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Who has the right to travel during peak hours? On congestion pricing and 'desirable' travellers

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ABSTRACT

Congestion pricing concerns the right to travel during peak hours. Most proponents of pricing propose an impersonal and anonymous allocation mechanism based on the willingness-to-pay of the person who travels. This view builds on the concept of private property rights and we confront this view with a different conception of rights, one based on needs. Furthermore, we discuss the results of an illustrative experiment in which respondents allocate access rights to hypothetical travellers. We can conclude that replacing individual self-judgment by judgments of others offers a fresh perspective on congestion pricing.

1. Introduction

The implementation of congestion charging is widely debated by academics, policy makers and the public. Most of the literature sees road space as a scarce good which should be distributed efficiently over the population and many scholars point to pricing as the preferred policy tool. This view is built on the premise that roads should be governed by market norms. This essay challenges the dominant approach and explores the question 'who has the right to travel during peak hours'.

Our basic premise is that congestion pricing can be seen as an answer to the question put forward in the title of this essay. In this question 'peak hours' refers to the concept of scarcity, which means in the context of transport that not everyone can travel at the same time. Consequently, in one way or another, a distinction is made between those having 'the right to travel' and those who have no such right. Please note that this distinction is not always made explicit. Section 2 starts with a description of the notion of rights adopted in the mainstream congestion pricing literature. Since the idea of pricing has generated considerable opposition, it is interesting to have a look at how the literature deals with counter-arguments, which is done in Section 3.

The reader will notice that the discussion of the idea of congestion pricing in Sections 2 and 3 contains general descriptions as well as anecdotal quotes. These elements illustrate how arguments are developed and are, in line with the rhetoric of economics literature, seen as an integral part of the argument (McCloskey, 1998). This is not mere rhetoric, but acts, among other things, as a bridge between theoretical models and reality, and such statements show the inevitably normative and political nature of economics (see e.g. Zuidhof, 2014).

Section 4 discusses alternative conceptions of rights. On the one hand, there is the notion of the right -or freedom- to move, and on the other hand, there are need-based rights, which can be found in the accessibility discourse (Farrington, 2007). Most of the literature on justice and transport stresses that people need accessibility and that rights follow from these accessibility needs (Farrington and Farrington, 2005; Martens, 2012). In contrast, the market-based approach emphasises efficiency, consumer sovereignty and individual responsibility. It seeks justice in an institutional setting where agents can autonomously decide how much transport they consume. This reliance on market norms has been criticised for being too individualistic, and the application of political and democratic norms is put forward as an alternative, inspired by the ideas of Anderson (1993; see Vanoutrive, 2017).

Anderson (1999, p.315) proposes a relational theory of justice and democracy which recognises '*the fact that most of the things people want to do require participation in social activities*'. A similar point has been made in the context of transport by Rajan (2007) who argues that driving requires considerable investments by others, and is hence '*not a solo activity*' (p.83). Within such a context, the central question relates to what people owe one another, or more specifically, to whether others are obliged to provide road space. According to Anderson (1999, p.309–310) people's '*market choices offer no guidance whatsoever to what citizens are obliged to provide one another on a collective basis.*' (italics in original). She argues in favour of democratic equality, which involves the creation of '*a*

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community in which people stand in relations of equality to others' (p.289) in order to guarantee '*effective access to the social conditions of freedom to all citizens*' (p.326). In other words, when someone suffers from a lack of basic accessibility, the community is obliged to eliminate this injustice, however, without resorting to stigmatisation, since this would violate the principle of equality. In this way, freedom, justice and democracy are unified in the framework of democratic equality, thereby avoiding a too narrow focus on distributive aspects. Related ideas on the connection between justice and democracy can be found in the work of Sen (2009) who emphasises public reasoning, discussion and open impartiality.

Moving from an individualistic market-based approach to a need-based or social justice paradigm, the discussion is no longer about the interpretation of individual preferences, but about publicly debating the allocation of road space and accessibility in general. To exemplify the discussion, Section 5 presents the results of a survey in which respondents were asked 'who has the (most) right to travel on congested motorways?', and given the central role of public transport in congestion pricing discourse, we conducted a second survey and asked 'who has the (most) right to travel by train during peak hours'. A central feature of this experiment is the replacement of the traditional self-judgment by a judgment of others. By doing so, this approach offers a fresh perspective on the concept of congestion pricing. The discussion and concluding sections highlight the implications of this analysis. In the remainder of the text, we refer to *congestion pricing* since it can refer both to road and rail (cf. Vickrey, 1963), and because we do not discuss funding tolls or pricing for environmental externalities.

2. Transport economics and its conception of rights

The congestion pricing literature, as we know it today, emerged during the 1950s and 1960s (Derycke, 1998; Rooney, 2014; Vanoutrive, 2017) and was from the beginning a reaction to the inefficient allocation of road space (Beckmann et al., 1956; Vickrey, 1955, 1963; Walters, 1954, 1961). The stated problem, (hyper)congestion, has been formalised using diagrams showing the relationship between traffic flow, speed and density, and in the basic congestion pricing model which highlights that the marginal social cost curve is above the marginal private cost curve, where the latter intersects the demand curve. The solution that follows from this problem definition is marginal social cost pricing, the imposition of a tax that bridges the gap between the private and social marginal cost (Walters, 1961). This type of tax was famously discussed by Pigou, but was not applied to the case of congestion until after the Second World War (with the exception of the discussion of a metaphor of two roads by Pigou himself in 1920 and a discussion by Knight four years later; see McDonald, 2013).

The definition of and the solution to congestion formulated in the 1960s is still the basis of mainstream transport economics and can be found in many papers (Morrison, 1986), textbooks (Blauwens et al., 2010; Button, 1993) and working papers (e.g. The World Bank; Hau, 1992) written since then. Since the second half of the 1990s, there has been an increase in academic interest in the topic fostered by, among other things, the European Commission, technological developments and '*a broader ideological acceptance of market mechanisms*' (Lindsey, 2006, p.293).

Let us now turn to the concept of rights in the transport economics literature. We start with Buchanan, who was one of the first to imagine a market for road services, with '*the right to use the road*' as the service offered to drivers (Buchanan, 1956, p.308). Later, Coase's property rights approach (Coase, 1960) influenced many scholars, especially those who call for tradable rights (Buitelaar et al., 2007; Viegas, 2001; Raux, 2004; Verhoef, Nijkamp, and Rietveld, 1997a). Unlike the Pigouvian approach, which proposes to tax those who cause externalities, Coase proposed a reciprocal system in which the most optimal outcome is achieved when the producer of an externality negotiates with those who want to stop the externality causing activity. Within this framework, ill-defined property rights are the main cause of externalities and market failures such as congestion (Hau, 1992; Buitelaar et al., 2007). Note that although the owner of a road is known in most cases, the right to use road space is often not commodified and is, as a consequence, ill-defined.

In both the Coasian and Pigouvian transport economics literature, the concept of rights employed is that of *private property* rights, which are considered necessary to obtain well-functioning markets. Although scholars disagree on the privatisation of road infrastructure (Lindsey, 2006), which is proposed by libertarian authors such as Roth (1996) and Block (1996), congestion pricing proponents agree to market or commercialise the right to access a particular road at a particular time. As is commonly assumed in neoclassical economics, markets are the best way to efficiently allocate scarce resources, like road space, and consumers reveal their preferences through their willingness-to-pay for goods and services. There seems to be a general conviction among a considerable number of (transport) economists that market-based solutions for governments are preferable in general (Zuidhof, 2014). For example, in a World Bank working paper Hau (1992, p.8) confesses '*I am convinced of the advantages of market forces*', Anthony Downs (2004, p. 327) of the Brookings Institution states that '*As an economist, I favor market-based approaches whenever possible*' (quoted in Lindsey, 2006, p.344) and Milton Friedman (Friedman and Boorstin, 1996, p.231) expresses his belief in a free-enterprise economy arguing that we should bring '*to our highways the initiative, competition, efficiency and freedom from political manipulation that only free enterprise can provide*'.

The examples given in the previous paragraph indicate that, notwithstanding the rational stance of transport economists, the '*question of who pays what, where and when is inevitably affected by normative reasoning*' (Langmyhr, 1997, p.28). Such reasoning can involve general principles, including formal equality, sustainability, social benefit and responsibility (Langmyhr, 1997; Banister, 1993; Taylor and Norton, 2009). Principles which are associated with the preference for market mechanisms include the user-pays, freedom of choice, competition and efficiency. Market proponents differ in the weight they give to each of these aspects (Zuidhof, 2012), but the notion of private property rights is generally present, not only in the libertarian literature, but also in studies that promote market mechanisms to achieve other aims.

3. Acceptability

In order to obtain a better understanding of the congestion pricing discourse, it is necessary to look at the responses to counter-arguments and opposition (Hajer, 1995). For proponents of congestion pricing the efficiency gains and other advantages of market mechanisms are evident. However, in order to gain support in a hostile political, business and public environment more pragmatic proposals have been made (Gerrard et al., 2001; Johansson et al., 2003). The failure to convince the public and politicians continues to frustrate researchers (Verhoef, Nijkamp, and Rietveld, 1997b), leading to a large literature on the acceptability of road pricing (Gärling et al., 2008; Giuliano, 1992; Schade and Schlag, 2003), with typical titles including '*Why are efficient transport policy instruments so seldom used?*' (Frey, 2003), '*How large is the gap between present and efficient transport prices in Europe?*' (Proost et al., 2001) and '*Making urban road pricing acceptable and effective*' (Viegas, 2001).

Acceptability concerns have fostered substantial research interest in the equity dimension of congestion pricing since the '*supposedly regressive effects*' are a '*recurrent argument against congestion charges*' (Hamilton et al., 2014, p.10). As a consequence, a considerable amount of literature has been published on equity and road pricing; Levinson (2010) could find more than a hundred papers on this topic and his review revealed that the main question in this literature is whether pricing is progressive or regressive to income. The distribution of winners and losers is regularly used to explain opposition against the 'rational' idea of congestion pricing (Lave, 1994). Besides lack of familiarity, self-interest and individual preferences are considered main determinants of public opposition, especially by scholars inspired by the Public Choice School (Oberholzer-Gee and Weck-Hannemann, 2002), calls for a genuine public