Cultures of Transport: Representation, Practice and Technology

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Cultures of transport: representation, practice and technology[1]

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> If transport history is to be again at the cutting edge of economic and social history, it should be innovative and controversial. It needs to develop, or borrow from other disciplines, novel theories, techniques and approaches to the subject. If new ideas, or their findings, are also iconoclastic, so much the better since that encourages debate and discussion enlivens the feel and ethos of the discipline.
> John Armstrong, 'Transport history, 1945-95: the rise of a topic to maturity', *Journal of Transport History* 3rd ser. vol.19 (1998): 103-21.

Despite transport history's illustrious development in the 1960s and 1970s, the idea that the discipline could be at the cutting edge of historiographical research, not only expanding its own boundaries through the adoption of innovative theoretical and methodological techniques but also contributing to the renewal of neighbouring fields, was hardly credible until quite recently.[1] In this essay, however, we argue that the so-called 'cultural' (and 'spatial') turn that has remodelled so many other areas of the humanities and social sciences over the last two decades might help answer Armstrong's plea for an innovative, even controversial, transport history. Such a strategy would not merely bring the discipline into line conceptually and methodologically with what has long been going on elsewhere. By focussing on the practical limits and historical capabilities of transport technologies, the renewed historiography would have something of relevance and value to say to these other fields.

Transport, travel and the cultural turn

The cultural turn has propelled issues of travel and physical mobility to the centre of lively debates in a number of key areas of social and historical inquiry: imperialism, post-colonialism, migration, the formation of scientific and technological knowledge, the clinical and social definition of the modern body, to name but a few. Terms such as 'travel',

'mobility', 'displacement', 'diaspora', 'frontier', 'transience', 'dislocation', 'fluidity' and 'permeability' have become central to thinking about the nature of subjectivity and hence the formation of identity, both personal and social.[2] In particular, social theorists have highlighted the ways that transport, along with communications, has helped to reduce the power of traditional places to define personal and communal identity. Instead, new identities are created through networks spreading across geographically and socially extended spaces. At one extreme John Urry proposes that unparalleled levels of mobility have contributed to a contemporary 'post-societal' world of extreme individualization in which nation-states and their civil societies are replaced by global 'networks and flows'.[3]

Yet as critics of globalization theory have long argued, without a sure grasp of the historical precedents to this allegedly postmodern condition, it is all too easy to overdraw the distinction between past and present and to misconstrue the significance of the changes that have taken place.[4] At the most basic level there is therefore a clear place for transport historians — or historians of transport and mobility, if one prefers to signal a new paradigm — to act as under-labourers in contemporary social science. Our job is to attend to the historical development of the transport systems that have brought about the new senses of identity and the social structures and processes of which they are a part.

At the very least, such a move might constrain some of the wilder rhetorical flourishes of those theorists who, by confusing metaphors relating to travel and mobility with the realities, end up in either a utopian celebration of the liberal freedoms of post-modernity or its mirror-image, a dystopian condemnation of the pathologies of late-modern capitalism.[5] The problem here, as Janet Wolff has observed, is that many of the key terms of this 'travelling theory', such as 'nomad', 'travel' or 'maps'

> are not usually located and hence (and supposedly) they suggest ungrounded and unbounded movement — since the whole point is to resist selves/viewers/subjects. But the consequent suggestion of free and equal mobility is itself a deception since we don't all have the same access to the road.[6]

Thus, as Tim Cresswell argues, understanding how inequalities of mobility arise should be a priority of any scholarship in this field. So too should be the study of the consequences of such inequalities.[7] As historians, we can help by looking closely at how the means by which mobilities were produced and consumed in the past — the organizations, modes of governance, infrastructures, vehicles and other artefacts which all together constitute

transport systems — have shaped present-day expectations and practices. In so doing, we should be forced to re-examine the ways in which transport systems and their mobilities were both shaped by the exercise of social power (class, gender, ethnicity etc) and have in turn acted back upon it.

Scholars of automobilization (including some of its more recent historians) have perhaps been most attentive to such matters and so offer a model of how transport and mobility historians might engage with debates in other fields of social inquiry. 'Automobilization' refers both to the growing dominance of personalized motor vehicles in many parts of the (post)modern world, and also to the social consequences of that dominance.[8] Automobilization's scholars are particularly interesting because they have not been afraid to enlist cultural factors in their analysis. As shown by the lengthy debates in other disciplines over the past two decades, 'culture' is an ambiguous and problematic concept. Here we can do little more than point out the contrast between the way we understand the term and its usage in some other fields of transport history, where until quite recently – and with some notable exceptions[9] – it still tended to be restricted to that of an artistic or aesthetic practice-cum-heritage. A more catholic, and more appropriate, sense includes this idea of artistic representation within the notion of culture as a practical resource for the organization of social life. Culture is a way of making sense of the everyday world of people, social institutions and material things and processes, and thus a way of enabling us to live in it.[10] Using this fuller sense of 'culture' to understand the complex relationships between the social and material worlds should lead to a historiography of transport and mobility that is more subtle, theoretically provocative, empirically rich, and perhaps even more politically effective than either its traditional forms or its overly abstract conceptualization in 'travelling theory'.

Drawing upon this richer notion of culture requires historians to be aware of certain pitfalls, long recognized in other branches of the discipline. Transport and mobility history is certainly not *just* about culture – we are not advocating a focus on meaning to the exclusion of other aspects of social life and structure. For conceived as 'a way of life', the concept of culture is open to the criticism that it lacks any form of explanatory power. For one thing, it is all too easy to treat the category as a 'catch-all'. If culture is both the object of study and the only means of its explanation, it becomes impossible to step outside the circle and define the problem in any other terms. In particular, approaches which attempt to understand social life

as organized through the symbolic interaction of language run a risk of reducing social existence to a homogeneous and aestheticized product of language. As Purvis and Hunt have argued, viewing the 'world *as* text' runs the danger of reifying the perspective as the 'world *is* text'.[11] Although appearing to give full scope to the organizational power of culture, this kind of theory draws on an understanding of the concept which is far too narrow. Taking culture as text cannot do justice to the diversity of media through which meaning is created and conveyed – the 'cultural turn' and the 'linguistic turn' in social theory are not one and the same. Mundane objects, built environments, and the everyday actions and other kinds of non-verbal communication that take place within these material settings also have a part to play in creating symbolic meaning.[12] Thus a major challenge is to look outside the realm of culture to identify the wider social processes which are implicated in it; in other words, to analyse *how* these material and symbolic dimensions are articulated or even mutually constituted.

The long search for a materialist theory of culture is not going to end with this essay. But it is nonetheless helpful to think of culture as a process rather than an object or stable category; as Raymond Williams once remarked, 'culture in all its early uses was a noun of process: the tending *of* something, basically crops or animals'.[13] Rather than ask 'what is culture?', we should ask 'what work does it do?' and 'how does it operate in social life?'; for culture as 'cultivation' is deeply grounded in the human effort of work (and play), rather than floating freely in a purely symbolic realm. In thus relating symbolic processes to social context (including its material, physical content), social semioticians such as M. Gottdiener seek to '"socialize" the domain of culture by linking it to the exo-semiotic realms of economic development and political conflict'.[14] We are thus sensitized to the cultural processes through which transport interacts with the goals and interests of social groups and individuals. In other words, we come to see transport throughout history not just as a practice heavily informed by, and informing, power – earlier generations of historians have been aware of that – but as one in which the symbolic component of social life was critical to the exercise of that power. Culture must therefore be integrated into analysis along with those factors which have traditionally been more commonly studied. As recent work is showing, this opens up rich possibilities for the historian; there is great merit in examining how the values, norms, moralities, attitudes and judgements embedded in social, economic, political, ecological and aesthetic customs, traditions and conventions have shaped and have been shaped by social life.[15] The literature on automobilization suggests ways in which we may

pursue this task, even though there are still conceptual problems to be overcome with the social-scientific perspectives we draw upon here.

Automobilization: culture as representation *and* practice *and* technology

When movement is understood as a purposeful, meaningful – and thus cultural – act, we are required to address both the material circumstances and political consequences of transport systems. One of the most thoughtful and conceptually sophisticated examples of this kind is Jörg Beckmann's article on the way that the automobile orders our everyday lives.[16] Beckmann reflects on the familiar contradiction that as automobilization 'creates independence and liberates its subject from spatiotemporal constraints, it also formulates new dependencies' by embedding car users (and non-users) in another equally structured way of life.[17] Taken as a whole, the customs, habits and values of automobilization are a practical resource for the ordering of everyday life; they are a cultural regime. Fully understanding the contradictions of this regime therefore requires a fresh examination and re-appraisal of the many ways in which historically automobile technology became indispensable in modern society, incorporating the cultural dimension in a more integrated fashion than was common until recently. We might ask, for example – as a few historians have already done – how and why so many of the costs of auto-use have been externalized and made illegible in everyday discourse, with profound impacts on the social and ecological systems of rural and urban landscapes, disenfranchising in particular the elderly, the young and the poor.[18] And how else, for instance, do we explain the central role that security of oil supplies has played in US foreign policy without recognizing the place of the automobile as a symbol of American democracy? Or how do we understand the cultural importance of suburbs, shopping malls, and edge-city office development to everyday life in the developed world without recognizing the physical constraints of nineteenth-century urban development and the 'efficiency gains' later brought about by personalized transport?[19]

For fellow critics such as Mimi Sheller and John Urry, automobilization is 'a complex amalgam of interlocking machines, social practices and ways of dwelling'.[20] Beckmann's work suggests that understanding how these domains mesh together requires close attention to the way in which symbolic and practical values are bound into the practices, institutions and structures by which the automobile becomes the 'best' choice of transport. He argues that automobilization is made up of three dimensions: auto-subjects, auto-objects and auto-

scapes.[21] The first of these terms covers the many different individuals and social groups that use or are otherwise affected by the automobile system. The second refers to technologies – vehicles, and their associated infrastructures of 'hard' physical forms, such as roads and servicing facilities, and 'soft' social institutional ones, like driving schools and policing. Autoscapes are the ways in which time and space are perceived, represented and used in a society where patterns of movement and social interaction are defined by the mass use of autos; we might, for instance, talk about somewhere being 'about ten minutes' drive away'.[22] Whilst there is always a risk with such schemata of terms becoming so abstract or loosely defined as to lose any analytical purchase, the advantage is that one is sensitized to thinking in terms of the overall transport *system*, and about the need to analyse in a theoretically informed and empirically grounded way how the various elements interact with, or – as we prefer to see matters – constitute, one another. And it reinforces the notion that transport technologies are much more than just hardware: that they are fully meaningful processes, entities and institutions – indeed, elements of *material culture*.

In developing a workable definition of material culture, the social-scientific literature on automobilization draws heavily upon ideas of socio-material hybridity. Like other schools of thought gathered together under the term 'relational materialism', these place the connections between the symbolic and material dimensions of contemporary social life at the heart of all analysis.[23] Whilst noting the many and sometimes deep differences between them, all these approaches are concerned with the functional and expressive presence of artefacts, practices and entities, however fleeting and insubstantial or solid and durable. These theories are also concerned with the ways in which power comes to fix the classificatory systems through which socio-material processes and entities are represented, grasped and, on some accounts, constituted. Thus culture is recognized as processual, contested and contingent (yet implicated in wider social processes and structures), rather than as unproblematic, fixed and universal.

One particular kind of relational materialism has greatly influenced recent theorists of automobilization, including Beckmann: actor (or actant)-network-theory (ANT). This is both a strength and a weakness. A strength because ANT in all its varieties is committed to a material semiotics, even if the intellectual connections are rarely made as explicit as in Akrich and Latour's 1992 definition of semiotics as the

study of how meaning is built, [where] the word 'meaning' is taken in its original

nontextual and non-linguistic interpretation: how a privileged trajectory is built, out of an indefinite number of possibilities; in that sense, semiotics is the study of order building or path building and may be applied to settings, machines bodies and programming languages…[24]

Or transport. Hence we might expect Beckmann to offer a convincing account of the role of culture in linking mobilities with transport technologies. But his ability to do so is constrained by the fact that, as Mike Michael has observed, the 'complexifying role of culture' is largely noticeable by its absence in ANT.[25] ANT has demonstrated its greatest potential when examining specific procedures and activities within fairly limited circumstances — it has rarely incorporated the multiplicity of contested meanings brought to specific technologies embedded in longer historical trajectories or broader geographical systems. Hence it is not surprising that Beckmann's account of how automobilization is constituted both practically and symbolically tend to be characterized more by assertion than demonstration.

Consider his three dimensions of auto-subjects, auto-objects and autoscapes. Drawing on ANT, Beckmann insists that all three are interwoven.[26] But this promise of integration is not fully redeemed at the conceptual level. To be fair, there is little doubt that Beckmann agrees with Michael that that the relationship between technology and its users must be conceived 'as inextricably cultural and instrumental'.[27] Beckmann works with the idea that technology (in Michael's words) 'always speaks to a range of "function-expressions"'; that the car does not just perform the practical function of moving from A to B but also, through the localized exercise of power, offers opportunities for the development and expression of users' self-identities.[28] But Beckmann faces problems when he tries to move beyond the conceptual absences of ANT to relate the 'moving hybrids' of auto-subjects and auto-objects to autoscapes, that is, automobilization's spatio-temporal perceptions, representations and patterns of usage. He is reduced to asserting, for instance, that 'space (which is always both physical and social) is the ground on which automobilisation unfolds'.[29] While one might agree wholeheartedly, what is needed is an account of how the localized interactions of moving hybrids are related to meaning-rich social processes operating at structural – and indeed structuring – geographical levels.

In fairness, this task is the domain of the so-called 'spatial turn' in the social sciences, particularly cultural geography, a body of literature arguably as voluminous (if ill-defined),

as contentious and as potentially important to a renewed transport historiography as that constituting 'the' cultural turn. The former literature is closely concerned with the semiotics of space; how space come to acquire meanings, and how these spatialized meanings/meaningful spaces contribute to the organization of social life and structures.[30] The geographer S. Kirsch, for instance, combines ANT with elements of Henri Lefebvre's more than 30-year old classic study of the social constitution and meanings of space to offer the beginnings of an account of transport's role in constructing social spaces from the global to the everyday.[31] This goes a long way to filling the conceptual gap left by automobilization's theorists, but the integration of the technological and the spatial is still not entirely satisfactory, for as he freely acknowledges, Kirsch analyses the technological construction of space at the cost of neglecting the spatial-social construction of technology.[32] We shall return briefly to this issue.

Towards a social semiotics of transport

In this essay, we cannot hope to do more than sketch the barest outline of what a renewed, techno-cultural historiography of transport and mobility might look like. Indeed, our purpose is more to invite others to join us in this task than offer a developed framework. Some brief remarks are in order, however. Until quite recently, many historians who identified themselves as transport specialists tended not to take technology very seriously. If they thought about it at all, they tended to conceptualize it as hardware, the development of which was a purely economic phenomenon, and ignored its wider semiotic qualities.[33] Yet as the study of the history of transport's consumption,[34] contemporary- mobility studies (including, of course, automobilization),[35] and the small but important (and now rapidly growing) historiography on transport as material culture[36] all show, adding technology into the equation along with movement brings considerable benefits. In all of this, there is an emphasis on process, reflecting that in the more recent theorizations of culture and space. To further this convergence between processual understandings of culture, space and of the historiography of transport and mobility, a first step should be to think of transport as a verb rather than (just) a noun.

The etymology of 'transport' suggests that this proposal works with the grain of the word's history. The *Oxford English Dictionary* charts the earliest (1374) usage of the term in English to indicate the act of carrying or conveying a thing or person from one place to

another. The word first appears amongst the legal language of property conveyancing during the 15th century, and by the late 16th the term had acquired metaphorical connotations. By the 17th century the word had acquired a wide variety of meanings, including a vessel or means of transport and the mental state of exaltation, rapture or ecstasy, 'being carried out of oneself'.[37] Considered in this way, the history of 'transport' begins to reveal a picture in which physical movement is also 'travail', literally 'a painful or laborious effort' or, metaphorically, a motivated act transforming the material and social worlds. These long etymological associations with goods, property and emotions suggest how 'transport' has historically been concerned with issues of subjectivity and identity. Moreover, the connections were not only metaphorical for physical movement could be an integral part of this linkage. Interpreted in this way, transport technologies and systems become more than an institutional context to everyday life; they are central to the *production* of society, establishing and reinforcing differences and inequalities between societies, groups and individuals. Transport as 'travail' is as deeply grounded in the human effort of work and play as the notion of culture as 'cultivation'.

In line with these theoretical considerations, we outline two ways by which to transform transport from a noun back into a verb.

Transport technologies as mediation between the imaginable and the material

First, we should give greater attention to the growing literature on socio-material hybrids ('heterogeneous actors', as they are called in ANT). As noted earlier, these are processes (sometimes involving humans, sometimes not) and their associated entities that are both meaningful and material. The driver of a car, for example, is such a process-entity; as too is the car itself, and the combination of the two, the driver-vehicle. Over the last decade or so, theorists have developed increasingly sophisticated accounts of how these meaning-laden intermediaries bind the social world together, making it both understandable and possible.[38] Though highly abstract and sometimes couched in unnecessarily esoteric language, this body of theory might open the way for an analysis of the semiotically rich relationship between transport systems and mobilities that avoids the shortcomings of the automobilization literature.

In these terms, transport is itself an order-building intermediary, a form of communication or mediation in every sense of the word. It is an organizer, regulator and generator of things, places, flows and people, a maker of journeys and a producer of texts and

images, from travel stories to timetables and from engineering drawings to photographs. More particularly, transport's centrality to the making of the world over centuries gives it particular importance in understanding the historical constitution, contemporary trajectories and future possibilities of (post)modern societies. This in turn suggests a genealogical approach to the historiography of transport and mobility, tracing the historically contested meanings of transport as part of a politics rooted in present-day practices and problems. It also indicates the potential for examining transport as one of those 'regimes of practices' central to Foucault's approach to the cultural history of modernity.[39] In all of this, analysis must examine in specific historical terms how transport's role as meaningful intermediaries interacts with (or perhaps better, constitutes and is constituted by) social power in its various forms.

Thus transport historians might follow the automobilization literature by examining the many ways in which technologies, rules and regulations, as well as vehicle and network design, mediate between humans, their mobilities and still wider social processes. Although much of this will involve looking at previously rather neglected areas of the history of transport, perhaps most notably consumption, it is the whole system of transport production and use *together* which should be the object of inquiry. This might involve some re-examination of the production side, to incorporate cultural factors more fully into explanations; for instance, analysing how individual and group identities are formed through the exercise of skill and knowledge in the design, construction and operation of transport technologies. Work on the history of railway labour, for example, suggests that the labour process was never contested solely in the sphere of economics, or of politics, or of technology and so cannot be understood by recourse to explanations in any one of these alone. Technical arguments concerning, for example, the efficient operation of mineral trains or the nature of railway safety took on a moral dimension relating to issues of duty, service and obligation. Conflicts over skill levels and workplace control drew – and still draw – on arguments relating both to worker identity and the economics of labour supply.[40] For this reason, the split between, say, studies of workplace culture and identity on the one hand and those of politics and collective action on the other is unhelpful. To examine these areas of overlap requires a pluralism of methodologies and evidence, which might include landscapes, technological artefacts, archival documents, literary and visual accounts, all of which is suggested by, but rarely realized in, studies concerning socio-material hybridity.

Transport technologies as a creative producer of spaces

Transport's remaking of the world in socially meaningful ways has always involved a spatial dimension. The articulation of particular sets of cultural values by social interests has historically contributed to the production of a range of symbolically rich and politically charged geographies at a variety of scales. Thus 'the' spatial turn in social theory offers great possibilities for the historiography of transport and mobility. The recognition that the space in which we all live is a social product implies that it should be subject to the kind of cultural analysis we have been advocating.

One way to do this is through ANT's increasing sensitivity to the ways and means through which spatial scale becomes defined *within* and *by* particular networks. As Latour suggests with regard to railways, a transport system can demarcate specific geographical locations as places operating at several levels of social space:

> Is a railroad local or global? Neither. It is local at all points, since you always find sleepers and railroad workers, … Yet it is global, since it takes you from Madrid to Berlin or from Brest to Vladivostok. However, it is not universal enough to be able to take you just anywhere…There are continuous paths that lead from the local to the global, from the circumstantial to the universal, from the contingent to the necessary, only so long as the branch lines are paid for.'[41]

Thus Latour suggests that the scale(s) at which a network operates partly depends on how, where and for what purpose it is put to work. These factors are influenced by wider political decisions concerning the allocation of resources and their use.

It is worthwhile to think about the ways in which the cultures of transport has both drawn upon, and in turn shaped, the geographical scale at which transport systems have operated. Thus, for instance, the 19th-century redefinition of the urban street as a 'thoroughfare' transformed its primary and long-standing function as a locale for the conduct of neighbourhood life into a part of a greater space of urban circulation.[42] We can see continuities with the recent activities of groups such as 'Reclaim the Streets' when they act, both practically and symbolically, to try to restore the primacy of the street as a place for local interaction at the same time that highway authorities invoke the greater good of unimpeded mobility to economic well-being and civic integration.[43]

Larger-scale transport systems should also be subjected to more of this kind of

analysis. As spaces at various levels are enrolled into such networks, they are ordered and arranged, tying locales (centres or nodes) together in ways that constitute and express their differing abilities to determine what goes on elsewhere.[44] At the extreme, these networks might extend world-wide, and critics of globalization have shown how modern technologies help to create a topography of differentiated locales rather than global homogeneity. Thus, for instance, Verstraete examines the role of technology in finding illegal migrants hiding in commercial vehicles at the Belgian port of Zeebrugge. By looking at the power structures involved as well as at the complex relations between standardized technologies and local experiences of them, she deconstructs the idea that we live in a homogenous space – the 'Schengen space' of an ostensibly borderless Europe of free movement. Rather, she suggests, old national borders are both displaced and subsequently reinscribed in ways that primarily serve the narrow interests of individual nation-states. Global technologies of transport play a central role in this reconfiguration of state power.[45]

Important here are the historical terms, concepts and sets of practices which acted as intermediaries engaging, ordering and distributing spaces from micro to macro levels. Understood in this way, the highway, for instance, implicated in the making of networks from mediaeval times to the computer age, emerges as a key notion in transport historiography. It has played, for example, an important role in conceptions of a civic sphere of free movement and speech since mediaeval law enshrined the right of passage along certain designated routes.[46] Important for the movement of political correspondents in the 18th century and the formation of a nascent working-class politics in the 19th, the highway (as the 'information superhighway') is frequently invoked as a triumph of western liberal-capitalist democracy in the 21st.[47] Yet as Verstraete's study suggests, the liberal-democratic representation of 'highway' tells only one side of the story and reveals only one dimension of the spatiality produced by its practice.

Similarly, studies of navigation on the River Trent in the UK, enabled by statute in 1783, show how legal conceptions of highway were used to negotiate between the interests of land and trade, fixed property and transport. The Trent was a particularly volatile river, regularly changing its course along several stretches. Given this topographical fact, landowners objected to proposals to construct a towpath, which they saw as a potentially uncontrollable intrusion upon their property. In order to satisfy all parties, the result was a proposal to regulate the course of the river whilst simultaneously ordering and regularizing the physical and social topography

of the riparian environment. Thus the plans claimed

> The Country would be freed from Depredations of several hundred dissolute fellows who are now loitering near the River without any settled Residence, and who might be useful to the community in other employments. And if proper Gates were made between the Inclosures contiguous to the River… the Trespass on the Lands would be greatly diminished.[48]

The proposals also reassured landowners that

> Provision be inserted in the Act for making satisfaction to the owners and occupiers of the adjacent lands for all trespass and damage to be done by the execution of any of the Powers of the Act, except by the Passage over such land for the hauling and navigating boats, the damage by which would be greatly diminished instead of increased.[49]

Here transport technology and the hydrological techniques of river regulation intersected with the interests of agricultural improvement within the context of theories of free-trade economics. Thus the proposal linked moral, social and natural orders in the landscape by using ideas familiar to many in the late-18th century. Regulation of the channel would order the landscape by removing the twin threats of a volatile river and vagrant labour. In the process it would entrench the rights of private property at the same time that it liberated the river in the cause of trade and enterprise.[50]

In a more contemporary context, Bishop, for instance, examines proposals for the (now-completed) Alice Springs to Darwin railway, linking Australia's southern coast with the northern. Bishop is particularly concerned with the idea of the 'corridor' as a tool of practical planning and a means of marshalling the hopes and aspirations of national identities.[51] He argues that the rail project was implicated in a continuing resignification of various technologies. The corridor was therefore a site of difference, struggle and reconciliation, between European, Aboriginal and Asian conceptions of nation. It was a

> highly contentious, paradoxical gathering, one that embraces both the macro level of regional and federal politics, as well as the micro level of local concerns and individual experiences. The rail corridor brings into sharp relief not just a struggle between various notions of place but their coexistence, 'a series of differing "social architectures" of dwelling that manage, more or less to coexist in what is imperiously composed by one of them as Australian national space'.[52]

Although originating in very different historical and geographical contexts, these brief examples show how transport systems have practical and symbolic consequences at the spatial level well beyond the immediacies of the technologies themselves. They gather and distribute heterogeneous materials in ways which are highly politicized in terms of both formal and cultural politics. The resulting relationships between technological formations and the conduct of everyday life are mutually constitutive, whether couched in terms of European integration, 18[th-] century agricultural improvement or Australian national identity.

Concluding remarks

We have argued that culture along with technology should be central to an engagement between transport historiography and other disciplines in the humanities and social sciences concerned with the place of mobility in the production of social life. In order to achieve this, we need a conception of culture that does more than merely consider (although this is no simple matter) how and why transport technologies are represented in the arts and popular imagination. The social-scientific literature on automobilization suggests one conceptual framework which we can use to build on the existing achievements of historians, by emphasizing the importance of understanding mobility-subjects, mobility-objects and mobility-scapes together as transport systems. But it arguably does not go quite far enough in relating the symbolic and material dimensions of transport technologies. The developing literatures on relational materialism (for example, socio-material hybridity and social semiotics) have much to offer here. They open the way for a historiography of transport and mobility sensitive to the richness of social meaning generated through a diversity of media, from, for example, legal documents to visual representations. Central to this project is the reassertion of 'transport' as a verb – an act, performance or process – rather than (just) a noun.

Such a renewed cultural – and spatial – historiography would take its rightful place as an interdisciplinary endeavour making theoretically informed use of a wide range of sources and methods. This kind of transport history could also become essential to understanding the contradictions and dilemmas of contemporary societies as these relate to the social inequalities and ecological costs of ever-increasing levels of mobility. Recognizing the multiplicity of possible meanings that can be attached to any technology demands that we understand how and why some (or perhaps even one) meanings came to be privileged over

others. More particularly, this implies that the naming of artefacts, practices, assemblies, animate or inanimate entities as components of a transport system — or perhaps their exclusion: think of the resistance to categorizing walking as transport — is a necessary starting point of any analysis. In this sense of representation and practice, the cultures of transport technologies are fundamental to understanding crucial elements in the relations of power so often missed in older ways of writing the transport history.

Notes

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1. See, for instance, G. Mom, 'What kind of transport history did we get? Half a century of *JTH* and the future of the field', *Journal of Transport History* 3rd ser. vol. 24 (2004): 121-38.

2. R. Wrigley and G. Revill, eds, *Pathologies of Travel* (Amsterdam, 2000), pp.2-3.

3. J. Urry, *Sociology Beyond Societies: Mobilities for the Twenty-First Century* (London and New York, 2000); 'Mobile sociology', *British Journal of Sociology* vol.51 (2000): 185-204; 'Social networks, travel and talk', *British Journal of Sociology* vol.54 (2003): 155-75.

4. S. Sassen, *Globalisation and its Discontents: Essays on the New Mobility of People and Money* (New York, 1998).

5. E.g., M. Chambers *Migrancy, Culture, Identity* (London, 1994); P. Virillio, *The Aesthetics of Disappearance* (New York, 1991); M. Augé, *Non-Places: Introduction to an Anthropology of Supermodernity* (London, 1995).

6. Quoted in T. Cresswell, 'The production of mobilities', *New Formations* no. 43 (2001): 11-25, at p.19.

7. T. Cresswell, 'Production of mobilities', pp.11-25.

8. We prefer this term to the rather more common one, 'automobility', because it is more suggestive of a process and hence more resistant to the pitfalls of reification.

9. [[Michael Freeman's pioneering work represents an important, if partial, exception to this claim. See his 'The railway as cultural metaphor: "What kind of railway history?" revisited', *Journal of Transport History* 3rd ser. vol.29 (1999): 160-7; and, more fully, *Railways and the Victorian Imagination* (New Haven, 1999).

10. E.g., D. Chaney, *Cultural Change and Everyday Life* (Basingstoke and New York, 2002), pp.1-9, 37-54. For an excellent general introduction, see A. Tudor, *Decoding Culture: Theory and Method in Cultural Studies* (London, 1999) and, more provocatively, D. Mitchell, 'There's no such thing as culture: towards a reconceptualization of the idea of culture in

geography', *Transactions of the Institute of British Geography,* new ser. vol.20 (1995): 102-16.

11. T**.** Purvis and A**.** Hunt, 'Discourse, ideology, discourse, ideology, discourse, ideology…', *British Journal of Sociology*, vol.44 (1993): 473-99, at p.486.

12. M. Gottdiener, *Postmodern Semiotics: Material Culture and the Forms of Postmodern Life* (Cambridge MA and Oxford, 1995).

13. R. Williams, *Keywords* (London, 1976), p.87.

14. Gottdiener, *Postmodern Semiotics*, p.vii.

15.

16. J. Beckmann, 'Automobility — a social problem and theoretical concept', *Environment and Planning D: Society and Space* vol.19 (2001): 593-607.

17. Beckmann, 'Automobility', p.600-2.

18. For important pioneering studies, see S. O'Connell, *The Car in British Society: Class, Gender and Motoring 1896-1939* (Manchester, 1998); C. McShane, *Down the Asphalt Path: The Automobile and the American City* (New York and Chichester, 1994).

19. On the historical opportunities and constraints of urban public transport, see e.g., C. Divall and W. Bond, eds, *Suburbanizing the Masses: Public Transport and Urban Development in Historical Perspective* (Aldershot, 2003).

20. M. Sheller and J. Urry, 'The City and the Car', *International Journal of Urban and Regional Research* vol.24 (2000): 737-57, at p.739. An edited version appears in A. Root, ed., *Delivering Sustainable Transport: A Social Science Perspective* (Amsterdam etc, 2003), pp.171-89.

21. Beckmann, 'Automobility', pp.593-4.

22. The idea that historically particular transport modes have been tied up with certain ways of representing, perceiving and using time and space is not, of course, new. See e.g., D. Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change* (Cambridge MA and Oxford, 1990), part 3; W. Schivelbusch, *The Railway Journey: The Industrialization of Time and Space in the Nineteenth Century* (Leamington Spa, 1986, orig. 1977); S. Kern, *The Culture of Time and Space 1880-1918* (Cambridge MA, 1983).

23. E.g., S. Whatmore, *Hybrid Geographies: Natures, Cultures, Spaces* (London, 2002). For an overview, see M. Michael, *Reconnecting Culture, Technology and Nature: From Society*

to Heterogeneity (London and New York, 2000), pp.1-44. A key figure is the philosopher Michael Serres, while Bruno Latour and Donna Haraway are leading examples of such theorists. But older, less-fashionable (but not necessarily less fruitful) social theories, such as some versions of historical materialism, also attempt to fuse the cultural and the material in ways that do not simply make the former an epiphenomenon of the latter.

24. M. Akrich and B. Latour, 'A summary of a convenient vocabulary for the semiotics of human and non-human assemblies', in W.E. Bijker and J. Law, eds., *Shaping Technology/Building Society* (Cambridge MA, 1992), p.259.

25. Michael, *Reconnecting Culture*, pp.25, 31, 35-7, quote at p.35.

26. Beckmann, 'Automobility', p.603.

27. Michael, *Reconnecting Culture*, p.35.

28. Michael, *Reconnecting Culture*, p.36.

29. Beckmann, 'Automobility', p.603.

30. S. Kirsch, 'The incredible shrinking world? technology and the production of space', *Environment and Planning D: Society and Space* vol.13 (1995): 529-55.

31. H. Lefebvre, *The Production of Space*, trans. D. Nicholson-Smith (Malden MA, Oxford and Victoria, 1991, orig.1974).

32. Kirsch, 'Shrinking world?', pp.550-2.

33. Note then-deputy editor Gijs Mom's comments in 2003 on the lack of a systematic treatment of technology within the pages of the *Journal of Transport History*, and more recently in the same journal, social historian John Walton's assertion that the history of transport technology has until recently been treated 'mainly' as an economic phenomenon. Mom, 'What kind of transport history did we get?', pp.131-2; J. Walton, 'Transport, travel, tourism and mobility: a cultural turn?', *Journal of Transport History* 3rd ser. 27/2 (Sep. 2006): 129-34, at p.129. See also C. Divall and A. Scott, *Making Histories in Transport Museums* (London and New York, 2001), chp.4.

34. See, e.g., C. Divall and B. Schmucki, 'Technology, (sub)urban development and the social construction of urban transport', in C. Divall and W. Bond, eds, *Suburbanizing the Masses: Public Transport and Urban Development in Historical Perspective* (Aldershot, 2003), pp.1-19, and several of the essays therein; C. Divall, 'Transport 1900-39', in C. Wrigley, ed., *A Companion to Early Twentieth-Century Britain* (Oxford, 2002), pp.286-301.

35. See the journal *Mobilities*, first published in March 2006.

36. An unjustly neglected instance is J. P. McKay, *Tramways and Trolleys: The Rise of Urban Mass Transport in Europe* (Princeton, 1976). Schivelbusch's *The Railway Journey* (orig. 1977) is better known – perhaps because its English translation coincided with the upsurge of interest in cultural history in the english-speaking world.

37. Oxford English Dictionary on line.

38. Michael, *Reconnecting Culture*, offers an interesting development.

39. K. Baynes, J. Bohman, T. McCarthy, *After Philosophy: End or Transformation?* (Cambridge MA, 1991), p.103.

40. G. Revill, 'Railway labour and the geography of collective bargaining: the Midland Railway strikes of 1879 and 1887', *Journal of Historical Geography* (special issue, Cultures of Transport) (in press); T. Strangleman, *Work Identity at the End of the Line? Privatisation and Cultural Change in the UK Rail Industry* (London, 2004).

41. B. Latour, *We Have Never Been Modern* (Cambridge MA, 1993), p.117.

42. P. Stallybrass and A. White, *The Politics and Poetics of Transgression* (London, 1986). For historical studies of this, see e.g., McShane, *Down the Asphalt Path*.

43. D. Wall, *Earth First! and the Anti-Roads Movement: Radical Environmentalism and Comparative Social Movements* (London, 1999).

44. See especially B. Latour, *Science in Action: How to Follow Scientists and Engineers Through Society* (Milton Keynes, 1987).

45. G. Verstaete, 'Technological frontiers and the politics of mobility in the European Union', *New Formations* no. 43 (2001): 26-43, at p.41.

46. P. Hindle, *Medieval Roads and Tracks* (Princes Risborough,1998); N. Ohler, *The Medieval Traveller* (Woodbridge Suffolk, 1989).

47. S. Webb and B. Webb, *English Local Government: The Story of the King's Highway* (London, 1913); P. Howell, 'Public space and the public sphere – political theory and the historical geography of modernity', *Environment and Planning D: Society and Space* vol.11 (1993): 303-22; G. Laugero, 'Infrastructures of Enlightenment: road-making, the public sphere, and the emergence of Literature', *Eighteenth-Century Studies* vol.29 (1996): 45-67. But for a much more nuanced account of the English 20th-century highway that draws upon the kind of ideas we advocate here, see P. Merriman, *Driving Spaces: A Cultural-Historical Geography of England's M1 Motorway* (Malden MA and Oxford, 2007).

48. Nottinghamshire Record Office [NRO], DDE 3/8 (1781), 'Proposals for improving the

Navigation of the River Trent, between Wilden Ferry and Gainsborough, and for regulating the boatmen and bargemen on that River'. See also University of Nottingham Library, G.Y. Hemingway, comp., 'Documents in Connection with the River Trent', ca 1970s, pp.29-33.

49. NRO, DDE 3/8 (1781).

50. G. Revill, 'Channels of evidence: documents, management and representation', in N. Alfrey and S.J. Daniels, eds, *River Trent Exhibition Catalogue* (Nottingham, 2001), pp.12-17.

51. P. Bishop, 'Gathering the land: the Alice Spring to Darwin rail corridor', *Environment and Planning D: Society and Space* vol.20 (2002): 295-317. The idea of a transport corridor is not, however, a new one amongst historians: John R. Stilgoe employed it over 20 years ago in his *Metropolitan Corridor: Railroads and the American Scene* (New Haven, 1985).

52. Bishop, 'Gathering the land', p.315.

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