the 1989 meeting of the European Conference of Ministers of Transport (ECMT) pointed to the growing threat from greenhouse gas emissions, particularly from private car traffic (Docherty, 2003; Goodwin, 1999). Whilst most governments have accepted the link between increasing CO<sub>2</sub> emissions and global warming, the scepticism of the Bush administration in the USA – the country with the world’s highest levels of car, lorry and aeroplane usage – is not encouraging for long-term environmental sustainability.

Moving beyond these two traditional areas of study, developments such as the new mobilities paradigm offer a wealth of opportunity for transport geographers to engage with other core concerns of contemporary human geographers. Among these are the nature and production of space and place, and a flurry of scholarly activity is now exploring these ideas with specific reference to travel spaces (e.g. Brown & O'Hara, 2003; Dodge & Kitchin, 2004; Jain, 2004; Laurier, 2004; Letherby & Reynolds, 2005; Lyons & Urry, 2005; Lyons *et al.*, 2007; Massey, 2005; Sheller & Urry, 2006). Many of these authors have taken the transport networks and systems traditionally studied by transport geographers and 'unpacked' them by focusing on their component flows and spaces to reveal nuanced or counter-intuitive qualities and attributes previously overlooked in transport geography research.

Work on the functions of travel space, for example, challenges the view that potential transport improvements should be judged in terms of the time saved by a new investment. Whereas conventional thinking assumes that travel time is wasted time, the arrival of ICTs has brought into clear focus the rather obvious point that travel time can be useful time: the travel space can also be a highly productive working space (laptops, mobile phones, blackberries) and leisure space (portable DVD players and iPods) in addition to fulfilling more general functions as a place to read, socialize or rest. Jain and Lyons (2007) go so far as to suggest that we might regard travel time as a 'gift'. There are implications with giving policy makers the idea that they can cut back on large investment in new transport infrastructure as this – along with making better use of that which we already possess (Eddington, 2006) – remains crucial to the efficient functioning of economies and societies. If, however, work on travel spaces leads to greater efforts on the part of governments and transport providers to improve journey quality, reliability and safety, it will have been of clear practical as well as intellectual benefit.<sup>2</sup>

## Mobility and Accessibility

And the new mobilities' increasing rejection of 'social science research [that] has been "a-mobile"' (Urry, 2003: 156) offers renewed opportunity to transport geographers not just because it embeds transport and travel at the heart of a vibrant intellectual endeavour. Also of significance is its emphasis on the role of innovative – often qualitative – research methods. Although qualitative methods have often been employed by transport geographers (e.g. Bird, 1982; Bird *et al.*, 1983; Docherty, 1999; Hoyle, 1994; Pooley *et al.*, 2005; Shaw, 2000) and others in significant works which might be regarded as transport geography (e.g. Castells, 1996; Cronon, 1991; Herod, 1998; Meining, 1986), the sub-discipline is commonly associated with positivist assumptions, methods of data collection and modelling (Goetz *et al.*, 2003; Hay, 2000). Indeed, *Modern Transport Geography* (Hoyle and Knowles, 1998: 5) stressed 'the pursuit of objectivity and truth' in transport analysis. Quantitative methods obviously retain a legitimate and necessary place within academic inquiry, but harnessing the power of qualitative techniques to enrich understanding of the specific and the subjective can bring, either on their own or as part of a 'mixed

methods' research strategy, added depth and rigour to research undertakings (Philip, 1998; Baxter and Eyles, 1997).

A good example of this in transport geography is the consideration of personal mobility (see Pooley *et al.*, 2005) and accessibility (see Farrington, 2007). Quantitative data sets gathered at a high level of aggregation point to vastly increasing personal mobility as a result of increasing car ownership (see, for example, Department for Transport, 2006; Hoyle and Knowles, 1998). For a considerable period this was taken as a good thing by governments (and many academics), leading to policies such as 'predict and provide'. This approach to transport policy is highly car-centric, seeking as it does to estimate future traffic demand and build road capacity accordingly. One consequence is that the needs of the minority who have no access to a car can all too easily be overlooked in comparison with those of the majority who do. As Goodwin (1999: 658) neatly summarizes, since 'private car use would increase. . . it was necessary to increase road capacity. And public service use would decline, therefore it would be logical to reduce service levels'.

The realization that 'predict and provide' would fail in its own terms – it simply would not be possible to build enough road capacity to cope with demand – and with this failure bring negative economic (more traffic jams), environmental (much more pollution) and social (dwindling public transport) consequences, led to the emergence of a 'new realism' in transport thinking which prioritises demand management and public transport provision (Goodwin *et al.*, 1991). Among British transport geographers (and others) one outcome was to renew interest in the concept of accessibility as a means of addressing mobility deprivation, especially in terms of its uneven distribution both spatially and structurally. Accessibility should not be confused with mobility: it refers to the extent to which something is 'get-at-able' (Moseley, 1979: 56; Chapter 4) and being mobile is only one of a number of ways of reaching services, facilities and social networks (others being the telephone and the Internet, for example). Equally, people are not accessibility-deprived solely as a function of lack of mobility: accessibility may also be limited on account of poverty, gender, race or other factors which might compromise access to services. Good examples are an inability to afford university tuition fees and prejudice which precludes access to certain social networks and / or situations (although see Weber, 2006).

Large-scale, mixed methods research programmes using travel diaries, in-depth interviews and focus groups in addition to 'traditional' questionnaires have been undertaken in the UK to determine both people's accessibility needs and the extent to which these are met (e.g. Farrington *et al.*, 1998, 2004). Subsequent work has sought to provide, among other things, a philosophical foundation for the concept of accessibility 'rights' (Farrington and Farrington, 2005); more sophisticated modelling techniques to take account of individual rather than aggregate geographical circumstances (Preston and Rajé, 2007); and a teasing out of the role of social capital and networks in providing mobility and accessibility for those without a car in rural areas (Gray *et al.*, 2006). In other words, a shift in focus from the general to the specific, attempting to understand subjective perceptions rather than seeking universal truths, has played a significant part in linking the practice of transport

geography not just to broader geographical and social science endeavours, but also to 'real world' policy needs and aspirations.

## **Mobilities, Flows and Spaces**

The following chapters pick up these and many other ideas and themes germane to transport geographies. The contributions are both wide-ranging and innovative, although inevitably we have been constrained by space and should state from the outset that the text is neither comprehensive nor definitive. Much of the discussion is focused on the developed world, for example, although some consideration is also given to topics of particular importance to developing countries and regions – such as the relationship between transport and economic advancement. Similarly, detailed examination of freight transport is restricted to an analysis of the rapid advances in bulk and containerized shipping which are key enablers in regionalized and global economies.

We have divided the book into three parts. The first of these sets out some 'fundamentals' in transport geography. In addition to this brief introduction, we include contributions based around the three 'pillars' of sustainability – the economy, the environment and society – as this neatly encapsulates and exemplifies many of the key linkages between transport and other significant areas of geographical research. The centrality of governance to the geographies of transport, not least as states and other authorities grapple with the complexities of transport and its impacts, is reflected by the chapter dealing with the state's role in regulating and sometimes owning transport systems and services.

The remainder of the book draws upon these fundamentals. The second part considers in more detail the principal transport flows and their geographical consequences apparent at different spatial scales. Issues of mobility and accessibility are recurring themes in these chapters, as are economic, environmental and social concerns evident at local, regional and international levels; sometimes these are comparable and inter-related, sometimes they are wildly different in character. We are aware that the selection of spatial scales to be covered is potentially problematic and contestable – we have, for example, chosen to focus on the 'urban' and the 'rural' rather than the 'local' – but those chosen strike a balance between the often-competing demands of the transport-related and geographical elements of the subject matter. Rounding off the section are analyses of transport choices and activities taking place across space from the local to the global: investigations into why we travel the way we do and transport in tourism exemplify two more ways in which transport and geographical concerns are being linked with other research agendas.

In part three, attention turns to the future. The authors briefly reflect on current transport trends and consider possible future trajectories of both global transport trends and the sub-discipline of transport geography. Seemingly inexorable increases in the mobility of the human race, allied with the continuing refinement of our understanding about travel and transport behaviour, the emergence of ICTs and the impacts and geographies of these developments, provide a wealth of opportunities



for transport geographers to influence the intellectual and policy agendas improving transport experiences around the world.

## Notes

- 1 And similar questions were asked with the advent of the postal service, the telegraph and the telephone (see Mokhtarian, 2000).
- 2 Interestingly, *Scotland's National Transport Strategy* (Edinburgh: Scottish Executive, 2006) identifies improving journey quality as an explicit policy goal.