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Carbon reduction and travel behaviour: Discourses, disputes and contradictions in governance

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ABSTRACT

Prospects for mitigating climate change require decarbonisation of the energy sector over relatively short time periods, coupled with significant changes to the way we consume energy. This is particularly true in the transport sector given the current levels of transport-related greenhouse gas emissions, the heavy dependence on fossil fuels, and the uncertainty surrounding transition pathways to ultra-low carbon vehicles. There are policy responses aiming to reduce carbon emissions by changing travel behaviour, but prominent approaches share a common theme of seeking to change behaviour by focusing on the individual and their choices. These are the object of critics who maintain that effective change requires collective action at the social, economic and cultural levels. This paper questions whether decision-makers are relying on these choice-based approaches to change travel behaviour and, if so, how effective they expect them to be. We address this through analysis of over 50 interviews with policy stakeholders in England and Scotland. We find dominant policy approaches do focus on individual choices, but significantly it is not because decision-makers have faith in their effectiveness. These approaches persist in policy on carbon reduction for two reasons. One is appeal to a politically powerful, but incoherent, discourse of individualism. The second is that decision-makers do not want significant behavioural change. There is an imperative of economic growth and a firm belief that a strong economy is linked to higher traffic levels, and that to reduce the demand for travel is to risk economic damage. We argue that these beliefs about the relation between travel demand and prosperity are narrowly defined and contestable for empirical and normative reasons. If there is to be a significant change in the approach to intervening in travel demand there is an urgency to engage in the politics of behaviour change – a meta-level behaviour change challenge.

1. Introduction

There is political recognition of the scale of carbon reduction necessary to mitigate dangerous climate change. The International Energy Agency estimates that transport is responsible for over 22% of global CO_2 emissions (IEA, 2013, p. 71). The picture is similar in the UK with road transport creating 25% of CO_2 emissions in each of the years 2007, 2008 and 2009 (DECC, 2011b, Table 4). In developed countries the transport sector has to contribute significantly to carbon reduction if the ambitious future targets are to be met. The scale of the challenge requires a 'sophisticated mix' of technological and behavioural adaptation (see IEA, 2012; Rajan, 2006; Schwanen et al., 2012). Despite agreement on this broad principle, the practical implications of such statements remain elusive. In particular, underlying approaches, responsibility, timing, and intensiveness of behavioural adaptation are all open to debate. The predominant approach in the UK, as with most developing countries, is on a shift of the vehicle fleet to electric or hydrogen-fuelled vehicles where the energy is provided by renewables (DECC, 2011a; EC, 2011; see also Barbour and Deakin, 2012; Deakin, 2011). Yet there remain substantial uncertainties surrounding the development and adoption of viable low carbon technologies (Lyons, 2011; Geels, 2012; Schwanen et al., 2012). Beyond these uncertainties, technological developments alone appear insufficient for the scale of carbon reduction required, and there is recognition that behaviour change will also be required. For instance the UK Government's technical advisory committee on climate change suggests a need for a 5% reduction in

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car travel by 2020 even if all anticipated technological advances are delivered (CCC, 2012, p. 185).

While carbon reduction through travel behaviour change is a feature in transport policy and debate, there is doubt about the effectiveness of some of the prominent measures adopted to prompt behaviour change (for instance, Bonsall, 2009). Some policy measures based on social psychology have been challenged for focusing on individual choices since it is claimed that effective change requires action at more fundamental social, economic and cultural levels (see Shove, 2010). Since they also focus on choice, this charge can also be levelled at other measures which draw on classical and behavioural economics. The focus on individual choice is by no means a universal approach within measures on behaviour change. A range of alternatives, both theoretical and applied, has aimed to change aspects of the fundamental economic, social or cultural conditions which frame individuals' travel possibilities and practices. This can be seen in some of the approaches using urban planning to reduce the need for travel by motor vehicle. An example of this is California's measures to reduce carbon which aim to implement smart planning, seeking among other things, to plan housing developments which avoid sprawl (Barbour and Deakin, 2012; Deakin, 2011). To be effective, such planning approaches need to reconsider the social and economic arrangements which influence planning and development, and consequently frame the conditions in which people act.

This paper addresses two broad questions raised by debate and criticism of measures which focus on choice-based approaches. First is the question of whether there are jurisdictions within which such measures dominate attempts to reduce carbon by travel behaviour change. Second, if these measures are dominant, then what are the decision-makers' reasons for this? It might be supposed that such reasons would fall into one of two categories. One category involves confidence that choice-based measures are effective. This could be because decision-makers are unaware of arguments to the contrary, or because they find reasons to reject those arguments – for instance, by appealing to cases such as the Sustainable Travel Towns Initiative in England, where, as we discus below, choice-based approaches enjoyed a degree of success (Sloman et al., 2010). The other category involves doubt about effectiveness of measures, but would involve ideas that choice-based measures are desirable for other reasons, which could be normative ideas about what constitutes legitimate attempts to influence behaviour, or might be reasons of political expediency, or might be some other reason. The value of understanding decision-makers' rationales lies in its contribution to the knowledge of factors relevant in determining what policy approaches are used. It is important to understand the way in which policies and policy change is framed in order to be able to develop alternative policy formulations with a chance of challenging the current framing (Tennøy, 2010).

In Section 2 we set out the theoretical groundwork for our argument. We first describe prominent approaches to behaviour change drawn from classical economics and some aspects of social psychology, and more recently from behavioural economics (see Avineri, 2012; Brekke and Johansson-Stenman, 2008; Gowdy, 2008; Metcalfe and Dolan, 2012). We show how these approaches share a common focus on seeking change at the level of individual choice. We go on to describe a contrary set of arguments which maintain effective behaviour change requires focus on social practices and their causes rather than at the level of individual decisions (for instance Geels, 2012; Schwanen et al., 2012; Shove, 2010). In Section 3 we introduce the data on which the analysis is built. This involved documentary analysis and in-depth interviews with 59 practitioners, policy-makers (including some councillors and politicians), advisors and campaigners concerned with carbon reduction and transport at European, UK, English and Scottish national and local levels. The interview findings, presented in Section 4, show a range of measures aimed at promoting behaviour change which will lower transport emissions. However these measures do share a common feature of a focus on individual choice. To this extent our findings reflect much of the wider theoretical analysis of policy on behaviour change. However, our study moves beyond existing critical arguments by revealing how actors are aware that their low expectations are a result of the choice-based approaches adopted. We find that despite this awareness they appear unable or unwilling to adopt a more effective strategy. This inability might result in part from a politically attractive but arguably incoherent 'choice' discourse. However, it is clear the greater barrier to effective action on carbon reduction results from prevalent beliefs about the relationship between travel demand and economic development. In Section 5 we use our analysis first to identify an inconsistent rhetoric of choice underpinning measures on travel behaviour, and second to argue that the dominant economic imperative and underlying mindset lead to the rejection of anything other than marginal changes in behaviour and this dominates the governance of measures to promote behaviour change.

2. Conceptualising approaches to travel behaviour change

Measures and policies aimed at promoting behaviour change draw on a range of theoretical conceptions drawn from economics, psychology, political theory and moral philosophy. The following discussion sets out the significant distinction that can be made between approaches which focus on change at the level of individual choice, and those which maintain that effective change requires a focus on wider social and structural context and practices.

2.1. Influencing choice

Measures drawing on economics and aspects of social psychology emphasise bringing about change by influencing individuals' choices. However as the following discussion shows, the disciplines, and measures derived from them, adopt quite different assumptions about an effective means of achieving this influence.

Classical economic theory maintains that price incentives will tend to make certain choices more attractive. As Avineri (2012) explains, applied to transport, classical economics treats individuals as rational and self-interested and that this has been interpreted as the view that, if their interest lies in making a journey, then it is assumed they will decide how to travel according to the cost and time involved in different options.[1] Further, if their interest is in travelling this will be because of 'the value of the activity at the destination' rather than 'activity that people wish to undertake for its own sake' (Banister, 2008, p. 73). Consequently, it is assumed that a policy aim of changing people's travel can be achieved by changing the timing, cost and quality of options available such that there is an incentive to shift to those options favoured by the policy. In other words, this approach attempts to influence people's choices. It is worth noting that there are long established, and sometimes contested, concerns that economic dis/incentives sufficient to prompt substantial behaviour change would be politically or publicly unacceptable (Altshuler, 1969). Further, there are increasingly challenges to ideas that transport behaviour is adequately explained by these ideas drawn from classical economics. As we

[1] While this interpretation remains widely used in transport modelling, it is increasingly contested (see for instance Vij et al., 2013).