

Towards a Politics of Mobility

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The past few years have seen the announcement of a ‘new mobilities paradigm’ (Hannam et al 2006; Sheller and Urry 2006a), the launch of the journal *Mobilities*, and a number of key texts and edited collections devoted to mobility (Brenholdt and Simonsen 2004; Cresswell 2006; Cresswell and Merriman 2008; Kaufmann 2002; Sheller and Urry 2006b; Urry 2000, 2007; Uteng and Cresswell 2008). Work inspired by the new mobilities paradigm has informed an array of writing on particular forms and spaces of mobility ranging from driving and roads (Beckmann 2001; Merriman 2007; Urry 2004) to flying and airports (Adey 2004a, 2004b). This is not the place to review the work on mobility (see Blunt 2007). Rather, the overall aim of the paper is to discuss further the insights into the new mobilities paradigm, and further develop some of the ideas that have been associated with it (Cresswell 2006; Urry 2007). In particular, this paper develops the approach I utilised in *On the Move: Mobility in the Modern Western World* (2006). In that book I outlined the role of mobility in a number of case studies, ranging from the micro-movements of the body to the politics of global travel. But, for the most part, mobility remained a singular thing. There was no detailed accounting of the various aspects of mobility that have the capacity to make it powerfully political. This paper, then, is an attempt to outline some key ideas for a mesotheoretical approach to the politics of mobility. Strategically, it uses ideas from other theorists and a variety of real-world examples. It does not subscribe to a singular theoretical model, but seeks to contribute to the development of a geographical theoretical approach to mobility. It is part of an ongoing process of mesotheoretical construction.

The paper seeks to meet these aims in two principal ways: First, by breaking mobility down into six of its constituent parts (motive force, velocity, rhythm, route, experience and friction) in order to fine-tune our accounts of the politics of mobility; and second, by developing the notion of ‘constellations of mobility’ as historically and geographically specific formations of movements, narratives about mobility and mobile practices, which reveal the importance of an historical perspective that mitigates against an overwhelming sense of newness in mobilities research. First, however, consider the notion of a new mobilities paradigm.

The new mobilities paradigm?

Bruno Latour has suggested that there are only three problems with the term ‘actor-network theory’ and they are the words ‘actor’, ‘network’ and ‘theory’ (Latour 2005). A similar point could be made of the new mobilities paradigm. First of all the word *paradigm* suggests the Kuhnian notion of normal science being transformed by sudden revolutions: where what went previously is unceremoniously tipped into the junkheap of academic history (Kuhn 1996). We have to be careful about such implications. Any study of mobility runs the risk of suggesting that the (allegedly) immobile notions, such as boundaries and borders, place, territory and landscape, are of the past and no longer relevant to the dynamic world of the 21st century. This would be wrong and, to be fair, does not seem to be the point of advocates of the new mobilities paradigm where moorings are often as important as mobilities. The second problem concerns the different

ways that new mobilities can be read. If the emphasis is on the word *new*, then this suggests an old mobilities paradigm. If the emphasis is on the word *mobilities*, then this suggests that old paradigms were about the immobile or sedentary. The second of these options seems untenable because movements of one kind or another have been at the heart of all kinds of social science (and particularly geography) since their inception.

In sociology, notions of movement and mobility were central to the concerns of thinkers such as Georg Simmel and the Chicago School sociologists, for instance (Park and Burgess 1925; Simmel 1950). If we think of geography, there have been any number of sub-disciplinary concerns with things and people on the move, ranging from Saurian concerns with origins and dispersals (Sauer 1952), through spatial science's fixations on gravity models and spatial interaction theory (Abler et al 1971) and notions of plastic space (Forer 1978), to feminist approaches and daily mobility patterns (Hanson and Pratt 1995; Pickup 1988). Transport geography, migration theory, time geographies, geographies of tourism – the list is endless. The same could be said of anthropology. So the question that arises: what is *new* about the new mobilities paradigm?

Despite all the caveats above, there clearly is something new about the ways mobilities are being approached currently that distinguishes them from earlier accounts of movement, migration and transport (to name but three of the modes of mobility that have long been considered). If nothing else, the mobilities approach brings together a diverse array of forms of movement across scales ranging from the body (or, indeed parts of the body) to the globe. These substantive areas of research would have been formerly held apart by disciplinary and sub-disciplinary boundaries that mitigated against a more holistic understanding of mobilities. In addition, the approaches listed above were rarely actually about mobility, but rather took human movement as a given – an empty space that needed to be expunged or limited. In migration theory, movement occurred because one place pushed people out and another place pulled people in. So, despite being about movement, it was really about places. Similarly, transport studies have too often thought of time in transit as 'dead time' in which nothing happens – a problem that can be solved technically. Mobility studies have begun to take the actual fact of movement seriously.

I have argued that mobility exists in the same relation to movement as place does to location (Cresswell 2006) and that mobility involves a fragile entanglement of physical movement, representations and practices. Furthermore, these entanglements have broadly traceable histories and geographies. At any one time, then, there are pervading constellations of mobility – particular patterns of movement, representations of movement and ways of practising movement – that make sense together. Constellations from the past can break through into the present in surprising ways.¹ Before moving on to six aspects of the politics of mobility it is necessary to define mobility as the entanglement of movement, representation and practice.

Movement, representation, practice

Consider, then, these three aspects of mobility: the fact of physical movement: getting from one place to another; the representations of movement that give it shared meaning; and, finally, the experienced and embodied practice of movement. In practice these elements of mobility are unlikely to be easy to untangle. They are bound up with one another. The disentangling that follows is entirely analytical and its purpose is to aid theory construction. Different forms of mobility research are likely to explore facets of any one of these. Transport researchers, for instance, have developed ways of telling us about the fact of movement, how often it happens, at what speeds and where. Recently, they have also informed us about who moves and how identity might make a difference (Bullard and Johnson 1997; Hoyle and Knowles 1998). They have not been so good at telling us about the representations and meanings of mobility either at the individual level or at a societal level. Neither have they told us how mobility is actually

¹ This use of the term constellation reflects the use of the term by Walter Benjamin (1999).

embodied and practised. Real bodies moving have never been at the top of the agenda in transport studies. Understanding mobility holistically means paying attention to all three of these aspects.

Physical movement is, if you like, the raw material for the production of mobility. People move, things move, ideas move. The movement can, given the right equipment, be measured and mapped. These measurements can be passed through equations and laws can be derived from them. This positivist analysis of movement occurs in all manner of domains. The physical movement of the human body has been extracted from real bodies and used to develop model mobilities for, among other things, sports therapy, animation and factory motion studies (Price 1989; Yanarella and Reid 1996). In cities, transport planners are endlessly creating models of mechanically aided physical movement in order to make transport more efficient or less environmentally harmful (Eliasson and Mattson 2005). In airports and railway stations modelers have used critical path analysis to measure the time taken to get between two points and then reduce it (Adey 2004a). So understanding physical movement is one aspect of mobility. But this says next to nothing about what these mobilities are made to mean or how they are practised.

Just as there has been a multitude of efforts to measure and model mobility, so there has been a plethora of representations of mobility. Mobility has been figured as adventure, as tedium, as education, as freedom, as modern and as threatening. Think of the contemporary links made between immigrant mobilities and notions of threat reflected in metaphors of flooding and swamping used by journalists and politicians (Tuitt 1996; White 2002). Or, alternatively, the idea of the right to mobility as fundamental to modern Western citizenship which is expressed in legal and governmental documents (Blomley 1994a). Consider all the meanings wrapped up in car advertisements or mobile phones. To take just one kind of mobile practice, the simple act of walking has been invested with a profound array of meanings from conformity to rebellion in literature, film, philosophy and the arts (Solnit 2000). Geographers, social theorists and others have been complicit in the weaving of narratives around mobility. We have alternately coded mobility as dysfunctional, as inauthentic and rootless and, more recently as liberating, antifoundational and transgressive in our own forms of representation (Cresswell 2001).

Finally, there is practice. By this I mean both the everyday sense of particular practices, such as walking or driving, and also the more theoretical sense of the social as it is embodied and habitualised (Bourdieu 1990). Human mobility is practised mobility that is enacted and experienced through the body. Sometimes we are tired and moving is painful, Sometimes we move with hope and a spring in our step. As we approach immigration at the airport the way our mobility feels depends on who we are and what we can expect when we reach the front of the line. Driving a car is liberating, or nerve wracking, or, increasingly, guilt ridden. Whether we have chosen to be mobile or have been forced into it affects our experience of it. Sometimes our mobile practices conform to the representations that surround them. We do, indeed, experience mobility as freedom as the airplane takes off and the undercarriage retracts. At other times there is a dissonance between representation and practice. As we sit in a traffic jam maybe. Mobility as practised brings together the internal world of will and habit (Merleau-Ponty 1962; Seamon 1979) and the external world of expectation and compulsion. In the end, it is at the level of the body that human mobility is produced, reproduced and occasionally transformed.

Getting from A to B can be very different depending on how the body moves. Any consideration of mobility has to include the kinds of things people do when they move in various ways. Walking, dancing, driving, flying, running and sailing – practices such as these have played important roles in the construction of social and cultural theory, philosophy and fiction. Take walking, for instance. We can think of the way Michel de Certeau uses walking to examine the spatial grammar of the city that provides a preconstructed stage for the cunning tactics of the walk:

The long poem of walking manipulates spatial organizations, no matter how panoptic they may be: it is neither foreign to them (it can take place only within them) nor in conformity with them (it does not receive its identity from them). It creates shadows and ambiguities within them. (1984: 101)

This story about walking replicates a number of literatures in which the walker is held forth as an exemplar of rebellion, freedom, and agency in the city – the pedestrian hero (Berman 1988) or the flâneur (Tester 1994). Practices are not just ways of getting from A to B; they are, at least partially, discursively constituted. The possibility of walking is wrapped up in narratives of worthiness, morality and aesthetics that constantly contrast it with more mechanised forms of movement that are represented as less authentic, less worthy and less ethical (Thrift 2004). And it matters where walking happens – the walk in 19th-century Paris is very different from the walk in rural Mali or the walk in the contemporary British countryside.

In addition to being a traceable and mapable physical movement which is encoded through representation, walking is also an embodied practice that we experience in ways that are not wholly accounted for by either their objective dimensions or their social and culture dimensions. Here the approaches of both phenomenological inquiry and forms of non-representational theory give insight into the walking experience (Ingold 2004; Wylie 2005). Similar sets of observations can be made about all forms of mobility – they have a physical reality, they are encoded culturally and socially and they are experienced through practice. Importantly, both forms and aspects of mobility are political – they are implicated in the production of power and relations of domination.

Six elements of a politics of mobility

By politics I mean social relations that involve the production and distribution of power. By a politics of mobility I mean the ways in which mobilities are both productive of such social relations and produced by them. Social relations are of course complicated and diverse. They include relations between classes, genders, ethnicities, nationalities and religious groups, as well as a host of other forms of group identity.

Mobility, as with other geographical phenomena, lies at the heart of all of these. Mobility is a resource that is differentially accessed. One person's speed is another person's slowness. Some move in such a way that others get fixed in place. Examples of this abound. Consider the school run that allows women (for the most part) to enact an efficient form of mobility so often denied them. At the same time it impacts on the ability of children to walk to school and makes the streets less safe for pedestrians. There is little that is straightforward about such an entanglement of gender, age and mobility. Consider the opening up of borders in the European Union to enable the enactment of the EU mantra of free mobility. This in turn depends on the closing down of mobilities at the borders (often airports) of the new Europe (Balibar 2004; Verstraete 2001). Speeds, slownesses and immobilities are all related in ways that are thoroughly infused with power and its distribution.

This politics of mobility is enriched if we think about it in terms of material movement, representation and practice. There is clearly a politics to material movement. Who moves furthest? Who moves fastest? Who moves most often? These are all important components of the politics of mobility that can be answered in part by the traditional approaches of transport studies. But this is only the beginning. There is also a politics of representation. How is mobility discursively constituted? What narratives have been constructed about mobility? How are mobilities represented? Some of the foundational narratives of modernity have been constructed around the brute fact of moving – mobility as liberty and mobility as progress. Everyday language reveals some of the meanings that accompany the idea of movement. We are always trying to get somewhere. No one wants to be stuck or bogged down. These stories appear everywhere from car advertisements to political economic theory.

Consider the act of walking once again. The disability theorist Michael Oliver has suggested that there is an ideology of walking that gives the fact of walking a set of meanings associated with being human and being masculine. Not being able to walk thus falls short of being fully human. Popular culture tells us that 'walking tall' is a sure sign of manhood: medical professionals dedicate themselves to the quest to make those who can't walk, walk again. All manner of technologies are developed to allow people to walk. The effect of such an ambulatory culture, he tells us, can be quite devastating on those who are being treated. As Oliver puts it, 'Not-walking or rejecting nearly walking as a personal choice threatens the power of professionals, it exposes the ideology of normality and it challenges the whole rehabilitation exercise' (Oliver 1996: 104). Here mobility, and particularly the represented meanings associated with particular practices, is highly political.

Finally, and perhaps most importantly of all, there is a politics of mobile practice. How is mobility embodied? How comfortable is it? Is it forced or free? A man and a woman, or a businessman and a domestic servant, or a tourist and a refugee might experience a line of a map linking A and B completely differently. The fact of movement, the represented meanings attached to it, and the experienced practice are all connected. The representation of movement can certainly impact on the experience of its practice. Think about Mexican immigrants in the United States, for instance. Compare that with a member of a multinational corporation jetting between world cities. Consider the image of a train with Pullman carriages steaming through the landscape of late-19th-century America. Here is a description from a journalist in the Chicago News:

The world respects the rich man who turned to be a globe-trotter and uses first class cabins and Pullman cars, but has inclination to look over his shoulder at the hobo who, to satisfy this so strong impulse, is compelled to use box-cars, slip the board under the Pullman or in other ways whistle on the safety of his life and integrity of his bones (Ernest Burgess archives of the University of Chicago Special Collections, box 126: 13).

Here we have exactly the same act of moving from A to B but completely different practices of mobility and sets of represented meanings associated with them. The globetrotter sits in plush velvet seats and chooses from extensive wine lists, while the hobo travels close to death on a wooden plank precariously balanced on the same carriage's axels. The mobile subject *globetrotter* signifies a different world from the mobile subject *hobo*. The narratives and discourses surrounding them make their mobilities possible and impact upon these very different practices. Indeed, just 50 years earlier the subject identities of *globetrotter* and *hobo* did not exist, just as the Pullman carriage or the transcontinental railroad did not exist. These mobile spaces, subjects and practices were all entangled in that particular moment.

There seems little doubt that mobility is one of the major resources of 21st-century life and that it is the differential distribution of this resource that produces some of the starkest differences today. But this argument is still more suggestive than specific. There remains the task of breaking mobility down into different aspects of moving that each have a role to play in the constitution of mobile hierarchies and the politics of mobility. In the process of breaking mobility down in this way we get some analytical purchase on how mobility becomes political. Below I outline six aspects of mobility, each has a politics that it is necessary to consider.

First – *why does a person or thing move?* An object has to have a force applied to it before it can move. With humans this force is complicated by the fact that it can be internal as well as external. A major distinction in such motive force is thus between being compelled to move or choosing to move. This is the distinction at the heart of Zygmunt Bauman's discussion of the tourist and the vagabond:

Those 'high up' are satisfied that they travel through life by their heart's desire and pick and choose their destinations according to the joys they offer. Those 'low down' happen

time and again to be thrown out from the site they would rather stay in If they do not move, it is often the site that is pulled away from under their feet, so it feels like being on the move anyway. (Bauman 1998: 86-7)

Of course, the difference between choosing and not choosing is never straightforward and there are clearly degrees of necessity. Even the members of the kinetic elite, who appear to move so easily through the world of flows, must feel obligated to sign in to airport hotels and book first-class flights to destinations 12 time zones away. Nevertheless, this basic difference in mobilities is central to any hierarchy and thus any politics of mobility. To choose to move or, conversely, stay still, is central to various conceptions of human rights within the nation-state (Blomley 1994b) and within 'universal' regimes (Sassen 1999).

Second – *how fast does a person or thing move?* Velocity is a valuable resource and the subject of considerable cultural investment (Kern 1983; Tomlinson 2007; Virilio 1986). To Paul Virilio speed, connected to the development of military technology in particular, is the prime engine for historical development. In *Speed and Politics* and elsewhere he paints a picture of ever-increasing velocity overwhelming humanity. Even such apparently fixed things as territory, he argues, are produced through variable speeds rather than through law and fixity. He proposes a 'science of speed', or dromology, to help us understand our present predicament. The faster we get, Virilio argues, the more our freedoms are threatened:

The blindness of the speed of means of communicating destruction is not a liberation from geographical servitude, but the extermination of space as the field of freedom of political action. We only need refer to the necessary controls and constraints on the railway, airway or highway infrastructures to see the fatal impulse: the more speed increases, the faster freedom decreases. (Virilio 1986: 142)

At its extreme, speed becomes immediacy - the speed of light that Virilio claims is at the heart of globalisation. This is the speed with which information can travel around the globe having profound impacts of relatively solid, relatively permanent places (Thrift 1994; Tomlinson 2007).

But speed of a more human kind is at the centre of hierarchies of mobility. Being able to get somewhere quickly is increasingly associated with exclusivity. Even in air travel – where, since the demise of Concorde, all classes of passenger travel at the same speed – those 'high up', as Bauman would put it, are able to pass smoothly through the airport to the car that has been parked in a special lot close to the terminal. In airports such as Amsterdam's Schiphol, frequent business travellers are able to sign up to the Privium scheme, where they volunteer to have their iris scanned to allow biometric processing in the fast lane of immigration. This frees up immigration officials to monitor the slow lane of foreign arrivals who are not frequent business travellers. Speed and slowness are often logically and operationally related in this way. And it is not always high velocities that are the valued ones. Consider the slow food and slow culture movements. How bourgeois can you get? Who has the time and space to be slow by choice? As John Tomlinson has put it in relation to the Italian slow city movement, Citta Slow:

Citta Slow, in promoting the development of small towns (of 50,000 inhabitants or less) represents the interests of a particular spatial-cultural constituency and related localized form of capital. In a sense then, and without being unduly cynical, [Citta Slow] could be seen as defending enclaves of interest, rather than offering plausible models for more general social transformation. (Tomlinson 2007: 147)

For some, slowness is impossible. Consider the workers in Charlie Chaplin's *Modern Times*. In its famous opening scenes we see a line of workers at a conveyer belt tightening nuts on some unspecified element of a mass production line. The factory boss is seen reading the paper and

enjoying a leisurely breakfast. This is interrupted only when he makes occasional demands for 'more speed' on the production line below. Here the principles of Taylorism are used by Chaplin to satirise the production of speed among workers through time and motion study. Here speed is definitely not a luxury. Rather it is an imposition experienced by those 'low down'.

Third – *in what rhythm does a person or thing move?* Rhythm is an important component of mobility at many different scales (Lefebvre 2004; Mels 2004). Rhythms are composed of repeated moments of movement and rest, or alternatively, simply repeated movements with a particular measure. Henri Lefebvre's outline of rhythm analysis as a method of interpreting the social world is richly suggestive. It brings to mind the more phenomenological conceptions of 'place-ballet' developed by David Seamon (1979) and recently reincorporated into a geography of rhythms by Tom Mels (2004). But unlike Seamon, Lefebvre delineates how rhythms, such as those visible on any such city square, are simultaneously organic, lived, endogenous and exterior, imposed and mechanical. Rhythm, to Lefebvre, is part of the production of everyday life; thus, 'rhythm seems natural, spontaneous, with no law other than its own unfurling. Yet rhythm, always particular (music, poetry, dance, gymnastics, work, etc) always implies a measure. Everywhere there is rhythm, there is measure, which is to say law, calculated and expected obligation, a project' (Lefebvre 2004: 8). Rhythm, then, is part of any social order or historical period. Senses of movement include these historical senses of rhythm within them. Even the supposedly organic embodied rhythms of the walker vary historically: 'Old films show that our way of walking has altered over the course of our century: once jauntier, a rhythm that cannot be explained by the capturing of images' (Lefebvre 2004: 38).

Crucially, for Lefebvre, rhythm is implicated in the production and contestation of social order for 'objectively, for there to be change, a social group, a class or a caste must intervene by imprinting a rhythm on an era, be it through force or in an insinuating manner' (Lefebvre 2004: 14). Indeed, it is possible to see a particular politics of rhythm across a range of human activities. The rhythms of some kinds of music and dance, for instance, have famously upset those 'high up'. Jazz, punk and rave are but three examples of rhythms that have proved anxiety provoking to certain onlookers (Cresswell 2006). In the case of rave this led to the Criminal Justice and Public Order Act of 1994 in the United Kingdom, which explicitly referred to repetitive rhythms among its reasons for cracking down on people having fun. But rhythm is important in more sinister ways. Gait analysis can now identify bodies moving with curious rhythms in airports and mark them for extensive searches and intensive surveillance. A strange rhythm of movements over a longer time period can similarly mark a person out. Too many one-way trips, journeys at irregular intervals or sudden bursts of mobility can make someone suspect. Alongside these curious rhythms are the implicit correct and regular movements of the daily commute, the respectable dance or the regular movements of European business people through airports. There is aesthetics of correct mobility that mixes with a politics of mobility.

Fourth – *what route does it take?* Mobility is channeled. It moves along routes and conduits often provided by conduits in space. It does not happen evenly over a continuous space like spilt water flowing over a tabletop. In Gilles Deleuze and Felix Guatarri's (1987) account of nomadology, it is not simply a case of free, mobile nomads challenging the 'royal science' of fixed division and classification. Mobility itself is 'channelled' into acceptable conduits. Smooth space is a field without conduits or channels. Producing order and predictability is not simply a matter of fixing in space but of channelling motion - of producing correct mobilities through the designation of routes.

More concretely, Stephen Graham and Simon Marvin (2001) have developed the notion of a 'tunnelling effect' in the contemporary urban landscape. They show how the routing of infrastructural elements ranging from roads to high-speed computer links warps the time and space of cities. Valued areas of the metropolis are targeted so that they are drawn into

‘intense interaction with each other’, while other areas are effectively disconnected from these routes (Graham and Marvin 2001: 201). Examples include the highways that pass through the landscape but only let you get off at major hubs. Or think of high-speed train lines that pass from airport to city centre while bypassing the inner city in between.

Think of the development of a commuter rail network in Los Angeles. Built at huge expense to facilitate speedy transit from suburb to city centre it effectively bypassed the predominantly black and Hispanic areas of the city. Although train riders were disproportionately white, bus riders were overwhelmingly black, Hispanic and female. A radical social movement, the Bus Riders Union (BRU), took the Metropolitan Transit Association (MTA) to court in order to halt the use of public money to fund the train system at the expense of the bus system. In court the MTA made the claim that train lines passed through many minority areas of the city, such as Watts. In response, the BRU argued that the population of areas the train lines passed through was not the relevant factor. The arrival of the train line had been matched by the removal of bus services. Although the bus services had stopped frequently along the corridor (serving a 95 per cent minority community) the train hardly stopped at all and thus tended to serve white commuters traveling comparatively long distances. In addition, the BRU pointed out that the Blue Line was built at grade (rather than being underground or elevated), and had resulted in a high number of accidents and deaths in inner-city minority communities. So not only did the rail system produce ‘tunnelling effects’ by passing through minority areas it was also logically and economically related to a decrease in convenient bus routes and an increase in rates of death and injuries among inner-city residents (Cresswell 2006).

Fifth – *how does it feel?* Human mobility, like place, surely has the notion of experience at its centre. Moving is an energy-consuming business. It can be hard work. It can also be a moment of luxury and pampering. The arrangement of seats on a trans-Atlantic flight is an almost perfect metaphor for an experiential politics of mobility. Upper, first, or connoisseur class provides you with more space, nicer food, more oxygen and more toilets per person, among other perks. Those at the back are cramped, uncomfortable, oxygen starved and standing in line for the toilet. And then there might be the body, frozen and suffocated in the undercarriage well waiting to drop out in a suburb of a global city.

Consider walking once more. Tim Ingold (2004) has described how walking (and pretty much all manner of travelling) was experienced as drudgery and work by the well-to-do: ‘The affluent did not undertake to travel for its own sake, however, or for the experience it might afford. Indeed the actual process of travel, especially on foot, was considered a drudge – literally a travail – that had to be endured for the sole purpose of reaching a destination’ (Ingold 2004: 321). Before the Romantic poets turned walking into an experience of virtue, ‘Walking was for the poor, the criminal, the young, and above all the ignorant. Only in the 19th century, following the example set by Wordsworth and Coleridge, did people of leisure take to walking as an end in itself, beyond the confines of the landscaped garden or gallery’ (Ingold 2004: 322). And even then the experience of walking was connected to the development of mechanised forms of transport, which allowed the well-to-do to get to scenic environments for walking. Poor people, unaffected by the peripatetic poetry of Wordsworth and Coleridge, presumably did not experience walking in a new, more positive way. It was still drudgery.

Sixth – *when and how does it stop?* Or, what kind of friction does the mobility experience? There is no perpetual motion machine and, despite the wilder prophecies of Virilio and others, things do stop. Spatial scientists famously formulated the notion of the ‘friction of distance’ as part of the development of gravity models (Cliff et al 1974). Here it is the distance between two or more points that provides its own friction. But in a world of immediacy that is rarely flat and isotropic and where connectivity has become the most ‘relevant variable in assessing accessibility’, forms of friction are more particular and varied. As with the question of reasons

for mobility (motive force) we need to pay attention to the process of stopping. Is stopping a choice or is it forced?

Graham and Marvin (2001), in their consideration of a city of flows, draw on the work of Manuel Castells and Carlo Ezachieli to suggest that the new points of friction are not the city walls but newly strengthened local boundaries. 'Global interconnections between highly valued spaces, via extremely capable infrastructure networks, are being combined with strengthening investment in security, access control, gates, walls, CCTV and the paradoxical reinforcement of local boundaries to movement and interaction within the city' (Graham and Marvin 2001: 206). One of the effects of tunneling is to produce new enclaves of immobility within the city (Turner 2007). Social and cultural kinetics means reconsidering borders, which once marked the edge of clearly defined territories, but are now popping up everywhere (Rumford 2006). Airports are clearly borders in vertical space.

Often certain kinds of people, possibly those with suspicious rhythms, are stopped at national borders – sometimes for hours, sometimes only to be sent back. Black people in major cities across the West are still far more likely to be stopped by police because of racial profiling and the mythical crime of 'driving while black' (Harris 1997). In post-911, people of Middle-Eastern appearance in London are increasingly stopped by the police on suspicion of activities associated with terrorism. In the most extreme case, in July 2005, Jean-Charles de Menezes, a Brazilian man mistaken for a Middle-Eastern terrorist, was shot in the head seven times by police to stop him moving on a London underground train. Racial profiling also appears to take place in airports in Western nations where non-white people are frequently stopped and searched in customs or before boarding a flight. Friction is variably distributed in space and is an important component of mobility studies.

So here then we have six facets of mobility, each with a politics: the starting point, speed, rhythm, routing, experience and friction. Each is important in the creation of a modern mobile world. Each is linked to particular kinds of mobile subject identities (tourists, jet-setters, refugees, illegal immigrants, migrant labourers, academics) and mobile practices from walking to flying.

Constellations of mobility

The ways in which physical movement, representations and mobile practices are interrelated vary historically. There is no space here for a charting of changing constellations of mobility through history. A key point is to dampen the enthusiasm for the 'new' that characterises some of the work in the new mobilities paradigm and to illustrate the continuation of the past in the present. For instance, carefully controlled physical movement characterised a feudal European sense of movement, in which the monopoly on the definition of legitimate movement rested with those at the top of a carefully controlled great chain of being. The vast majority of people had their movement controlled by the lords and the aristocracy. For the most part mobility was regulated at the local level. Yet still mobile subject positions existed outside of this chain of command in the minstrel, the vagabond and the pilgrim.

As feudalism began to break down, a larger class of mobile masterless men arose who threatened to undo the local control of mobility (Beier 1985). New subjects, new knowledges, representations and discourses, and new practices of mobility combined. The almshouse, the prison and the work camp became spaces of regulation for mobility. By the 19th century, in Europe the definition and control of legitimate movement had passed to the nation-state, the passport was on the horizon, and national borders were fixed and enforced (Torpey 2000). New forms of transport allowed movement over previously unthinkable scales in short periods of time. Narratives of mobility-as-liberty and mobility-as-progress accompanied notions of circulatory movement as healthy and moral (Sennett 1994). By the 20th century, mobility was at the heart of what it is to be modern. Modern men, and increasingly modern women, were

mobile. New spaces of mobility from the boulevard to the railway station (the spaces of Walter Benjamin's (1999) Arcades Project) became iconic for modernity. New subject positions, such as tourist, citizen, globetrotter, and hobo came into being.

By the Second World War passports had become commonplace and nations were cooperating in identifying and regulating moving bodies. It was indeed bodies that proved to be the key element even as the scale of mobility expanded and speeded up. Although feudal vagabonds had their bodies branded like cattle, later travellers had to provide a photograph and personal details including 'distinguishing marks' for the new passes and passports that were being developed (Groebner 2007). Currently we are in a new phase of mobility regulation, in which the means of legitimate movement is increasingly in the hands of corporations and transnational institutions. The United Nations and the European Union, for instance, have defined what counts and what does not account as appropriate movement. The Western Hemisphere Travel Initiative is seeking to regulate movement between the United States, Canada, Mexico and the Caribbean in evermore sophisticated ways (Gilbert 2007; Sparke 2006). Increasingly, national interests are combined with so-called pervasive commerce as innovative forms of identification based on a hybrid of biometrics and mobile technology are developed (Fuller 2003).

One of the latest developments in mobile identification technology is the Radio Frequency Identification (Rfid) chip. These chips have been attached to objects of commerce since the 1980s. The Rfid chip contains a transponder that can emit a very low power signal that is readable by devices that are looking for them. The chip can include a large amount of data about the thing it is attached to. The Rfid chip is readable on the move, through paint and other things that might obscure it, and at a distance. It is, in other words, designed for tracking on the move and it is being used on people. In Manchester airport a trial has just been conducted in which 50,000 passengers were tracked through the terminal using Rfid tags attached to boarding passes. The airport authorities have requested that this be implemented permanently. Washington State, together with the Department of Homeland Security, has recently conducted a trial involving Rfid tags on state driving licences, allowing the users to travel between the states participating in the Western Hemisphere Travel Initiative. These tags can include much more information than is normally found on a driver's licence and can, of course, be tracked remotely. It is experiments such as these that have led some to predict the development of a global network of Rfid receivers placed in key mobility nodes, such as airports, seaports, highways, distribution centres and warehouses, all of which are constantly reading, processing, and evaluating people's behaviours and purchases.

Information gathering and regulation such as this is starkly different from the mobility constellations of earlier periods. Regulation of mobility, to use Virilio's (2006) term, is increasingly dromological. Virilio and others argue that previous architectural understandings of space-time regulation are increasingly redundant in the face of a new informational and computational landscape, in which the mobility of people and things is tightly integrated with an infrastructure of software that is able to provide a motive force or increase friction at the touch of a button (Dodge and Kitchin 2004; Thrift and French 2002). The model for this new mode of regulation is logistics. The spaces from which this mobility is produced are frequently the spatial arrangements of the database and spreadsheet.

Conclusion

The purpose of this paper is to raise a series of questions about the new mobilities paradigm and to suggest some ways in which a mobilities approach can develop. I have suggested two caveats it is necessary to take on board in contemporary mobility research. One is an awareness of the mobilities of the past. Much that passes for mobilities research has a flavour of technophilia and the love of the new about it. In this formulation it is the current that is mobile, whereas the past was more fixed.

Taking a look back into history, consider the role of the medieval vagrant in the constitution of contemporary mobilities. It was the presence of these masterless men that prompted the invention of new forms of surveillance and identity documentation that form the basis for what is going on today in airports and at national borders (Bauman 1987; Groebner 2007). The figure of the vagabond, very much a mobile subject of 15th-century Europe, still moves through the patterns, representations and practices of mobility in the present day (Cresswell 2010). We cannot understand new mobilities, then, without understanding old mobilities. Thinking of mobilities in terms of constellations of movements, representations and practices helps us avoid historical amnesia when thinking about mobility. Reflecting Raymond Williams's (1977) notions of emerging, dominant and residual traditions that work to shape cultural formations, we can think of constellations of mobility similarly. Elements of the past exist in the present, just as elements of the future surround us.

The second caveat is that, in addition to being aware of continuities with the past that make contemporary mobilities intelligible, we need to keep notions of fixity, stasis and immobility in mind. Although there is a temptation to think of a mobile world as something that replaces a world of fixities, we need to constantly consider the politics of obduracy, fixity and friction. The dromological exists alongside the topological and the topographical.

Finally, in addition to recognising the importance of historical constellations of mobility in understanding the present, mobility itself can be fine tuned through considering its more specific aspects, each of which has its own politics and each of which is implicated in the constitution of kinetic hierarchies in particular times and places.

References

- Abler, R., Adams J. and Gould P. (1971) *Spatial Organisation: The Geographer's View of the World*, Englewood Cliffs NJ, Prentice-Hall
- Adey, P. (2004a) 'Secured and sorted mobilities: examples from the airport', *Surveillance and Society*, Vol. 1, pp. 500-19
- (2004b) 'Surveillance at the airport: surveilling mobility/mobilising surveillance', *Environment and Planning A*, Vol. 36, pp. 1365-180
- Brenholdt, J.O. and Simonsen, K. (2004) *Space Odysseys: Spatiality and Social Relations in the 21st Century*, Aldershot, Ashgate
- Balibar, E. (2004) *We, the People of Europe? Reflections on Transnational Citizenship* Princeton, NJ, Princeton University Press
- Bauman, Z. (1987) *Legislators and Interpreters* Cambridge, Polity Press
- (1998) *Globalisation: The Human Consequences* New York, Columbia University Press
- Beckmann, J. (2001) 'Automobility - a social problem and theoretical concept', *Environment and Planning D: Society and Space*, Vol.19, pp. 593-607
- Beier, A.L. (1985) *Masterless Men: The Vagrancy Problem in England 1560-1640* London, Methuen
- Benjamin, W. (1999) *The Arcades Project*, Cambridge MA, Belknap Press
- Berman, M. (1988) *All That is Solid Melts into Air: The Experience of Modernity*, Harmondsworth, Penguin
- Blomley, N. (1994a) 'Mobility, empowerment and the rights revolution', *Political Geography*, Vol. 13, pp. 407-22
- (1994b) *Law, Space and the Geographies of Power*, New York, Guilford
- Blunt, A. (2007) 'Cultural geographies of migration: mobility, transnationality and diaspora', *Progress in Human Geography*, Vol. 31, pp. 684-94
- Bourdieu, P. (1990) *The Logic of Practice*, Palo Alto, Stanford University Press
- Bryson, N. (1997) 'Cultural studies and dance history', in Desmond, J. (ed) *Meaning in Motion: New Cultural Studies of Dance*, Durham NC, Duke University Press
- Bullard, R.D. and Johnson, G.S. (1997) *Just Transportation: Dismantling Race and Class Barriers to Mobility*, Gabriola Island, BC, New Society Publishers
- Cliff, A.D., Martin R.L. and Ord J.K. (1974) 'Evaluating the friction of distance parameter in gravity models', *Regional Studies*, Vol. 8, pp. 281-86
- Cresswell, T. (2001) 'The production of mobilities', *New Formations*, Vol. 43, pp.3-25

- (2006) *On the Move: Mobility in the Modern Western World* New York, Routledge
- (2010) 'The vagrant/vagabond: the curious career of a mobile subject', in Cresswell, T. and Merriman, P. (eds) *Geographies of Mobility: Practices, Spaces, Subjects*
- and Merriman P (eds) (2008) *Geographies of Mobility: Practices, Spaces, Subjects*, Aldershot, Ashgate
- Criminal Justice and Public Order Act (1994) *Public General Acts - Elizabeth II*, Chapter 33 London, HMSO
- De Certeau, M. (1984) *The Practice of Everyday Life*, Berkeley, University of California Press
- Deleuze, G. and Guattari, F. (1987) *A Thousand Plateaus: Capitalism and Schizophrenia*, Minneapolis, University of Minnesota Press
- Dodge, M. and Kitchin, R. (2004) 'Flying through code/space: the real virtuality of air travel', *Environment and Planning A*, Vol. 36, pp. 195–211
- Dodgshon, R.A. (1987) *The European Past: Social Evolution and Spatial Order*, Basingstoke, Macmillan Education
- Eliasson, J. and Mattson, L-G. (2005), 'It is time to use activity-based urban transport models? A discussion of planning needs and modelling possibilities', *Annals of Regional Science*, Vol. 39, pp. 767–89
- Forer, P. (1978) 'A place for plastic space?', *Progress in Human Geography*, Vol. 2, pp. 230–67
- Fuller, G. (2003) 'Perfect match: biometrics and body patterning in a networked world' *Fibreculture Journal*, Vol. 1, http://journal.fibreculture.org/issue1/issue1_fuller.html
- Gilbert, E. (2007) 'Leaky borders and solid citizens: governing security, prosperity and quality of life in a North American partnership', *Antipode*, Vol. 39, No. 1, pp. 77–98
- Graham, S. and Marvin S. (2001) *Splintering Urbanism Networked Infrastructures, Technological Mobilities and the Urban Condition*, London, Routledge
- Groebner, V. (2007), *Who Are You? Identification, Deception, and Surveillance in Early Modern Europe*, Brooklyn, Zone Books
- Hannam, K. Sheller, M. and Urry, J. (2006) 'Mobilities, immobilities and moorings', *Mobilities*, Vol. 1, No. 1, pp. 1–22
- Hanson, S. and Pratt, G.J. (1995) *Gender, Work and Space*, London, Routledge
- Harris, D.A. (1997) 'Driving while black and all other traffic offences: the supreme court and pretextual stops', *Journal of Criminal Law and Criminology*, Vol. 87, pp. 544–82
- Harvey, D. (1996) *Justice, Nature and the Politics of Difference*, Oxford, Blackwell
- Hoyle, B.S. and Knowles, R.D. (1998) *Modern Transport Geography*, Chichester, John Wiley
- Ingold T. (2004) 'Culture on the ground: the world perceived through the feet' *Journal of Material Culture*, Vol. 9, pp. 315–40
- Kaufmann, V. (2002) *Re-thinking Mobility: Contemporary Sociology*, Aldershot, Ashgate
- Kern, S. (1983) *The Culture of Time and Space, 1880-1918*, Cambridge, Harvard University Press
- Kuhn, T.S. (1996) *The Structure of Scientific Revolutions*, Chicago, University of Chicago Press
- Latour, B. (2005) *Reassembling the Social: An Introduction to Actor-Network Theory*, Oxford, Oxford University Press
- Lefebvre, H. (2004) *Rhythmanalysis: Space, Time and Everyday Life*, London, Continuum
- Marinetti, F.T. (1909) 'Manifesto of futurism', <http://www.cscs.umich.edu/crshalizi/T4PM/futurist-manifesto.html>
- Mels, T. (2004) *Reanimating Places: A Geography of Rhythms*, Aldershot, Ashgate
- Merleau-Merriman, P. (2007) *Driving Spaces: A Cultural-historical Geography of England's M1 Motorway*, Oxford, Blackwell
- Modern Times* (1936) Film. Directed by Charles Chaplin. Charles Chaplin Productions
- Oliver, M. (1996) *Understanding Disability: From Theory to Practice*, Basingstoke, Macmillan
- Park, R. and Burgess, E. (1925) *The City: Suggestions for Investigation of Human Behavior in the Urban Environment*, Chicago, University of Chicago Press
- Pickup, L. (1988) 'Hard to get around: a study of women's travel mobility', in Little, J., Peake, L. and Richardson, P. (eds) *Women in Cities: Gender and the Urban Environment*, New York, New York University Press
- Ponty, M. (1962) *The Phenomenology of Perception*, London, Routledge and Kegan Paul
- Price, B. (1989) 'Frank and Lillian Gilbreth and the manufacture and marketing of motion study 1908-1924', *Business and Economic History*, Vol 18, pp. 88–98
- Rumford, C. (2006) 'Theorising borders', *European Journal of Social Theory*, Vol. 9, No. 2, pp. 155–69
- Sassen, S. (1999) *Guests and Aliens*, New York, New Press
- Sauer, C.O. (1952) *Agricultural Origins and Dispersals*, New York, American Geographical Society
- Seamon, D. (1979) *A Geography of the Lifeworld: Movement, Rest, and Encounter*, New York, St Martin's Press

- Sennett, R. (1994) *Flesh and Stone: The Body and the City in Western Civilisation*, New York, W.W. Norton
- Sheller, M. and Urry, J. (2006a) 'The new mobilities paradigm', *Environment and Planning A*, Vol. 38, pp. 207–26
- (2006b) *Mobile Technologies of the City* New York, Routledge
- Simmel, G. (1950) *The Sociology of Georg Simmel*, Glencoe, Free Press
- Solnit, R. (2000) *Wanderlust: A History of Walking*, New York, Viking
- Sparke, M. (2006) 'A neoliberal nexus: economy, security and the biopolitics of citizenship on the border', *Political Geography*, Vol. 25, No. 2, pp. 151–80
- Tester, K. (ed) (1994), *The Flaneur*, London, Routledge
- Thrift, N. (1994) 'Inhuman geographies: landscapes of speed, light and power', in Cloke, P. (ed) *Writing the Rural: Five Cultural Geographies*, London, Paul Chapman
- (2004) 'Driving in the city', *Theory, Culture and Society*, Vol. 21, No. 4/5, pp. 41–59
- and French, S. (2002) 'The automatic production of space', *Transactions of the Institute of British Geographers, New Series*, Vol. 27, pp. 309–35
- Tomlinson, J. (2007) *The Culture of Speed: The Coming of Immediacy*, Los Angeles, Sage
- Torpey, J.C. (2000) *The Invention of the Passport: Surveillance, Citizenship and the State* Cambridge, Cambridge University Press
- Tuitt, P. (1996) *False Images: Law's Construction of the Refugee*, London, Pluto Press
- Turner, B.S. (2007) 'The enclave society: towards a sociology of immobility', *European Journal of Social Theory*, Vol. 10, pp. 287–304
- Urry, J. (2000) *Sociology Beyond Societies: Mobilities for the 21st Century*, London, Routledge
- (2004) 'The system of automobility', *Theory, Culture and Society*, Vol. 21, No. 4/5, pp. 25–39
- (2007) *Mobilities*, Cambridge, Polity Press
- Uteng, T.P. and Cresswell, T. (eds) (2008) *Gendered Mobilities*, Aldershot, Ashgate
- Verstraete, G. (2001) 'Technological frontiers and the politics of mobility in the European Union', *New Formations*, Vol. 43, pp. 26–43
- Virilio, P. (1986) *Speed and Politics: An Essay on Dromology*, New York, Columbia University
- (2006) *Speed and Politics*, Los Angeles Semiotext(e)
- White, A. (2002) 'Geographies of asylum, legal knowledge and legal practices', *Political Geography*, Vol. 21, pp. 1055–73
- Williams, R. (1977) *Marxism and Literature*, Oxford, Oxford University Press
- Wylie, J. (2005) 'A single day's walking: narrating self and landscape on the South-West Coast Path', *Transactions of the Institute of British Geographers, New Series*, Vol. 30, pp. 234–47
- Yanarella, E.J. and Reid, H.G. (1996) 'From "trained gorilla" to "humanware": repoliticising the body-machine complex between Fordism and post-Fordism', in Schatzki, T. and Natter, W. (eds) *The Social and Political Body*, New York, Guilford