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Policy Processes/Governance Issues	
<p>Fulton, (Lord) J. (1968), <i>Report of the Committee on the Civil Service</i>, London: HMSO,</p> <p>beautifully summarised in: Robson, W. (1968) "The Fulton Report on the Civil Service", <i>Political Quarterly</i> 39, 397-414. http://onlinelibrary.wiley.com/doi/10.1111/j.1467-923X.1968.tb00292.x/abstract</p>	<p>The classic critique of executive timidity and self-interest, based on institutionalised risk aversion, reproduction of socio-class hierarchies and other analyses of <i>who</i> is the civil service</p>
<p>Better Government Initiative (2010) <i>Good government: reforming Parliament and the executive</i>. Better Government Initiative, London. www.bettergovernmentinitiative.co.uk/sitedata/Misc/Good-government-17-October.pdf</p>	<p>A contemporary example of the above. Excoriating in places and written by some very senior former civil servants who should know their subject.</p>
<p>Rhodes, R. (1996) 'From Institutions to Dogma: Tradition, Eclecticism, and Ideology in the Study of British Public Administration' <i>Public Administration Review</i> 56(6) 507-516. http://www.jstor.org/stable/977249</p>	<p>Another classic critique of the dead hand of the civil service and why genuine (and radical) policy change is so difficult in the UK</p>
<p>Bovaird, T. (2007) "Triggering Change through Culture Clash: The UK Civil Service Reform Program, 1999–2005",</p> <p>In Schedler, K. and Proeller, I. <i>Cultural Aspects of Public Management Reform</i>, Emerald, Bingley 323 – 350 http://www.emeraldinsight.com/books.htm?issn=0732-1317&volume=16</p>	<p>An excellent essay on the impacts of institutional and cultural conservatism.</p>
<p>Bovaird, T. and Russell, K. (2007) <i>Civil Service Reform In The UK, 1999–2005: Revolutionary Failure Or Evolutionary Success?</i>, <i>Public Administration</i>, 85(2) 301-32 http://onlinelibrary.wiley.com/doi/10.1111/j.1467-9299.2007.00651.x/abstract</p>	<p>... ditto.</p>
<p>Chapman, R.A. and O'Toole, B.J. (2010) <i>Leadership in the British civil service: an interpretation</i>. <i>Public Policy and Administration</i>, 25(2) 123-136 http://ppa.sagepub.com/content/25/2/123.abstract</p>	<p>Explores how the notion of 'public sector ethos' still pervades the civil service and the conflicts between this idea and more proactive ones of 'leadership'.</p>

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Policy Change	
<p>Work within the political science domain has studied the processes of policy change. This has involved both describing what is meant by ‘change’ and seeking to explain change (although this can take a massive range of perspectives). This seems highly relevant to the Disruption project as Hall’s work (for example) talks about very gradual periods of policy evolution followed by more rapid ‘punctuated equilibria’ where there is a big policy shift. This implies that ‘policy disruptions’ do occur. Dudley and Richardson’s work looking at Beeching and the rise and fall of the roads lobby also suggests that these shifts can be engineered and consider some of the conditions that support that. Kingdon’s work may have something to offer here as it looks at the notion of ‘windows of opportunities’ where ideas, interests and politics come together to deliver change. Disruptions may be one such window and this could influence our thinking on dissemination.</p>	
<p>Dudley, G. and Richardson, J. (2000) Why Does Policy Change: Lessons from British Transport Policy 1945-99, Routledge, London. http://books.google.co.uk/books/about/Why_does_policy_change.html?id=Q7oDxFn-phYC</p>	<p>This book describes the importance of policy communities and policy entrepreneurs in effecting policy change. They support the notion of punctuated equilibriums and suggest that we might well identify what the broader communities and logics that we are working “with” and “against” in order to effect change to lower carbon behaviours.</p>
<p>Hall, P. (1993) Policy Paradigms, Social Learning, and the State: The Case of Economic Policymaking in Britain, <i>Comparative Politics</i>, 25, 275-296. http://www.jstor.org/stable/422246</p>	<p>Hall’s work was important in unpacking what is meant by policy change. This allows us to understand changes to the means and ends of policy more clearly and also provides insights into why policy change typically happens incrementally over long periods before major changes, often rapid, occur.</p>
<p>Howlett, M. and Cashmore, B. (2009). The Dependent Variable Problem in the Study of Policy Change: Understanding Policy Change as a Methodological Problem, <i>Journal of Comparative Policy Analysis: Research and Practice</i>, 11(1), 33-46. http://dx.doi.org/10.1080/13876980802648144</p>	<p>Howlett and Cashmore underscore the importance of being clear about the nature of policy change so that the right variables are being assessed (e.g. changing objectives, changing logics underpinning instruments, changing mechanisms) which builds from Hall and could help us steer the policy design and expert interviews to specific arenas where we feel change is necessary.</p>
<p>Kingdon, J.W. (1995) Agendas, Alternatives and Public Policies (Second Edition). New York, Harper Collins. http://books.google.co.uk/books/about/Agendas_Alternatives_and_Public_Policies.html?id=OXsdSgAACAAJ&redir_esc=y</p>	<p>Kingdon’s work discusses how and why policy changes. It is noted in particular for describing how the coupling of the generally distinct ‘streams’ of policy, politics and problems can lead to ‘windows of opportunities for change’ – which may be relevant to the outcomes of disruptions and may indeed have some</p>

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	<p>interesting parallels to the work undertaken in WP1-4 on a citizen, community and business level.</p>
<p>Fischer, F. (2003) Reframing public policy: discursive politics and deliberative practices, Oxford University Press http://books.google.co.uk/books/about/Reframing_public_policy.html?id=yR0dZ42TjgUC</p>	<p>In calling for ‘approaches that emphasize deliberative interaction between citizens, analysts and decision makers, Fischer (2003: 14) advocates a ‘bringing together’ of politicians’ and people’s interests through participatory policy making. He challenges technocratic discourses of policy-making arguing that such dominant discourses need to be replaced with a ‘continuous interchange of ideas, interpretations and criticisms among social scientists and other political actors’ Fischer (2003: 36).</p> <p>If I were to pick one author/book that sums up my worldview on all of this, it would be Frank Fischer. It’s from this book that comes our closing quote at the sandpit, that as academics, we should “minimise unproductive political debate on the pressing political issues of the day”</p>
<p>Birkland, T. (2006) Lessons of Disaster: Policy Change After Catastrophic Events, Georgetown University Press, American Governance and Public Policy Series http://books.google.co.uk/books/about/Lessons_of_Disaster.html?id=TziZKPqkhTMC</p>	
<p>Backstrand (2003). "Civic Science for Sustainability: Reframing the Role of Experts, Policy Makers and Citizens in Environmental Governance." Global Environmental Politics 3(4): 24-41. http://dx.doi.org/10.1162/152638003322757916</p>	<p>The authors suggest that situations involving large complexity, radical uncertainty and high stakes, new scientific practices to ensure quality control have to be established. This encompasses a re-orientation of science toward incorporating multiple stakeholders.</p>
<p>Bickerstaff, K. and G. Walker (2005). "Shared visions, unholy alliances: Power, governance and deliberative processes in local transport planning." Urban Studies 42(12): 2123-2144. http://dx.doi.org/10.1080/00420980500332098</p>	<p>The research, across a range of stakeholder groups, reveals a deeply problematic relationship between citizen involvement and established structures of democratic decision-making. Attention is drawn to the institutional constraints which account for the limited realisation of the participatory agenda in local governance.</p>

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Papadopoulos, Y. and P. Warin (2007). "Are innovative, participatory and deliberative procedures in policy making democratic and effective?" European Journal of Political Research 46(4): 445-472.
<http://dx.doi.org/10.1111/j.1475-6765.2007.00696.x>

The article focuses on four research questions the authors consider particularly important for the assessment of the contribution of the devices under scrutiny to democratic and effective decision making: questions of openness and access (input-legitimacy); questions regarding the quality of deliberation (throughput); questions of efficiency and effectiveness (output-legitimacy); and the issue of their insertion into the public space (questions of transparency and accountability).

Transport Policy (Overviews)	
<p>Docherty, I. and Shaw, J. (2011) "The Transformation of Transport Policy in Great Britain? 'New Realism' and New Labour's decade of displacement activity", Environment and Planning A 43(1) 224-251. http://www.envplan.com/abstract.cgi?id=a43184</p> <p>Docherty, I. and Shaw, J. (eds) (2008) <i>Traffic Jam – 10 years of 'sustainable' transport in the UK</i>, Policy Press, Bristol http://www.policypress.co.uk/display.asp?K=9781847420725</p> <p>Docherty, I. and Shaw, J. (eds) (2003) <i>A New Deal for Transport? The UK's Struggle with the Sustainable Transport Agenda</i>, Blackwell, Oxford. http://eu.wiley.com/WileyCDA/WileyTitle/productCd-1405106301.html</p>	<p>The first article is a distillation of various issues discussed in two previous edited books that charted the unsuccessful stumbles of the Blair and Brown governments towards 'sustainable transport': The EP(A) piece sets out some fairly straightforward arguments about why transport policy is a 'wicked problem' of the type identified in Rittel, H. and Webber, M. (1973) "Dilemmas in a general theory of planning", <i>Policy Sciences</i> 4, 155-169 http://www.thestudiony.com/ed/bfa/Rittel+Webber+Dilemmas.pdf.</p> <p>We debate whether transport has enough political impact, the mismatch between long planning horizons and electoral cycles etc, but in the end conclude that the real problem is intransigent bureaucracy and the suffocating influence of the civil service, which, with very few exceptions (most noticeably Thatcherite privatisations), has managed to throttle most transport policy innovation. Added to this is the all-seeing all-powerful role of the Treasury, which is often proud of how much less we spend on transport overall than continental Europe, the hypocrisy of spending (relatively) large amounts of money in London and the south east compared to the rest of England especially, notwithstanding.</p>
<p>Goodwin, P. (1997) <i>Solving congestion (when we must not build roads, increase spending, lose votes, damage the economy or harm the environment and will never find equilibrium)</i>. Inaugural lecture delivered at UCL, 23 October. http://www2.cege.ucl.ac.uk/cts/tsu/pbginau.htm</p> <p>and its formal exposition as:</p> <p>Goodwin, P. (1999) <i>Transformation of transport policy in Great Britain</i>, <i>Transportation Research Part A: Policy and Practice</i>, 33(7-8) 655-669 http://www.ingentaconnect.com/content/els/09658564/1999/00000033/00000007/art00011</p>	<p>The antecedents of the above, the second of which we deliberately referenced in the title of the EP(A) piece. Goodwin (and colleagues) was first to set out a broad scope, an intellectually-coherent response to the 'predict and provide' orthodoxy in place since the 1960s supporting new road construction as the primary instrument of transport policy. Much (but not all) of this thinking was incorporated in the 1997 Labour Government's original White Paper, <i>A New Deal for Transport</i></p>

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<p>also</p> <p>Goodwin, P., Hallett, S., Kenny, F and Stokes, G. (1991) <i>Transport: the new realism</i>. Transport Studies Unit, Oxford</p>	
<p>Headicar, P (2009) <i>Transport policy and planning in Great Britain</i>. Routledge, London http://www.routledge.com/books/details/9780415469876/</p>	<p>Best (other than <i>Traffic Jam</i>) general recent survey of the UK transport policy scene</p>
<p>Mackinnon, D., Shaw, J., and Docherty, I. (2008) <i>Diverging mobilities? Devolution, transport and policy innovation</i>. Elsevier, Oxford http://books.google.co.uk/books?id=8Z2zq4W3ThgC&printsec=frontcover#v=onepage&q&f=false</p> <p>Shaw, J., Mackinnon, D. and Docherty, I. (2009) Divergence or convergence? Devolution and transport policy in the United Kingdom, <i>Environment and Planning C: Government and Policy</i> 27(3) 546-567. http://www.envplan.com/abstract.cgi?id=c0899r</p>	<p>Some recent work that looks at how devolution has shaped changing policy formulation and implementation frameworks, in both book and article versions. It begins to put forward the idea that sufficient ‘strategic capacity’, effectively a combination of vision, leadership and social capital in the organisation, is necessary to actually implement radical policy. Simply having the power to do so is not enough.</p>
<p>Docherty, I. and Mackie, P. (2010) Planning for transport in the wake of Stern and Eddington, <i>Regional Studies</i> 44(8) 1085-1096. http://www.tandfonline.com/doi/abs/10.1080/00343400902736550</p>	<p>This is an attempt to analyse whether the various independent reviews for the Treasury in recent years – most notably Stern on climate change and Eddington on transport – were aligned in any meaningful way, and what the combination of documents says about government’s approach to climate change</p>

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Transport Policy (Context)	
<p>European Conference of Ministers of Transport (1989) <i>Transport policy and the environment</i>. OECD, Paris.</p>	<p>This really is the first meaningful document to set out the scale of the environmental challenge as it relates to *transport* and policy priorities in particular. It is the real turning/tipping point that informed subsequent UK government policy as expressed in early 90s documentation such as the Royal Commission on Environmental Pollution's report on transport (1994).</p>
<p>Cabinet Office (2009) An Analysis of Urban Transport, Cabinet Office, London. http://www.cabinetoffice.gov.uk/strategy/work_areas/urban-transport.aspx</p>	<p>This is one government document that demonstrates some understanding of the nub of the transport problem can indeed be found in Whitehall... although in appearing 6 months before the 2010 general election it was somewhat ill-timed to say the least</p>
<p>Banks, N., Bayliss, D. and Glaister, S. (2007) Motoring Towards 2050: Roads And Reality. RAC Foundation, London http://www.racfoundation.org/assets/rac_foundation/content/downloadables/roads%20and%20reality%20-%20glaister%20et%20al%20-%20041207%20-%20technical%20report.pdf</p>	<p>Given that it's always good to know what the opposition is thinking, this is probably the best example of the unreconstructed UK roads lobby in action.</p>

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Transport Policy (Implementation)	
<p>Banister, D. (2003) 'Critical pragmatism and congestion charging in London', <i>International Social Science Journal</i> 176, 249-264 http://onlinelibrary.wiley.com/doi/10.1111/1468-2451.55020145/abstract</p>	<p>An excellent case study of the realpolitik of getting something actually done (and much better/more informed than most attempts at understanding the congestion charge)</p>
<p>Banister, D. (2004) 'Implementing the possible?', <i>Planning Theory & Practice</i> 5(4) 499-501 http://www.tandfonline.com/doi/abs/10.1080/1464935042000293233</p>	<p>More of the same, a more positive view of the capacity of government to make things better;</p>
<p>Banister, D., Pucher, J. and Lee-Gosselin, M. (2007) 'Making Sustainable Transport Politically and Publicly Acceptable' http://policy.rutgers.edu/faculty/pucher/Acceptability%20EU%20CAN%20USA.pdf</p> <p>in</p> <p>Rietveld, P. and Stough, R., (eds), <i>Institutions and Sustainable Transport: Regulatory Reform in Advanced Economies</i>. Cheltenham, England: Edward Elgar, 17-50 http://www.tandfonline.com/doi/abs/10.1080/01944360802146253</p>	<p>... adds some comparative dimensions.</p>

Transport Policy and Behaviour Change	
<p>Commission for Integrated Transport (2002) <i>Public Attitudes to Transport in England</i>, CfIT, London. http://cfit.independent.gov.uk/pubs/2002/mori2002/mori2002/pdf/mori2002.pdf</p>	<p>Before it was nobbled by government and reduced to “didn’t they all do well” platitudes, the Commission for Integrated Transport published some very insightful data about public attitudes to the transport ‘problem’.</p>
<p>Cairns, S., Sloman, L, Newson, C., Anable, J. Kirkbride, A. and Goodwin P. (2004), <i>Smarter Choices – Changing the Way We Travel</i>, University College London, http://eprints.ucl.ac.uk/1224/1/1224.pdf</p> <p>Department for Transport (2005) <i>Smarter choices: changing the way we travel</i>. DfT. London. http://www.dft.gov.uk/publications/smarter-choices-changing-the-way-we-travel-main-document/</p> <p>Department for Transport (2009) <i>Understanding business attitudes to transport</i>. DfT, London. http://www.dft.gov.uk/pgr/scienceresearch/social/businessattitudes/.</p> <p>Goodwin, P and Lyons, G (2010) <i>Public attitudes to transport</i>. <i>Transportation Planning and Technology</i> 33, 3-17. http://eprints.uwe.ac.uk/7777/2/Goodwin_Lyons_Public_Attitudes_submitted_to_TPT_V321_REVISIED_CLEAN.pdf</p> <p>Sloman L., Cairns S., Newson C., Anable J., Pridmore A. and Goodwin P, (2010) <i>Effects of Smarter Choices Programmes in the Sustainable Travel Towns</i>, Department for Transport, London. http://www.dft.gov.uk/pgr/sustainable/smarterchoices/smarterchoiceprogrammes/pdf/effects.pdf</p>	<p>This set of references looks at the potential for ‘hearts and minds’-type behaviour change initiatives from the perspectives of the individual/household, the firm, and the community. They are the best attempts to set out what might be possible in terms of ameliorating carbon emissions from transport within the wider policy paradigm we have at present, i.e. one based on ‘choice’ rather than more interventionist pricing and regulation</p>

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Studying Crises	
<p>Lyons, G. and Chatterjee, K. (Eds.) Transport Lessons from the Fuel Tax Protests of 2000. pp63-84 , Aldershot, Ashgate. (ISBN 0 7546 1844 7) http://www.ashgate.com/default.aspx?page=637&calcTitle=1&title_id=4427&edition_id=4965</p>	<p>This book chronicles the unfolding of the 2000 Fuel Duty protests and therefore provides a good window on how this type of crisis happened and what the implications were. There are chapters on the policy context, history and behavioural response (including by me!)</p>
<p>Mobilities (2010) Ash cloud disruption special issue. <i>Mobilities</i> 6 (1) http://www.tandfonline.com/toc/rmob20/6/1</p>	<p>The papers in this special issue offer a range of insights into why the Icelandic volcanic ash cloud had the widespread impacts experienced. Particularly relevant are the systems perspectives put forward (in the paper by O'Regan) and the framing of the eruption as a necessary crisis to show how normalised mobility has become and how it is seen as a right governments are expected to preserve (Budd et al.).</p>
<p>Birtchnell, T. and Buescher, M. (2011) Stranded: An Eruption of Disruption, <i>Mobilities</i>, 6 (1), 1-9 http://dx.doi.org/10.1080/17450101.2011.532648</p>	<p>This is the editorial to the <i>Mobilities</i> special issue on the Icelandic Ash Cloud disruption and the whole special issue should provide further useful insights into the duration and unfolding of the disruption.</p>
<p>Adey, P., Anderson, B. and Guerrero, L.L. (2011) An ash cloud, airspace and environmental threat. <i>Transactions of the Institute of British Geographers</i> 36, 338-343 http://onlinelibrary.wiley.com/doi/10.1111/j.1475-5661.2011.00448.x/pdf</p>	<p>Using the example of the Icelandic volcanic eruption in 2010, this paper explores the complex interdependencies that shape everyday mobile life. The way air travel for business and pleasure is affected by a whole series of entanglements - from the governance of airspace to risk management and the effects of financialisation on insurance for travellers - is used to reveal the often overlooked factors organising the travel we now take for granted.</p>
<p>Shianjiang, Z and Levinson, D. (2010) A Review of Research on Planned and Unplanned Disruptions to Transportation Networks. 89th TRB Annual Meeting, Washington D.C. http://EconPapers.repec.org/RePEc:nex:wpaper:disrupti-onreview</p>	<p>This paper reviews the theoretical and empirical evidence on “traffic and behavioural impacts” of network disruptions and tries to draw out lessons for methods for capturing the impacts of network disruption.</p>
<p>Graham S (Ed) (2009) Disrupted cities. London & New York: Routledge. http://books.google.co.uk/books?id=ksLzDva8kIMC&lpg=</p>	<p>The chapters in this edited collection illustrate how infrastructures central to everyday life have: become taken for</p>

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granted as part of a normalised way of being; involve complex system interdependencies that only become obvious when the system is disrupted; have different impacts of different social groups, at times of normal operation and disruption. The introduction to the book is particularly insightful. It outlines how, for the editor, the disruption of infrastructures is a moment when the role and normality of taken for granted systems is revealed, something hard to unpack through studies of systems that are functioning as they are designed to.

Habitual Behaviour	
<p>Garling, T. and Axhausen, K.W.(2003) Introduction: Habitual travel choice. Transportation 30: 1–11, 2003 http://www.springerlink.com/content/k00835072r802863/</p>	<p>The literature is vast (although narrow in perspective (see Schwanan et al below for a critique) but this introduction to a special issue on habitual travel choice is the best place for an overview. The authors justify the focus on this topic because of <i>'its bearing on travel demand management strategies. A choice that is non-deliberate may in fact be difficult to influence with rational arguments (e.g., increased costs), since the person making the choice tends to discount relevant information. Thus, it must also be asked how habits are broken, that is, how choices become deliberate and rational again.'</i> This sums up the ethos of all the main texts on habitual travel. This introduction goes through the various ways in which travel habit has been 'measured' (mainly using experimental psychology). Habits are said to be triggered and reinforced by the physical and social environment - e.g. - including infrastructure, and behavioural norms including perceptions of socially and culturally acceptable behaviour.</p>
<p>Verplanken B, Aarts H, van Knippenberg A & van Knippenberg C (1994) Attitude versus general habit: Antecedents of travel mode choice. Journal of Applied Social Psychology 24: 285–300. http://onlinelibrary.wiley.com/doi/10.1111/j.1559-1816.1994.tb00583.x/abstract</p>	<p>Bas Verplanken has been extremely influential regarding habit in mode choice, critiquing mainstream psychological theory (eg TPB) for failing to consider how habits mediate the link between behavioural intention and actual behaviour. In a variety of his papers (including this one) he provides empirical (experimental) evidence for the claim that habitual behaviour is preceded by less or no deliberate information processing. He developed the <i>response-frequency measure of habit</i> - the more frequently a certain mode is chosen, the more habitual or script-based the choice is assumed to be. The idea is that a developed habit or script (e.g of choosing to drive) has generalised to many situations so that it is triggered simply by the goal of travel from one place to another. This is deemed to be a better</p>

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	<p>measure of habit than merely asking people to recall past choice frequencies. This is relevant to Disruption only to know where the so called empirical evidence for the notion of non-deliberative, habitual behaviour comes from but also to be aware of the debate about how to measure habit strength in surveys.</p>
<p>Ouellette, J.A. and W. Wood (1998), Habit and Intention in Everyday Life: The Multiple Processes by Which Past Behavior Predicts Future Behavior, Psychological Bulletin, 124 (1), 54–74. http://dornsife.usc.edu/wendywood/research/documents/Ouellette.Wood.1998.pdf</p>	<p>This is another classic text on habit which develops the hypothesis that a strong relationship between past behaviour and later behaviour proves that the behaviour in question is habitual. The authors claim that well practiced behaviours in constant contexts recur because the processing that initiates and controls their performances becomes automatic. Alternately, when behaviours are not well learned or when they are performed in <i>unstable or difficult contexts</i>, conscious decision making is likely to be necessary to initiate and carry out the behaviour.</p>
<p>Schwanan, T., Banister, D. and Anable, J. Rethinking habits and their role in behaviour change: the case of low carbon mobility. Submitted (Aug 2011) Journal of Transport Geography (special issue on Theoretical Perspectives on Climate Change Mitigation in Transport).</p>	<p>This is not yet in press but represents the journey I have personally been on recently to broaden my theoretical horizons ... Habits are generally viewed as negative and restrictive things that need to be ‘broken’ when applied to carbon intensive travel behaviours. This paper adopts a more positive approach by critiquing and moving away from psychological approaches and instead draws upon philosophical and sociological conceptualisations of habit. Here reflective thought and conscious mental processes are downgraded in favour of the idea that habits actually <i>precede</i> deliberative action and should be thought of as the capacity or <i>tendency</i> to act. We use the example of the nourishment of cycling capacity and norms from a young age in the Netherlands (so that changes to infrastructure re-actualise such tendencies and have greater impact) and the idea that those who are used to travelling on public transport or non-car modes in general earlier in the life-course</p>

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	<p>adapt more easily to life after the car (with evidence cited). This is directly relevant to Disruption as it argues that widespread, durable behaviour change is unlikely to result from the displacement of automaticity by reasoned action but instead demands systemic changes in collective customs.</p>
<p>Darnton, A, Verplanken, B, White, P and Whitmarsh, L (2011). Habits, Routines and Sustainable Lifestyles: A summary report to the Department for Environment, Food and Rural Affairs. AD Research & Analysis for Defra, London., Defra Briefing Paper EVO502 http://randd.defra.gov.uk/Document.aspx?Document=HabitsRoutinesSustainableLifestylesEVO502FinalSummaryReportNov2011(2).pdf</p>	<p>A report for Defra looking at the place of habits and routines in the context of behaviour change policy for the promotion of sustainable lifestyles. The report comes to similar conclusions as Chatterton 2011, with regard to the usefulness of Triandis' Theory of Interpersonal Behaviour, and the link between 'Habits as Behaviours' (where they are created under conditions of repetition, automaticity and stability, and 'Habits as Practices' where things are much more complex. This report is particularly key as it is currently the best elaboration of the '3 Elements' view of the precursors from which social practice arise. This 3 Elements model comprises of Materials/Infrastructure, Meanings/Images and Procedures/Competencies.</p>

Measurement of the Natural Variability in Travel Behaviour	
<p>Jones P & Clarke M (1988) The significance and measurement of variability in travel behaviour. Transportation 15: 65–87. http://www.springerlink.com/content/q7424n8646nj2531/</p>	<p>An early paper advocating an understanding of variability in travel behaviour and puts forwards methods and measures to do so. It raises a number of issues for debate, probably the most crucial of which is: variability in what? The way in which behaviour is measured crucially affects our conception of stability and variability – the more finely we categorise behaviour (eg by activities, time spent, trip rates, mode, number of stops, routes, destinations and how all of these are defined), the more variation will become apparent from day to day or from person to person.</p>
<p>Schlich, R. And Axhausen, K.w. (2003) Habitual travel behaviour: evidence from a six week travel diary. Transportation, 30 (1), pp13-36. http://www.springerlink.com/content/vxpkq226606v3062/</p> <p>Axhausen, K.W., Zimmermann, A., Schoenfelder, S., Rindsfuser, G. and Haupt, T. (2002) Observing the rhythms of daily life: A six-week travel diary. Transportation 29: 95–124 http://www.springerlink.com/content/xp1ndwh7nm8a9f54/ http://e-collection.library.ethz.ch/eserv/eth:24347/eth-24347-01.pdf</p>	<p>The former paper asks how repetitious travel behaviour actually is (and the second one describes the methodology). Analysis of a six-week travel diary in two German cities (N=317 in 139 households) to show that travel behaviour is neither totally repetitious nor totally variable – being more stable on work days. The variability shows up more when more of the complexity of the travel patterns are analysed. The paper goes in to detail about the methods and behavioural indicators that could be used to capture the complexity and variability and conclude that the time period for measurement should not be less than two weeks.</p>
<p>Susilo, Y. and. Axhausen K.W. (2007) Stability in individual daily activity-travel-location patterns: A study using the Herfindahl-Hirschman Index, Arbeitsberichte Verkehrs- und Raumplanung, 435, IVT, ETH Zürich, Zürich. http://e-collection.library.ethz.ch/eserv/eth:29502/eth-29502-01.pdf</p>	<p>Using the same dataset as above, this analysis shows that the stability of individual activity-travel-mode-location combinations is highly influenced by the individuals’ out-of-home commitments, the intra-household conditions and the availability and the accessibility of the activity locations. Not surprisingly it concludes that different type of activity give different pattern of stability but, somewhat surprisingly, it concludes that this variability is mostly related to the accessibility of the activity locations than the activity itself. Urban residents show less variability in locations/activities than</p>

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	<p>rural residents which is also surprising, but rural residents have more stability in mode choice due to reliance on the car.</p>
<p>Kitamura, R., Yamamoto, T., Susilo, Y.O., Axhausen, K.W. (2006) How Routine is a Routine? An Analysis of Day-to-Day Variability in Prism Vertex Location. Transportation Research Part A 40 (3), 259 – 279 http://dx.doi.org/10.1016/j.tra.2005.07.002</p>	<p>Don't be put off by the title! This study is concerned with how routine an individual's routine really can be. By concentrating on commuting, it examines how the timeframe / departure times which governs the individual's daily schedule is variably from day to day and across individuals – but admits that it has no satisfactory explanation for these differences</p>
<p>Burnett P. & Hanson S. (1982) The analysis of travel as an example of complex human behaviour in spatially-constrained situation: Definition and measurement issues. Transportation Research A 16: 87–102. http://dx.doi.org/10.1016/0191-2607(82)90001-2</p> <p>Huff JO & Hanson S (1986) Repetition and variability in urban travel. Geographical Analysis 18: 97–114 http://onlinelibrary.wiley.com/doi/10.1111/j.1538-4632.1986.tb00085.x/abstract</p> <p>Hanson S. & Huff JO (1988) Systematic variability in repetitious travel. Transportation 15:111–135. http://www.springerlink.com/content/j3362331v83v8r47/</p>	<p>They take on the notion that repeated choices of a behaviour does not necessarily imply that the behaviour is habitual. They differentiate among three very different sources of variation in an individual's travel behaviour from one day to the next: systematic or predictable variation (regular patterns often done on fixed days of the week); ephemeral or nonrecurring aspects of travel (one off things); and long-term, structural change (one off events that can cause significant and longer lasting changes)".</p>
<p>Goodwin, P. (2009). Enhancing the Effectiveness of Transport Policy by Better Understanding of Travel Choices. Centre for Transport and Society, UWE Bristol, July 2009.</p> <p>Goodwin, P. (2008). Policy Incentives to Change Behaviour in Passenger Transport, Paper prepared for the OECD/International Transport Forum, Leipzig 28-30 May 2008. http://www.liftshare.com/business/pdfs/goodwin%20-%20policy%20incentives%20to%20change%20behaviour%20in%20passenger%20transport%202008.pdf</p>	<p>Goodwin has made an important contribution to the discussion of habit by introducing the notion of lags, inertia and churn in behaviour and these two publications summarise many years of his and others research in this area.</p> <p>Lag/ Intertia: even if a chosen travel option becomes less attractive, it may not justify the effort of changing behaviour. The result at the level of the individual is that there are likely to be threshold effects, sometimes called 'tipping points', where choices are not affected until the stimulus has exceeded a sufficient level.</p> <p>Churn: Analysis shows that despite relatively stability in aggregate behaviour patterns over time, there are very significant, often compensating changes</p>

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	<p>in behaviour at the micro level. Eg over a time period, a significant proportion of people can change their mode of transport to work while aggregate patterns remain stable. This is akin to the idea of 'swing' in voting behaviour being the net effect after the people moving in opposite directions have balanced out. Goodwin introduced the notion of 'asymmetric churn' in which the numbers of new and lost users over a given period are not necessarily equal.</p> <p>Variability in travel behaviour needs to be considered in conjunction with these concepts. And they are relevant to Disruption because they suggest that in order for disruptive events (especially unplanned ones) to change travel behaviour beyond the event itself, the event may need to coincide with a number of synergistic events or policies which reinforce the change and/or may need to represent a 'tipping point' which follows a consistent 'push' to change after a longer time period. Indeed, Phil Goodwin has said he thinks '<i>people store up their behavioural responses to changes in travel conditions until some other event happens</i>' (Local Transport Today article).</p>
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Planned versus Unplanned Disruption

van der Waerden, P., Timmermanns, H., Borgers, A. (2003) The influence of key events and critical incidents on transport mode choice switching behaviour: A descriptive analysis. 10th International Conference on Travel Behaviour Research, Lucerne. (also at TRB, January 2003).
http://www.ivt.ethz.ch/news/archive/20030810_IATBR/waerden.pdf

One study which tries to categorise types of disruption in relation to travel. These papers attempt to classify 'disruptions' (though they do not use that word) into:

Key events defined as a *major event in a personal life that will trigger a process of reconsidering current behaviour* eg when a young person reaches the legal age for a driver's license.

Critical incidents defined as *an event that has a major impact on one's attitude such as the involvement in an accident. In contrast to key events, a critical incident is an unexpected or unplanned event.* 90 key events and critical incidents were presented to respondents in a survey (N=173) and the table is reproduced here:

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Table 1: *Overview of response categories*

<i>Event type</i>	<i>Event classes</i>	<i>Subclasses</i>	<i>Examples of response categories</i>
(i) Personal/ Household	Socio-demographics	- change in household size - give birth to son/daughter - change in home location - change in work situation - change in daily activity	* live together / marry / divorce * - * change profession, employer, income * start school, work or pension
	Availability transport mode	- learn to cycle - getting a license - getting extra transport mode	* - * driving license for car or moped * come into possession of new mode
	Time	- change in working hours - leisure time increases - leisure time decreases	* - * - * -
	Personal experience	- victim of accident - family involved in accident - witness of accident	* subdivided into transport mode * subdivided into transport mode * subdivided into transport mode
	Physical condition	- health has increased - health has decreased - becoming older	* increase of sight, ability, fitness * decrease of sight, etc. * -
(ii) Transport mode	Experiences with transport modes	- damage to mode - feeling of insecurity - unsafe traffic situation	* broken down or damaged * subdivided into transport mode * subdivided into transport mode
	Characteristics of transport mode	- change in level of service - change in timetable - change in travel time - temporary alternatives	* standing, convenient, service * time change or reliability * subdivided into transport mode * (un)availability
	Costs	- change in travel costs - change in fixed costs - change in fuel price	* used mode or alternative modes * used mode or alternative modes * -
(iii) Transport System	Comfort and smoothness	- change in street furniture - change in parking facilities - change in traffic flows	* pavement, traffic lights, signs * parking spaces, parking costs * detour, crowded streets, flow
	Safety, psychological and policy	- change in social and traffic safety - change in driving behavior - change in traffic policy	* - * aggression, confidence, kindness * moped in car lane, priority for bikes, speed limit
(iv) Environment	Environment	- change in social environment - change in weather - attractiveness of route increased - attractiveness of route decreased	* carpooling, higgage * average temperature, darkness * construction of facilities like green space, playground, art * removal of facilities

The analysis attempted to find out: how these events affect the composition of choice sets (usually increases choice), influence people's attitude towards available mode alternatives (not very much) and how they influence behaviour (this varies..). The paper is potentially useful because of its attempt at classifying events.

(i) Life Events

Despite the increasing interest in life events and travel choices, there is little current research directly on the topic.

Coming originally from the health literature, the assumption is that change happens in everybody's life which forces a reappraisal in [travel] practice – this might be a change of home or job, or retiring, or getting married or divorced, or children growing up and leaving home. The responses can be delayed but the literature seems to suggest (or hypothesise) that people whose lives are being changed by some important event or development, tend to respond more to whatever changes in relative attractiveness to travel options that are made. This might mean that during our studies it

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<p>may be important to study unplanned disruption specifically in the context of these more planned life events. But unlike the typical literature on this, in the ethnographic work we would be able to look at the whole process, rather than simply observing in cross sectional data the typical behaviour of those before and after a transition.</p> <p>Residential relocation appears to be the most comprehensively researched life event in relation to its effects on travel behaviour change. However, the chain of causation in this case is so complex as routines of mode use, the location and distance of daily activity places, are all criteria for and caused by locational choice so that mobility decisions have to be seen as involving intertwined long and short-term decisions.</p>	
<p>Dargay, J. and Hanly, M (2003) A panel data exploration of the journey to work. European Transport Conference, Strasbourg, France. http://www.etcproceedings.org/paper/the-journey-to-work-an-analysis-of-mode-choice-based-on-panel-data</p>	<p>Analysis of the British Household Panel Survey showed that over a nine-year period, over 50% of commuters change their main mode at least once. Of those who both move house and change employer during two consecutive years, 45% also changed mode.</p>
<p>Schafer, M. and S. Bamberg (2008). Breaking habits: Linking sustainable consumption campaigns to sensitive life events. Sustainable Consumption and Production: Framework for action, Brussels, Belgium. http://www.lifeevents.de/media/pdf/publik/Schaefer_Bamberg_SCORE.pdf</p>	<p><i>“Life events do not seem to have a direct impact on sustainable consumption habits (including mobility and energy use), but they do create ‘windows of opportunity’ for behavioural changes, especially by stimulating a higher openness toward information. These windows of opportunity can be used more effectively if they are linked systematically to motivating interventions.”</i></p>
<p>Verplanken, B., Walker, I., Davis, A., Jurasek, M. (2008) Context change and travel mode choice: Combining the habit discontinuity and self-activation hypotheses, Journal of Environmental Psychology, 28: 121–127. http://dx.doi.org/10.1016/j.jenvp.2007.10.005</p>	<p>The authors draw upon the ‘habit discontinuity hypothesis’ which states that when a context change disrupts individuals’ habits, a window opens in which behaviour is more likely to be deliberately considered and the ‘self-activation hypothesis’ which states that when values incorporated in the self-concept are activated, these are more likely to guide behaviour. They put these two together to say that when context changes (could be any type of disruption) it enhances the likelihood that important values are considered and guide behaviour. They show this to be the case when tested on university employees who had or had not recently moved.</p>
<p>Wood, W., L. Tam, and M. Guerrero Wit (2005), Changing Circumstances, Disrupting Habits, Journal of Personality and Social Psychology, 88 (6), 918–33.</p>	<p>Examining various behaviours of students transferring to a new university (e.g. exercising, newspaper reading, TV</p>

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<p>http://dornsife.usc.edu/wendywood/research/documents/Wood.Tam.GuerreroWitt.2005.pdf</p>	<p>watching), habits were found to survive the transfer only when aspects of the performance context did not change (e.g. participants continued to read the paper with others). Changes in circumstances also affected the favourability of intentions, but changes in intentions alone could not explain the disruption of habits.</p>
<p>Stanbridge, K. and Lyons, G. (2006) Travel behaviour considerations during the process of residential relocation, 11th IATBR conference, Kyoto http://www.transport.uwe.ac.uk/staff/tp221r%20-%20final.pdf</p>	<p>Planned disruption such as a house move provides a useful comparator for us. This may not be the best example of this type of work but it is a qualitative understanding of the factors which influence residential relocation.</p>
<p><i>(ii) Planned (temporary or long term) Disruptions</i></p>	
<p>In addition to the literature on the impact of Smarter Choice interventions and of numerous types of planned infrastructure interventions such as pedestrianisation or congestion, there are some studies which look at individual interventions in a quasi- experimental setting. These claim to demonstrate that temporary structural interventions can interrupt habitual behaviour:</p>	
<p>Eriksson, L., Garvill, J., Norlund, A., (2008) Interrupting habitual car use: The importance of car habit strength and moral motivation for personal car use reduction, Transportation Research Part F, 11: 10-23. http://dx.doi.org/10.1016/j.trf.2007.05.004</p>	<p>Use of a randomised control trial to test out the impact of personalised journey planning advice on habit. It sought to induce a deliberate consideration to reduce personal car use and intentions for changes in travel behaviour. They claim that the intervention did make the choice of travel mode more deliberate since the association between car use and car habit strength were weakened while the relation between car use and personal/moral norm were strengthened after compared to before the intervention.</p>
<p>Fujii, S., and R. Kitamura (2003), What Does a One-Month Free Bus Ticket Do to Habitual Drivers? Transportation, 30 (1), 81–95 http://www.springerlink.com/content/p736732033370222/</p>	<p>A one month free bus ticket was given to 23 drivers but not to 20 drivers in a control group. Attitudes toward, habits of, and frequency of using automobile and bus were measured immediately before, immediately after, and one month after the long intervention. Attitudes towards the bus improved and frequency of use increased in the experimental group even one month after the intervention. The authors claim that this temporary structural change would induce a lasting increase in drivers'</p>

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	public transport use.
<p>Bamberg, S., I. Ajzen, and P. Schmidt (2003) Choice of Travel Mode in the Theory of Planned Behavior: The Role of Past Behavior, Habit, and Reasoned Action. <i>Basic and Applied Social Psychology</i>, 25 (3), 175–87. http://www.darkcoding.net/research/travelmode.pdf</p>	<p>Applies theory of planned behavior (TPB - Ajzen, 1991) in a longitudinal study to investigate the impact of the introduction of a pre-paid bus ticket (+ informational campaign) on increased bus use among college students (particularly among those who used to drive cars). A measure of past behaviour (habit) improved prediction of travel mode prior to the intervention but lost its predictive utility for behaviour following the intervention. Also, an independent measure of habit (using Verplanken’s fast response index) failed to improve the model. They conclude that past travel choice (habit) contributes to the prediction of later behaviour only if circumstances remain relatively stable. There was however no control group and there is no discussion that this ticket lasted a whole semester and therefore how transferable the results would be to a shorter intervention.</p>
(iii) Unplanned Disruptions	
<p>Budd, L., Griggs, S., Howarth, D. And Ison, S. (2010) A Fiasco of Volcanic Proportions? Eyjafjallajökull and the Closure of European Airspace. <i>Mobilities</i> 6:1, 31-40 http://dx.doi.org/10.1080/17450101.2011.532650</p>	<p>This is the only article I have seen (plus others in this special edition) which discusses how a disruption can lead to a re-evaluation of our dependency on mobility and the discourses which prevail (e.g. in the media) during such events.</p>
<p>Noland, R.B., Polak, J.W., Bell, M.G.H and Thorpe, N. (2001) Expected disruption and flexibility of vehicle users to fuel shortages. 81st TRB Paper No: 02-3475 http://www.cts.cv.ic.ac.uk/documents/publications/iccts00196.pdf</p>	<p>This paper analyses data collected about two months after the 2001 fuel crisis. It focuses on the ability of individuals to engage in various work and non-work activities under disruptive conditions and the flexibility of adaptation and whether survey respondents were able to adapt their activities to the disruption that occurred. It uses lots of statistics to try and explain attitudes to expected disruption and adaptive flexibility from demographic factors, commute mode selection, vehicle characteristics, and various other factors. They say ‘<i>modeling results suggest that households are capable of avoiding severe disruption,</i></p>

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	<p><i>though those dependent on cars expect severe disruption under these conditions. The flexibility to change various travel and activity patterns was found to be more difficult [for those dependent on cars] ... Expected disruption and flexibility tended to differ for discretionary (primarily non-work) versus non-discretionary (primarily work) trips'.</i></p>
<p>Noland, R.B., Cowart, W.A. and Fulton, L.M. (2006) Travel demand policies for saving oil during a supply emergency. Energy Policy, 34, pp. 2994-3005 http://dx.doi.org/10.1016/j.enpol.2005.05.013</p>	<p>This paper derives from a study for the IEA which documents the potential transport demand restraint strategies that could mitigate the impact of short-term supply disruptions. Using various assumptions based on (rather dodgy) knowledge about how travellers may respond under emergency conditions (e.g. using evidence from 2001 fuel crisis), it estimates the potential fuel savings from doing so. It includes various work-based policies (telecommuting, flexible work schedules), carpooling, speed limit reductions, driving bans and restrictions, increased public transport usage, and providing information on the effect of maintaining optimal tyre pressures. Results suggest that the most restrictive policies, such as driving bans and mandatory carpooling are the most effective. Other policies provide small reductions with some, such as telecommuting and flexible work schedules, having the potential to be easily implemented. Those policies, focussed on encouraging public transport use, are less effective and potentially more costly to implement.</p>
<p>Fujii, S., T. Gärling, and R. Kitamura (2001) Changes in Drivers' Perceptions and Use of Public Transport During a Freeway Closure: Effects of Temporary Structural Change on Cooperation in a Real-Life Social Dilemma. Environment and Behavior, 33 (6), 796–808 http://eab.sagepub.com/content/33/6/796.abstract</p>	<p>This survey of drivers before and during an 8-day temporary freeway closure in Osaka, Japan, the concentrates on understanding the psychological and behavioural consequences on drivers who had not used public transport before. However, the only real insights are about the frequency of PT use and their changes in perceptions of commute times. It suggests that these changes may be an important catalyst to change</p>

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	<p>behaviour. They investigate the longer term consequences in a second study (Fujii, S. and Garling, T. (2003) Development of script-based travel mode choice after forced change. Transportation Research Part F 6 (2003) 117–124). This follow-on survey indicated that frequent drivers who changed to public transport during the freeway closure continued to use PT more frequently one year after than did those drivers who did not change to PT during the closure. This enduring effect is interpreted to reflect the development of a script-based travel mode choice (one which can be made on a subset of information as important information is stored in memory).</p>
<p>Van Exel, N.J.A. and Rietveld, P. (2009) When strike comes to town: anticipated and actual behavioural reactions to a one-day, pre-announced, complete rail strike in the Netherlands. Transportation Part A, 43, pp. 526-535 http://dx.doi.org/10.1016/j.tra.2009.01.003 http://www.jobvanexel.nl/vanExel_chapter%204.pdf</p>	<p>This paper demonstrates that an announced one-day strike in the railway system of the Netherlands lead to a major reorganization of travel patterns, including abandoning the trip, changing to car use, and rescheduling the trip to another day. Young people and females were less likely to switch to car; short and middle distance trips were less likely abandoned or switched to another day; commute and business trips were more likely done by car, and business trips less likely cancelled. They conclude <i>‘despite high levels of perceived behavioural control and satisfaction with the chosen alternative, permanent modal shift as result of this strike is not expected.’</i></p>
<p>Lo,S-C., Hall, R.W. (2006) Effects of the Los Angeles transit strike on highway congestion. Transportation Research Part A, 40, pp. 903-917 http://dx.doi.org/10.1016/j.tra.2006.03.001</p>	<p>Shows that a strike in Los Angeles PT system lead to traffic speed declining by 20% and the rush period extending by 200%, even though the PT users constituted a rather limited fraction of the population. Their results imply that a significant number of PT travellers switched to using the car for the duration of the strike.</p>
<p>Hassan, Y.A. and Barker, D.J. (1999) The impact of unseasonable or extreme weather on traffic activity within Lothian region, Scotland. Journal of Transport Geography, 7, pp. 209-213</p>	<p>Daily traffic activity together with meteorological data for the period between 1987 and 1991 was used to build a predictive model. Comparing</p>

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<p>http://dx.doi.org/10.1016/S0966-6923(98)00047-7</p>	<p>observed and predicted values this paper makes observations about the type of weather events that impact on traffic and the differences between weekday and weekend patterns. A similar study (Datla, S. and Sharma, S. (2008) Impact of cold and snow on temporal and spatial variations of highway traffic volumes. Journal of Transport Geography, 16, pp. 358-272) also documents the spatial impacts (i.e on different types of road).</p>
<p>Khattak, A. and De Palma, A. (1997) The impact of adverse weather conditions on the propensity to change travel decisions: a survey of Brussels commuters. Transportation Research Part A, 3, pp181-203 http://dx.doi.org/10.1016/S0965-8564(96)00025-0</p>	<p>Commuters were asked about adverse weather impacts on their mode, mode, departure time and route selection decisions, and the factors that influence them, including travel conditions, personal and household characteristics, and situational constraints. Lots of stats about who changed what and how often and claims that most of the changes are in themselves systematic/ pre-planned.</p>
<p>Ferguson, E. (1992) Transit ridership, incident effects and public policy. Transportation Research A, 5, pp. 393 – 407, http://dx.doi.org/10.1016/0965-8564(92)90003-P</p>	<p>This paper looks at strikes and gasoline shortages in California. It uses aggregate time series data to make conclusions about how travellers respond (by changing their perceptions of the PT service utility, or by changing their location and travel behaviour on either a permanent or a temporary basis). It also looks at how long it takes for behaviour to revert to pre-incident levels and conclude that this can be influenced by fare changes, service changes or changes in operating subsidies implemented in the aftermath of a particular incident.</p>
<p>Shianjiang, Z., Levinson, D., Liu, H.X. and Harder, K. (2010) The traffic and behavioral effects of the I-35W Mississippi River bridge collapse, Transportation Research Part A, 44(10), 771-784 http://dx.doi.org/10.1016/j.tra.2010.07.001</p>	<p>The collapse of the I-35W bridge over the Mississippi River in Minneapolis abruptly interrupted the usual route of about 140,000 daily vehicle trips. Paper reports on traffic counts, ridership surveys and a bespoke survey to assess the travel reactions.</p>
<p>MacKinnon, A. (2006) Life without trucks: The impact of a temporary disruption of road freight transport on a national economy, Journal of Business Logistics 27 (2), 227-250. http://dx.doi.org/10.1002/j.2158-1592.2006.tb00224.x</p>	<p>Looks at the broader systemic impacts of a week long disruption to freight traffic in the UK through examination of inventory levels, substitutions in critical sectors and dependence on road transport.</p>

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<p>Cairns, S., Atkins, S. and Goodwin, P.G. (2002) Disappearing Traffic? The story so far, <i>Proceedings of the Institution of Civil Engineers: Municipal Engineer</i> 151 (1), 13-22 http://www.southwesteip.co.uk/downloads/documents/20070703145845.pdf</p>	<p>Paper which demonstrates using a variety of case studies that the closure of major bridges or routes, sometimes with little notice leads to traffic reductions – although as with many of these studies, they are not established to find out if the disappearing traffic reappears, why and how.</p>
<p>Guiver, J. (2011) Travel Adjustments after Road Closure: Workington, Proc. 43rd UTSG Conference, Milton Keynes, 5-7th January http://www.utsg.net/web/uploads/conference_papers/2011/jwguiver2011.pdf</p>	<p>Describes the travel responses and also the broader policy changes (e.g. GPs, supermarket, working practices, social networks) which resulted from the flooding in Workington and specifically the loss of an important crossing point.</p>
<p>Guiver, J. and Jain, J. (2011) Impacts of and Insights from the Volcanic Ash Cloud Disruption, <i>Mobilities</i>, 6 (1), 41-55 http://dx.doi.org/10.1080/17450101.2011.532651</p>	<p>Describes the types of responses, sources of information and broader social impacts (family, work) of people being stranded away from home and in determining how/when to travel in the Ash Cloud incident.</p>
<p>Kent, JD (2002) Winter maintenance - how to avert the emergency <i>Proceedings of the Institution of Civil Engineers, Municipal Engineer</i>, 151 (4), 265-270 http://www.ice.org.uk/ICE_Web_Portal/media/Topics/Winter-maintenance---How-to-avert-the-emergency.pdf</p>	<p>Examines two cases where early road closures averted emergencies. The paper questions whether the public attitude towards travelling in severe winter conditions is a major cause of disruption and discusses how this attitude can be changed.</p>

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Mobilities	
<p>Goffman, E., (1963) Behavior in Public Places: Notes on the Social Organization of Gatherings, The Free Press</p>	<p>In Behavior in Public Places (1963) Goffman develops the notion of co-presence: distinguishing between the ‘gathering’, the ‘situation’ and the ‘social occasion’. This is crucial to understanding everyday mobility and how it is altered through disruption as travel is of course dependent on the need for co-presence, for face-to-face contact between people (an idea developed by Molotch and Boden, 1994 and Urry, 2007). As well as person-to-person interaction, this theory also allows for consideration of interactions between people and space and Goffman drew from sociologists such as Georg Simmel and the Chicago School in theorizing social interaction in urban public space.</p>
<p>De Certeau, M. (1984). ‘Walking in the city’ , The practice of everyday life Berkeley: Uni of California Press http://www.ucpress.edu/book.php?isbn=9780520271456</p> <p>Lefebvre, H. (1991). The production of space (translated by Nicholson-Smith, D) Oxford, UK: Blackwell http://eu.wiley.com/WileyCDA/WileyTitle/productCd-0631181776.html</p>	<p>Lefebvre and De Certeau incorporate everyday social, embodied and material experiences of mobile space; observations and readings of mobile practices in space. De Certeau sets out an analysis of the significance of observing everyday mobile practices from the perspective of mobile bodies and Lefebvre allows a conceptualization of space as meaningful and productive of specific mobile interactions.</p>
<p>Urry, J. (2007) Mobilities, Polity Press http://books.google.co.uk/books?id=Oxdp7ssaNkC&lpg=PA6&ots=Xjl3ie6rN4&dq=Mobilising%20social%20science%20urry&pg=PA4#v=onepage&q&f=false</p>	<p>Urry argues that we need to move away from a static social science in order to fully understand the social world. Although there are a number of limitations to this thesis, particularly in applying theory to practice, Urry conceptualizes the mobile body as central in relation to other aspects of mobility. He provides a framework for understanding complex social and emotional interdependencies: ‘There is a complex sensuous ‘relationality’ between the means of travel and the traveller. Such sensuous geographies are not only located within individual bodies but extend to familial spaces, neighbourhoods, regions, national cultures and leisure spaces with</p>

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	particular kinaesthetic dispositions'
<p>Sheller, M. and Urry, J. (2006). 'The new mobilities paradigm'. Environment and planning A 38: 207-226. http://www.envplan.com/abstract.cgi?id=a37268</p>	<p>Sheller and Urry claim a paradigm shift as the importance of mobility in social science is acknowledged. They set out the range of mobilities that have the capacity to shape the social world: nearness and distance, interdependent mobilities including corporeal travel, physical movement of objects, imaginative travel, virtual travel, and communicative travel, embodied movement, materiality and affordances and mobile identities</p>
<p>Dennis, K. and Urry, J. (2009) <i>After the car</i>. Cambridge: Polity Press. http://www.polity.co.uk/book.asp?ref=9780745644219</p>	<p>This book examines how the socio-technical system that underlies the institutionalisation of the car as a form of mobility in the western world has emerged, is now being undermined by the pressures of peak oil and climate change, and is likely to be replaced as a transition to a new system takes place over the next century. As such, it provides an intriguing account of the way socio-technical systems define everyday life, but also how such systems might be disrupted and replaced.</p>
<p>Adams, J. (1999). <i>The social implications of hypermobility</i>, Paris: OECD. http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ENV/EPOC/PPC/T(99)3/FINAL/REV1&docLanguage=En (Pages 95-135)</p>	<p>Adam's develops the idea of hypermobility, a term used to encompass the far-reaching and deleterious impacts of increased mobility on the social and physical environment. Adam's suggests that key impacts of mobility including social (e.g. severance), environmental (e.g. pollution) and economic (e.g. congestion) will lead to a more dispersed, polarised, dangerous society. He argues that most resources are erroneously directed towards technical fixes, with the gap between the mobility rich and mobility poor widening as a result.</p>
<p>Sheller, M. (2004) <i>Automotive emotions</i>. Theory, Culture and Society 21: 221-242. http://tcs.sagepub.com/content/21/4-5/221.abstract</p>	<p>Sheller's article discusses the emotionality of automobility and thereby seeks an understanding of societal dependence on the car.</p>
<p>Cresswell, T. (2006) <i>On the move: Mobility in the Modern Western World</i>, New York: Routledge. Cresswell, T. (ed.) 2011. <i>Geographies of Mobilities</i>:</p>	<p>Cresswell articulates an understanding of mobility as opposed to movement, where mobility is meaningful movement. He conceptualizes 'mobility' as socially</p>

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<p>Practices, Spaces, Subjects, Ashgate, Surrey. http://books.google.co.uk/books?id=jGVo3sOFVOWC&lp g=PP1&pg=PP1#v=onepage&q&f=false</p>	<p>produced and 'movement' which is abstract, outside context of power and devoid of meaning. Mobility is both produced through social interaction and productive of space and time. It is made up of three relational mobilities: human mobility as meaning is attached to movement in space; representational mobility where mobility is a metaphor for freedom, development, progression or transgression etc. and embodied mobility, where mobility as produced and experienced and becomes a way of 'being' in the world.</p>
<p>Cresswell, T. (2010) Towards a politics of mobility. <i>Environment and Planning D: Society and Space</i> 28, 17-31. http://www.envplan.com/abstract.cgi?id=d11407</p>	<p>This paper problematises mobility and asks about the politics associated with the act of movement, the significance of movement, and the experience of movement and immobility. A series of questions are posed about mobility choices (who makes them?), about whether mobility is a good or bad thing, about the rules of mobility and who sets them, and therefore about the inequalities inherent in all mobility systems.</p>
<p>Cresswell, T. (2011) Mobilities I: Catching up. <i>Progress in Human Geography</i> 35, 550-558. http://phg.sagepub.com/content/35/4/550.short?rss=1&ssource=mfr</p>	<p>A concise summary of research to date on mobility in the social sciences (geography, sociology and politics especially). Particular emphasis is placed on the way the mobilities turn in the social sciences has moved attention away from the functionality of mobility - travel time, network connectivity etc - and towards the construction of mobility as a system, set of experiences, and as something meaningful. This alternative focus challenges the idea that mobility should be understood as simply a productive task, instead highlighting its more complex social significance.</p>
<p>Fincham, B. McGuinness, M. and Murray, L. (eds.) 2010. Mobile methodologies. London: Palgrave MacMillan. http://us.macmillan.com/mobilemethodologies/BenFincham</p>	<p>This edited collection brings together innovative research using methodological approaches that are mobile. Such approaches are predicated on the need to use discrete mobile tools to research mobile practices and on the premise that in order to understand the social world</p>

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	we must engage with practices of mobility.
<p>Hannam, K., Sheller, M. and Urry, J. (2006) Editorial: mobilities, immobilities and moorings. <i>Mobilities</i> 1, 1-22. http://www.lancs.ac.uk/fass/projects/medmobilities/docs/Editorial-Mobilities.pdf</p>	<p>This paper sets out a number of key considerations in research that adopts a systems perspective. It is highlighted how mobilities always have a spatial fix because of the infrastructures, institutions and objects involved. It is also highlighted that technology (re)configures the practice of everyday life in unpredictable ways - whether it be the changes virtual communications have or have not made to mobility or the impacts of the car on 20th century mobility. The politics of mobility and immobility are also flagged.</p>
<p>Sheller, M. and Urry, J. (2006) The new mobilities paradigm. <i>Environment and Planning A</i> 38, 207-226. http://www.envplan.com/abstract.cgi?id=a37268</p>	<p>This paper sets out the importance of understanding mobility as a central part of everyday life and thus as a central part of the production of meaning and identity. It also shows that, although apparently contradictory, mobile lives are also very much related to place and fixed infrastructures, making them geographically contingent socio-technical systems.</p>
<p>Larsen, J., Axhausen, K.W. and Urry, J.(2006) Geographies of social networks: meetings, travel and communications. <i>Mobilities</i> 1, 261-283. http://dx.doi.org/10.1080/17450100600726654</p>	<p>By reviewing the role of travel in maintaining social networks, this paper highlights the embeddedness of mobility in everyday life. It reveals that the importance of mobility stems from wider societal and technical changes that facilitate relationships at a distance, but which in turn also create compulsions of mobility for face-to-face contact. The main lesson of this paper is that the role of mobility in contemporary society cannot be disconnected from wider socio-technical transformations, these transformations also making changing mobility practices problematic.</p>
<p>Kaufmann, V., Bergman, M.M. and Joye, D. (2004) Motility: mobility as capital. <i>International Journal of Urban and Regional Research</i> 28, 745-756. http://www.pacte.cnrs.fr/IMG/pdf_articleMotilityIJURR.pdf</p>	<p>Wide ranging, conceptual and provocative, the authors use this paper to identify the intimate connections between mobility and various forms of capital. The main point is that, for many, mobility is form of capital - what they call</p>

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	<p>motility. This highlights how being mobile is a taken for granted way of being in contemporary society, and therefore the potential problems of attempting to disrupt mobility systems.</p>
<p>Laurier, E., Lorimer, H., Brown, B., Jones, O., Juhlin, O., Noble, A., Perry, M., Pica, D., Sormani, P. and Strelbel, I. (2008) Driving and ‘passenger’ing’: Notes on the ordinary organization of car travel. <i>Mobilities</i> 3, 1-23. http://dx.doi.org/10.1080/17450100701797273</p>	<p>Two important insights can be gained from this paper. First, the role of video ethnography is revealed, in this case recording what people do in their cars. Second, the role of the car as a social space is identified. The way families and friends interact in the car is shown to be a central part of social life, undermining the idea that the car is simply a way of getting from a to be. Instead, it is now an integral part of social life.</p>

Social Practices and Socio-Technical Systems	
<p>Shove, E. (2003) <i>Comfort, cleanliness and convenience: the social organization of normality</i>. Oxford & New York: Berg publishers. http://www.questia.com/library/book/comfort-cleanliness-and-convenience-the-social-organization-of-normality-by-elizabeth-shove.jsp</p>	<p>This book provides numerous examples of how socio-technical systems emerge and are stabilised. It argues for a co-evolution perspective in which the relationships between technologies, those promoting them, and the meanings and habits of consumers together generate a socio-technical system that normalises particular ways of doing things. It also suggests that systems can either be so embedded that they are impossible to break, or changeable but only if the right element of the system to target can be identified.</p> <p>An excellent introduction to looking at the world in term sof 'social practices. The approach is refreshingly devoid of jargon and has been proved to be particularly accesible to policy makers Apart from the general illustration of the concept of practices and how they arise, the key thing that stood out for me is how the novel rapidly becomes normalised, and then develops into an expectation. Shove sets out a number of conceptual mechanisms for the inter-development of practices (such as the pin-wheel). However, the one-dimensional travel or 'ratcheting' seems particularly applicable to the increasing use of the motor car.</p>
<p>Reckwitz, A. (2002) Toward a Theory of Social Practices: A Development in Culturalist Theorizing. <i>European Journal of Social Theory</i> 5, 243-263. http://www.sozialwiss.uni-hamburg.de/Isocz/isoz/schwerpunkte/allgemein/reckwitz/pdf/2002theorysocialpractices.pdf</p>	<p>This paper lays out the principles of a social theories of pratice analysis (which can be applied to mobility). It draws attention to the way that meanings, competencies, and materials 'hang together' to generate normal ways of being (or doing mobility). This theoretical framing provides a powerful way to pull together much of the work on mobilities so as to reveal why particular practices become routine and normalised.</p>
<p>Shove, E. (2010) Beyond the ABC: climate change policy and theories of social change. <i>Environment and Planning A</i> 42, 1273-1285.</p>	<p>This commentary calls for a refocussing of government attempts to change consumer behaviour. Instead of viewing behavious as rationale, and consumers as</p>

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	<p>needing education to change their attitudes and choices, it is suggested that more careful analysis of the systems that generate unsustainable behaviours is completed. Such an analysis, it is claimed, can provide new ways of thinking about change that do not simply involve targeting individuals, or engaging in stand-alone initiatives designed to introduce new ways of being, but instead involve thinking about more long term and fundamental attempts to reconfigure the elements of everyday life that have the greatest environmental impacts.</p>
<p>Shove E, Walker G, (2010), Governing transitions in the sustainability of everyday life, Research Policy, Volume: 39, Issue: 4, Publisher: Elsevier B.V., Pages: 471-476 DOI: 10.1016/j.respol.2010.01.019</p>	<p>Elizabeth Shove expands the discussion of socio-technical transitions and their governance to go beyond new technologies and systems of supply to look at the London Congestion charge and how it can be seen not as a fiscal instrument but as a means of changing the social practice of travelling to and working/socialising/being in London. In particular they compare a social practice view with the multi-level perspective of market innovation and conclude <i>“Enduring and relatively stable practices (and complexes of practice) do exist but only because they are consistently and faithfully reproduced, not because they have achieved some kind of closure.”</i> They also talk about showering.</p>
<p>Trentmann, F., (2009), Disruption is Normal, Blackouts, Breakdowns and the Elasticity of Everyday Life, Time, Consumption and Everyday Life, in Time Consumption and Everyday Life: Practice, Materiality and Culture, Eds. Shove E., Trentmann F. and Wilk R., Berg, Oxford – New York, 2009. http://www.bergpublishers.com/?TabId=5154</p>	<p>It starts <i>“Breakdowns and shortages are a regular feature of everyday life. In fact some disruptions, like traffic jams and blackouts, have evolved in to routines themselves”</i> thus placing the paper as a key starting point for established work looking at transport and ‘disruption’ through a social practice lens. The paper focuses mainly on power outages with only tangential discussion of transport (mainly where blackouts directly affect power for trains). The paper finds that the conventional view of modern consumer culture is that the consumption and use of technology permits the operation of a “smooth materialistic</p>

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	<p>machine”. Trentmann however claims that actually this has made our lives more prone to breakdown: <i>“Disruption reveals the material world as more tenuous and fragile, one that involves a lot of energy, maintenance and adjustment from consumers”</i>. In terms of recognising disruption as an opportunity for promoting positive change, Trentmann states that <i>“Disruptions trigger new social processes and political consciousness”</i>.</p>
<p>O’Dell, T. (2009), My Soul for a Seat: Commuting and the Routines of Mobility in Time Consumption and Everyday Life: Practice, Materiality and Culture, Eds. Shove E., Trentmann F. and Wilk R., Berg, Oxford – New York, 2009. http://www.bergpublishers.com/?TabId=5154</p>	<p>An important paper because it focuses on the issue of transport routines from a range of views including a practice perspective. <i>“The text argues that routines do not just unfold in a simple pre-determined and mechanical fashion; they have tempos and rhythms of their own that make them susceptible to change, but that even help people adapt to the ever-changing context of everyday life”</i>.</p> <p>One particularly interesting part of the paper is the discussion of people largely in ‘auto-pilot’ on their daily commute – up until the point where the train is approaching and their worlds <i>“become tangibly entangled in a larger collective movement”</i> where <i>“the sanctity of one’s personal space [becomes] disrupted”</i>. This suggests that even within apparently consistent routines, there are real opportunities for in-built micro-scale levels of disruption that might not affect the travelling itself, but at least the experience of the traveller.</p>
<p>Hubers, C., Lyons, G. and Birtchnell, T. (2011) The unusual suspects: the impact of non-transport technologies on social practices and travel demand, Proc. 43rd Annual UTSG conference http://eprints.uwe.ac.uk/14151/</p>	<p>On going research which is trying to understand the extent to which transport demand co-evolves with technological change and social practices (e.g. the supermarket trolley and the freezer as a driver of shopping behaviour).</p>

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Business Travel and Tele-Working/Communication	
<p>Aguilera, A. (2008) Business travel and mobile workers. <i>Transportation Research Part A</i>, 42, 1109-1116 http://dx.doi.org/10.1016/j.tra.2008.03.005</p>	<p>Discusses the reasons people travel for business and the changing nature of organisations to include more virtual teams and the impact this has on forms of communication and travel.</p>
<p>Arnfolk, P. & Kogg, B. (2002) Service transformation - managing a shift from business travel to virtual meetings. <i>Journal of Cleaner Production</i>, 11, 859-872 http://dx.doi.org/10.1016/S0959-6526(02)00158-0</p>	<p>The factors that influence meeting behaviour and the ability to substitute corporeal for virtual meetings. Discusses the contextual factors that influence the choice of meeting media and how this is affected by media richness theory and channel expansion theory.</p>
<p>Cairns, S. (2008) Can teleconferencing reduce business travel? London, Rees Jeffreys Road Fund, TRL & UCL</p>	<p>Review of literature to determine whether teleconferencing does reduce business travel.</p>
<p>Denstadli, J. M. (2004) Impacts of videoconferencing on business travel: the Norwegian experience. <i>Journal of Air Transport Management</i>, 10, 371-376 http://dx.doi.org/10.1016/j.jairtraman.2004.06.003</p>	<p>Reasons for adopting video conferencing and the impacts on air travel and video conferencing usage in the wake of the 9/11 terror attacks.</p>
<p>Felstead, A., Jewson, N. & Waters, S. (2005) Changing Places of Work, Basingstoke, Palgrave, Macmillan. http://www.palgrave.com/products/results.aspx?Type=BS&a=&i=&SC=felstead</p>	<p>Book looking at how working practices are changing, the effect this has on management styles and the utilisation of office space. The book explores the idea of the boundaryless organisation, the effect this has on the social order embedded in the workplace and on the structure of an organisation.</p>
<p>Fuchs, C. (2008) The implications of new information and communication technologies for sustainability. <i>Environment Development and Sustainability</i>, 10, 291-309. http://fuchs.uti.at/wp-content/uploads/eds.pdf</p>	<p>An evaluation of new information technologies and their effect on sustainability and the environment.</p>
<p>Holley, D., Jain, J. & Lyons, G. (2008) Understanding Business Travel Time and Its Place in the Working Day. <i>Time & Society</i>, 17, 27-46 http://tas.sagepub.com/content/17/1/27.short</p>	<p>Evaluation of time use whilst travelling by train and the potential to deliver positive utility through productive use of travel time.</p>
<p>Verdantix (2010) Carbon Disclosure Project Study 2010: The Telepresence Revolution. London: Carbon Disclosure Project. https://www.cdproject.net/CDPResults/Telepresence-Revolution-2010.pdf</p>	<p>Evaluation of the ability of telepresence to reduce carbon emissions, business costs, vehicle miles travelled, ROI and work-life balance</p>

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Mobility and Social Inequalities	
<p>Social Exclusion Unit. (2003). <i>Making the connections: final report on transport and social exclusion</i>: Office of the Deputy Prime Minister http://www.cabinetoffice.gov.uk/media/cabinetoffice/social_exclusion_task_force/assets/publications_1997_to_2006/making_transport_summary_2003.pdf</p> <p>Church, A., M. Frost and K. Sullivan. (2000). Transport and social exclusion in London. <i>Transport Policy</i> 7: 195-205. http://www.its.leeds.ac.uk/projects/MobileNetwork/downloads/transport_policy.pdf</p>	<p>Both acknowledge the role of transport in relation to social inequalities and therefore highlight the necessity to consider the mobility practices of different social groups as they require different approaches to mobility issues.</p>
<p>James, A., C. Jenks and A. Prout. (1998) <i>Theorizing childhood</i>. Cambridge: Polity Press. http://www.polity.co.uk/book.asp?ref=9780745615646</p>	<p>James et al. (1998), in their social studies of childhood paradigm develop a theoretical framework that considers children as social actors rather than passive subjects. Childhood is considered to be a highly embodied phase of the lifecourse. This enables us to comprehend the role of children and young people in determining mobility behaviour of both themselves and the people around them. This work tells us that children and young people cannot be excluded from meaningful research on mobility practices.</p>
<p>Williams, F. (2004) <i>Rethinking families</i> London: Calouste Gulbenkian Foundation http://www.gulbenkian.org.uk/pdf/files/Rethinking-families.pdf</p>	<p>This book is one of the key outputs of the ESRC Group on Care, Values and the Future of Welfare. Fiona Williams set out to reconceptualize ‘family’ as a broad social grouping that encompasses a wide range of social and caring relationships involving both kin and non-kin. In particular concept is theorized in a way that includes people outside the traditional parent/child relationship based on children’s dependency. Williams argues that ‘family’ should reflect everyday practices of family building on Silva and Smart’s ‘families are what families do’. There is recognition of different groups of people as crucial to social functioning of social units e.g. children and older people not only as care receivers but as care givers in widest sense. In addition the family is a spatial as with an increasing recognition of</p>

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	<p>'transnational' families and identification of 'detached carers' i.e. family members who have a sustained interest in/sense of responsibility for e.g. older parents, but do not live close by. Mobile space is considered an important dimension in understanding family, as we cannot assume that family can/should be defined by living in close proximity.</p>
<p>Hamilton, K. and L. Jenkins. (2000) A gender audit for public transport: a new policy tool in the tackling of social exclusion. <i>Urban Studies</i> 37: 1793-1800 http://usj.sagepub.com/content/37/10/1793.abstract</p>	<p>Hamilton and Jenkins developed the gender audit tool to highlight the inadequacies of the transport system in meeting the needs of women. They argue that women are a social group with different travel characteristics and practices to men and therefore the transport planning system needs to pay particular attention to this group. This is significant in that Hamilton's earlier work on women and transport paved the way for consideration of the travel needs of a number social groups and drew attention to transport exclusion. Women drivers account for almost all the increase in automobility in the western world.</p>

Methodological Issues and Challenges of Inter-disciplinary Working

Shove, E. (2010) Beyond the ABC: climate change policy and theories of social change. *Environment and Planning A* 42, 1273-1285.

<http://www.envplan.com/abstract.cgi?id=a42282>

And the ongoing discussion:

Whitmarsh, L., O'Neill, S., Lorenzoni, I., (2011) Climate change or social change? Debate within, amongst and beyond disciplines, *Environment and Planning A*, 43, 258-261

<http://www.envplan.com/epa/editorials/a43359.pdf>

Shove E, (2011) "On the difference between chalk and cheese—a response to Whitmarsh et al's comments on "Beyond the ABC: climate change policy and theories of social change" *Environment and Planning A* 43(2) 262 – 264 <http://www.envplan.com/epa/editorials/a43484.pdf>

A provocative critique of current attitudes to behaviour change within environmental policy circles.

A response to Shove's 'deliberately provocative' stance in the ABC paper. Whitmarsh et al. argue for a mixed-methods research, providing examples of where different approaches from individualist psychology and socially focussed sociology have been brought together. However, it doesn't deal with potential theoretical incommensurability, though they do highlight the difficulty in acknowledging the role of individuals within a social practices approach.

A very strong response from Shove that argues that sociological and psychological approaches are fundamentally incompatible at the theoretical level. For me the core argument put forward is that Whitmarsh was arguing for the use of practice theory to be used to answer problems framed by using psychological thinking, and that not only is this inappropriate theoretically, but completely misses the point of using practice theory to frame the problems in entirely new ways, explicitly stating that "*contrasting paradigms are valuable because they generate different definitions of the problem*".

This paper makes what has been described as a "brave" effort to step into the debate by from a pragmatic point of view, making it clear that policy makers are not interested in issues of theoretical purity and would like to have a set of tools that help them reach their desired goals. How the initial questions have been asked and the desired outcomes have been framed will, as Shove has rightly pointed out, often steer policy to a particular means of obtaining them. However, this is not necessarily always the case. By proposing a framework for

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<p>Wilson, C. and Chatterton, T., (2011), “Multiple models to inform climate change policy: a pragmatic response to the ‘beyond the ABC’ debate” <i>Environment and Planning A</i> 43(12) 2781 – 2787 http://www.envplan.com/epa/editorials/a44404.pdf</p>	<p>describing and analysing the ‘observed behaviour’ that is in need of change, it is possible to break out of the need to have a one-size-fits-all, all encompassing theory of behaviour. Once theories of practice can be introduced to policy and programme teams in government, it is envisaged that their value will be recognised, and in time can then be used upstream to actually frame the questions and issues that policy seeks to tackle.</p>
<p>Chatterton, T. (2011) An Introduction to Thinking About Energy Behaviour: A Multi-Model Approach, Report for the Department of Energy and Climate Change. http://www.decc.gov.uk/assets/decc/11/about-us/economics-social-research/3887-intro-thinking-energy-behaviours.pdf</p>	<p>This document addresses the current ‘backward nature’ of most government thinking on behaviour which is moving out of the traditional field of economic rationalism and entering the Brave New World of Behavioural Economics (and its bastard offspring ‘Nudge’). Using Triandis’ Theory of Interpersonal Behaviour as a previously accepted and endorsed framework for understanding energy behaviour, the document outlines 3 current behavioural discourses and encourages the application of them in a complementary rather than conflicting way. The three approaches tackled are:</p> <p>Behavioural Economics and Social Psychology – as forwarded in the Institute for government report MINDSPACE</p> <p>The ‘Values and Frames’ work of Tom Crompton and Tim Kasser looking at pro-social and pro-environmental behaviours in the context of ‘bigger than self problems’ and identity.</p> <p>The social practices approach epitomised by Elizabeth Shove’s work.</p>
<p>Hargreaves, T., (2010) Towards a phronetic approach to pro-environmental behaviour: Seeking context, interaction and power in behaviour change processes <i>CSERGE Working Paper EDM 10-03</i> http://www.cserge.ac.uk/sites/default/files/edm_2010_03.pdf</p>	<p>A discussion of approaches to the promotion of pro-environmental behaviour based on Flyvberg’s concept of <i>phronetic social science</i> as based on Aristotle’s concept of phronesis “Ethics. Deliberation about values with reference to praxis. Pragmatic, variable, context-dependent. Oriented toward action. Based on practical value-rationality.”</p>

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	<p>Flyvberg’s claim is that a phronetic approach will lead to social science that is “done in public for the public, sometimes to clarify, sometimes to intervene, sometimes to generate new perspectives, and always to serve as eyes and ears in our ongoing efforts at understanding the present and deliberating about the future”. Hargreaves argues why this should be a rallying point for work on pro-environmental behaviours, and how measures to change behaviour can validly interpreted in two different ways – often leading to two different analyses and sets of recommendations.</p>
<p>Behrens, R. and Del Mistro, R. (2010) Shocking Habits: Methodological Issues in Analyzing Changing Personal Travel Behavior Over Time. International Journal of Sustainable Transportation. Volume 4, Issue 5, 2010, Pages 253 – 271</p> <p>http://www.informaworld.com/10.1080/15568310903145170</p> <p>http://www.cfts.uct.ac.za/downloads/publication/2006/behrensdelmistro_2006.pdf</p>	<p>This paper examines the methodological problem of analysing changing personal travel behaviour without available longitudinal intra-personal datasets but actually concludes that, for ‘disruptions’, because recollections of behaviour changes are by definition attached to salient events, respondents report no major difficulties in recalling them in retrospective surveys. Hmmm .. I’m not so convinced.</p>
<p>OECD/IEA (2005) Saving oil in a hurry http://www.iea.org/textbase/nppdf/free/2005/savingoil.pdf</p>	<p>This publication points out an important methodological consideration: <i>‘Once measures are put in place that provide fuel-efficient mobility options or alternatives to travel, the public responsiveness to these measures may actually be better during an emergency than under normal circumstances, since there will likely be a strong interest in such alternatives. There may also be an altruistic attitude amongst people to “do their part” during the emergency. If this occurs, then estimates of policy response and impacts based on behaviour during normal circumstances, as made throughout this analysis, may underestimate the impacts of measures during emergencies. But the relative impacts and costs of different measures should at least be similar.’</i></p>
<p>D’Andrea, A., Ciolfi, L. and Gray, B. (2011) Methodological challenges and innovations in</p>	<p>This paper grapples with the multi-dimensional challenge of studying</p>

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<p>mobilities research. <i>Mobilities</i> 6 (2), 149-160. http://dx.doi.org/10.1080/17450101.2011.552769</p>	<p>mobility as a relational practice in which the interactions between humans and objects on the move must be understood, whilst not losing sight of the macro-scale implications of any analysis. Rich ethnographic research is promoted, but the importance of connecting the micro to the macro emphasised as the basis of useful scholarship. The other papers in this special issue of the journal exemplify ways of dealing with such methodological challenges (although tending to lean towards the micro scale rather than macro scale extrapolation).</p>
<p>Buscher, M. and Urry, J. (2009) Mobile Methods and the Empirical. <i>European Journal of Social Theory</i> 12, 99 - 116. http://est.sagepub.com/content/12/1/99.abstract</p>	<p>This paper problematises existing approaches to social science research, suggesting that the inherent mobility of everyday life is not recognised in data collection methods. A refocusing is said to require a focus on mobility systems which have both human and material components. Human related components include methods that collect data on the meaning and sensual experience of mobility. Material related components include studies that can reveal the objects that enable mobility but also the objects used and interacted with whilst on the move. Methods including walking interviews, video diaries, blogs and observation are suggested as ways of capturing the data needed.</p>
<p>Garrett, B.L. (2011) Videographic geographies: Using digital video for geographic research. <i>Progress in Human Geography</i> 35, 521-541. http://www.wepapers.com/Papers/141810/%E2%80%98Videographic_geographies%3A_using_digital_video_for_human_geography_research%E2%80%99_for_Progress_in_Human_Geography</p>	<p>Advocating the use of video in research, this paper suggests that a range of techniques, from head mounted cameras to conversations captured on video, can both inform social science analysis and be used in dissemination. Video is promoted not as a visual representation of reality, but as a tool for interpreting experience, research participant engagement, and for challenging public perceptions.</p>
<p>Evans, J. and Jones, P. (2010) The walking interview: Methodology, mobility and place. <i>Applied Geography</i> 31, 849-858. https://www.escholar.manchester.ac.uk/api/datastream?publicationPid=uk-ac-man-scw:105121&datastreamId=POST-PEER-REVIEW-</p>	<p>Whilst mainly focussed on using GIS as a data collection technique, this paper illuminates a number of important issues regarding data collection relating to mobility. In particular, it suggests that interviewing people on the move</p>

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<p>PUBLISHERS.PDF</p>	<p>provides insights into the influence of the environment moved in and through on the experience of mobility. Hence much richer insights are said to be gained from mobile interviews compared with sedentary interviews if the focus is on experience of mobility. This suggests that mobile and non-mobile methods may play different but potentially complementary roles in unpacking mobility systems (the former when seeking to understand experience, the latter when pulling apart systemic influences?).</p>
<p>Lanzendorf, M. (2003) Mobility biographies. A new perspective for understanding travel behaviour, 10th International Conference on Travel Behaviour Research http://www.ivt.ethz.ch/news/archive/20030810_IATBR/lanzendorf.pdf</p>	<p>Lanzendorf has written on the need for more extensive understanding of the whole history and context surrounding travel behaviour. This may be particularly pertinent where responses to previous experiences condition behaviour. Also important thinking around change at key life points.</p>

Annotated Bibliography

Miscellaneous	
<p>Cohen, M.J. (2010) Destination unknown: Persuing sustainable mobility in the face of rival societal aspirations. <i>Research Policy</i> 39, 459-470. http://dx.doi.org/10.1016/j.respol.2010.01.018</p>	<p>This is a unique paper in that it uses a socio-technical perspective on air travel to reveal the factors that lock us into air travel. It is argued that a system that is inherently designed to encourage aeromobility, through both meanings and technical provision, inevitably means more air travel. The paper also alludes to the fact that the response of the aeromobility industry to climate change has been to attempt to reproduce the system, through innovations in systems in particular, in a way that does not attempt to curb the growth in air travel but maintain the growth and even introduce new systems that seem to contradict logics of sustainability. The learning from this paper is, then, that understanding how systems drive travel practices is crucial if practices are to become more sustainable.</p>
<p>Watts, L. (2008) The Art and Craft of Train Travel. <i>Social and Cultural Geography</i> 9, 711-726. http://dx.doi.org/10.1080/14649360802292520</p>	<p>Although a little abstract and written as a story rather than a 'typical' academic analysis, this paper has an important underlying message. Mobility is a form of competency that involves negotiating mobility systems, the use of various objects to facilitate mobility, and developing capabilities to tolerate or exploit the journey. This reminds us again that travel is more than a way of moving from a to b. It has much more complex socio-technical groundings and diverse implications for the traveller.</p>
<p>Tulloch, J. and D. Lupton. (2003). Risk and everyday life, Sage http://books.google.co.uk/books?id=KpoAXMuLyLAC&lp_g=PP1&pg=PA1#v=onepage&q&f=false</p>	<p>Tulloch and Lupton's (2003) everyday risk concerns people's daily risk experiences as opposed to larger scale risks such as terrorist threats or global climate change. They are risks that are within the realms of daily lives even if they are not experienced on a daily basis. Road accidents are therefore considered to be a daily concern even if they are not directly experienced.</p>