Urban transport justice

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A B S T R A C T

Many cities in the world seek to establish more sustainable urban transport systems with a view to reduce accidents, congestion, air and noise pollution, and to improve social interactions, liveability and amenity values. Against this background, this paper frames urban transportation as an issue of justice: contemporary transport systems are characterized by injustice, as they tend to favour and prioritize motorized transport, accepting that considerable environmental and social burdens are put on more sustainable forms of transportation, other traffic participants and society as a whole. To conceptualize 'urban transport justice', the paper discusses three dimensions where injustices are apparent: Exposure to traffic risks and pollutants; distribution of space; and valuation of transport time. It is argued that public and political recognition of urban transport injustices provides significant argument for changes in urban planning, transport infrastructure development and traffic management.

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1. Introduction

In most parts of the world, cities struggle with high accident numbers, congestion, air pollution and noise as a result of high and often growing levels of motorized transport (Gilbert and Perl, 2008; Hook and Replogle, 1996; Kenworthy and Laube, 1996, 1999; Stanley et al., 2011). Gwilliam (2002), in a global review of urban transport for the World Bank, suggested that per capita motor vehicle ownership would continue to grow rapidly and that increased use of private vehicles had already resulted in falling demand for public transport, leading to a concomitant decline in services and pressure on available road space. These developments would affect in particular the poor: "the absence of efficient congestion pricing for road use … will almost certainly benefit the relatively wealthy at the expense of the poor" (Gwilliam (2002): xii). Such an unequal distribution of the benefits and burdens of urban transport development has also been discussed in the context of access, accidents and air pollution (e.g. Graw and König, 2002; Gwilliam, 2002, 2003; Martens et al., 2012; Mullen et al., 2014; Vasconcellos, 2014).

Negative outcomes of transport systems are now widely acknowledged, and there is political consensus in the European Union and elsewhere that urban transport systems need to be redesigned to become more environmentally and socially sustainable (EC, 2011; UNESCAP, 1999). Public transport systems, cycling and walking are generally

understood to have important roles in sustainable urban transport designs (EC, 2011; Pucher and Buehler, 2012), while motorized transport is seen to cause many of the problems associated with transport systems (Banister, 2005). This forces city planners to reconsider transportation. Yet, as urban transport planning has for decades sought to accommodate growing car numbers (Hutton, 2013; Vasconcellos, 2014), change is complicated by various factors, including one-sided public and political discourses regarding the benefits of motorized individual transport (Imran and Pearce, 2015); lack of political will or public support (Bratzel, 1999); (perceived) high restructuring costs (Gössling and Choi, 2015); the need to compromise (Hysing et al., 2015); and path dependency in search of solutions (Schwanen et al., 2011).

This paper is situated within this wider context. It purports that there is a considerable paradox between stated political ambitions to create more sustainable urban transport systems and persistent realities of urban infrastructure development in favour of the least sustainable transport mode, the car (Banister, 2005; Vasconcellos, 2001). To address this paradox and the observed 'implementation gap' in sustainable transport planning (Banister and Hickman, 2013), inconsistencies are framed as injustices. With a starting point in discussions of the 'just city' (Harvey, 1973; Fainstein, 2001, 2010), the paper sets out with a review of the historical development of transport systems in cities, concluding that urban transport systems are superimposed rather than naturally grown systems. In most cities, transport systems benefit only a share of traffic participants, while putting considerable burdens on others, as well as residents and society as a whole (Azetsop, 2010;

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Graw and König, 2002; Gwilliam, 2002, 2003; Lucas, 2012; Martens et al., 2012; Mullen et al., 2014; Vasconcellos, 2014). Conceptually, 'transport injustices' can be identified within three dimensions: exposure to traffic risks and pollutants, distribution of space, and the valuation of time. These are discussed in terms of their relationships with the predominating transport paradigm, the automotive city. Even though there is evidence of transport change in various cities (Newman and Kenworthy, 2015), it is argued that there is a need to integrate 'urban transport justice' in the discussion of the 'sustainable mobility paradigm' (Banister, 2008) to guide urban transport planning and infrastructure development. This echoes earlier arguments made in relation to transport access and benefit distribution (Martens et al., 2012; Mullen et al., 2014), which are conceptualized and developed in this paper in a justice theory framework.

1.1. The 'just city' and urban transportation

Over the past 40 years, numerous authors have emphasized that cities are not equal, with conflicts arising over urban land use and planning, distributional policies, access, and livelihoods (Harvey, 1973; Fainstein, 2010; though justice in cities was already discussed by Sokrates more than 2000 years ago [Plato, 1955]; see also Park et al., 1925). Originally framed as an issue of unequal resource distribution, academic discourse has increasingly focused on inequalities related to gender, ethnicity, sexuality, and age (Fainstein, 2010). This, despite differing perspectives on the normative and philosophical dimensions of urban justice, appears to represent a consensus: Cities are not socially just (Harvey, 1973; Marcuse et al., 2009), and perhaps increasingly so (Fainstein, 2010). Just cities can only come into existence where residents have the right to inhabit, to appropriate and participate (Lefebvre (1996 [1968]), for which it would be necessary for cities to embrace concepts of equity, democracy and diversity, and to overcome neoliberalism and its allocation of resources at the expense of wider social benefits (Fainstein, 2010; see also Fincher and Iveson, 2012; Purcell, 2008). The just city would also have to incorporate environmental dimensions, for instance with regard to noise, air pollution or waste (e.g. Chakraborty, 2006; Haughton, 1999). Critical perspectives on contemporary cities thus postulate that urban space is a public good (Bodnar, 2015), and that this public good needs to be managed in *just* ways that represent society in its entirety.

More specifically, urban *transport* systems have been discussed out of social justice theory, including issues such as gender, ethnicity, age, class and disability, as well as (in)accessibility, income and social participation (e.g. Lucas et al., 2001; Martens et al., 2012; Rajé et al., 2004; see also van Wee, 2011). Beyazit (2011: 117) describes social justice in transport in broad terms as "the fairness in the physical distribution of goods, accessibility for people, affordability of all types of services and distribution of other gains (such as increases in land and property prices)". In this view, justice is closely related to social inclusion/exclusion, and policies of redistribution in the interest of equality of opportunities (Lucas, 2004, 2006, 2012; Martens et al., 2012), including capabilities, opportunities, and choices (Mullen et al., 2014). For example, Lucas (2006: 802) in describing the outcomes of UK transport policies, suggests that "in many parts of the country it is now virtually impossible to carry out basic daily activities without a car", highlighting developments that have increased transport inequalities. Mullen et al. (2014) argue that just transport policies would have to consider inequalities in terms of access or exposure to risks, based on an underlying principle of 'equal concern'. This principle proposes that an individual's entitlements are limited by the equal entitlements of others, and that capable individuals have responsibility to provide for others.

In this perspective, transport justice is closely linked to equality concepts of welfare and resources. In his seminal works, Dworkin (1981a, 1981b) concluded that welfare equality is difficulty to achieve (see

also Cohen, 1990; Daniels, 1990; Sen, 1993). Transport justice in this paper refers to a political ideal primarily concerned with distributional equality, treating people as equals when resources are transferred or distributed among them (Dworkin, 1981b: 186). This refers to fairness in the distribution of burdens, risks, access, or valuation of assets between different traffic participants (Lucas, 2012; Martens, 2012; Martens et al., 2012; Mullen et al., 2014). Transport justice thus refers to an achievement of greater equality or the abolishment of injustices (Martens et al., 2012; Mullen et al., 2014). This is necessarily a longer-term process and will involve trade-offs, for example with regard to risks (Wolff, 2002). Overall, transport justice should represent a social and political goal for at least three interrelated reasons: First, there is evidence that transport systems have been developed on the basis of specific (industry) interests, which do not necessarily represent broader societal goals (Urry, 2013) and continue to be implemented on this basis (Beyazit, 2011; Lucas, 2012). Second, it is clear that (automotive) urban transport systems increasingly face physical limits, while there is also growing evidence of the burdens they place on others (Banister, 2008; Levinson, 2009; Mullen et al., 2014). Last, change in transport behaviour is evident in cities throughout the world, and the design of transport systems is no longer reflective of the desirability of different transport modes, their actual use, or perspectives on quality of life in cities (Pucher and Buehler, 2012; Newman and Kenworthy, 2015).

1.2. Urban planning and the automotive city

Most cities in the world have devoted a major share of their urban transport infrastructure to automobility (Gilbert and Perl, 2008). This process was sometimes initiated more than a century ago (e.g. Norton, 2007 for the US), and in many Asian countries as recently as in the 1990s (Hook and Replogle, 1996; Pucher et al., 2007). Kenworthy and Laube (1996) show that US cities, in the 1980s and 1990s, had population densities an order of magnitude lower than those in Asia, though with seven times greater per capita road infrastructure space allocation. Yet, even in US cities, space has not always been dedicated to the car: Streets in US cities in the 1910s were shared between children at play, pushcart vendors, horse-drawn vehicles, pedestrians and streetcars (Norton, 2007). The city street was a public space, to be used by everyone. This only changed with the advent of the car, which quickly occupied urban space. As cars operated at higher speeds, they became a risk to other traffic participants. Streets became contested spaces that needed to be re-allocated, and by 1930, there was a "new street equilibrium based on the supremacy of automobiles" (Norton, 2007: 332): Pedestrians were forced from the street and labelled 'jaywalkers', marking the beginning of the motor age and the automotive city (see also Foster, 1981).

Similar developments have taken place in Europe, and, more recently, in Asia (Gilbert and Perl, 2008; Hook and Replogle, 1996; Pucher et al., 2007). In Europe, automotive hegemony began in the 1950s and 1960s, when city planning became increasingly inspired by functionalism and notions of 'the modern city', which would separate cars from other transport modes (e.g. Koglin and Rye, 2014). Urban planning processes included social housing developments in urban peripheries, which were, as in the USA, "often poorly connected to centres of urban commerce" (Miciukiewicz and Vigar, 2012: 1943). Non-motorized transport was abandoned with 'modernization', and, within one or two decades, usually no longer had any significant role in urban transportation. The bicycle in particular came to be seen as a means of leisure transportation in post-war Europe, to be used in green belts or outside the city (Koglin and Rye, 2014). Transport planning, on the other hand, became increasingly concerned with expected growth in individual motorized mobility, adopting 'predict and provide' transport planning principles (Hutton, 2013; Whitelegg, 1997). This approach resulted in large-scale road