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# Justice in transport as justice in accessibility: applying Walzer's 'Spheres of Justice' to the transport sector

Karel Martens

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**Abstract** This paper seeks to provide a theoretical basis for a distributive approach to transport. Using the theory developed by Michael Walzer in his 'Spheres of Justice' (1983), I argue that the transport good, defined as accessibility, should be distributed in a so-called separate sphere, i.e. independent from the way in which other key goods, like money or power, are allocated. I subsequently explore what kind of justice principle could guide the distribution of the transport good, once a separate sphere would be established. This preliminary exploration results in the elimination of a number of widely supported distributive principles, and in the tentative identification of a criterion matching the particularities of the transport good. The explorations in the paper are not intended as final answers, but rather seek to open the debate about the need for an explicit distributive transport policy and the distributive principle that should guide such a policy.

**Keywords** Transport · Justice · Equity · Spheres of Justice · Distribution

## Introduction

Transport has become a key field of government intervention in modern societies. Governments do not only set the regulatory framework, but also determine the size and scope of investments in transport facilities. Given the importance of transport in current highly mobile societies, the way in which governments distribute transport over their citizens becomes of the utmost importance. And yet, while an extensive body of literature exists on transport and (environmental) justice (see Schweitzer and Valenzuela 2004), little has been said about the desirability or (im)possibility of a distributive approach to transport.

The goal of this paper is to explore transport as a field of government intervention through a distributive lens. While a wide variety of approaches to social justice can be distinguished (see Fabre 2007 for an overview), the explorations presented here start from

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K. Martens (✉)

Institute for Management Research, Radboud University Nijmegen, Nijmegen, The Netherlands  
e-mail: k.martens@fm.ru.nl

Walzer's 'Spheres of Justice' (Walzer 1983).<sup>1</sup> There are two main motivations for this choice. First, to the best of our knowledge, Walzer's approach has not yet been applied to transport. Second, and more importantly, many of the major theories of justice, among which Rawl's theory of 'justice as fairness', relate to the *basic* structure of a society rather than to particular institutions within a society (Fabre 2007, pp. 19–20). While such theories can be applied to the field of transport (see Beatley 1988 for an application of Rawls' difference principle to transport), such applications will not provide an answer to the question *why* a distributive approach is called for in the case of transport. In contrast, as will be argued below, Walzer's theory can provide such a theoretical foundation for a distributive approach to transport.

The paper starts with a brief account of Walzer's theory of justice ("Walzer's Spheres of Justice" section). This results in the identification of three questions: (1) What is the social meaning of the transport good ("The social meaning of the transport good" section); (2) Does the social meaning of the transport good justify the creation of a so-called separate sphere around the good? ("Transportation as a field of policy intervention" and "Transport as a separate sphere" sections); and (3) Which distributive principle should guide the allocation of the transport good? ("Towards a distributive principle for transport" section). Taken together, the answers to these questions provide a tentative theoretical basis for a distributive approach to transport.

The character of the paper is explorative. It cannot address all the issues related to a distributive approach to transport, such as the importance of the land use–transport interaction or the personal responsibility of people in choosing e.g. their place of residence or means of transport, all of which directly affect justice in transport. As a result, the paper does not aim to provide final answers, but rather aims to trigger a debate about the need for a distributive approach to transport.

The paper draws, amongst others, on the rather dispersed body of literature that connects transport and distributive justice. This literature includes papers that explicitly apply philosophies of social justice to transport (e.g., Lucy 1988; Khisty 1996), empirical studies into the distribution of a wide variety of transport-related benefits and burdens (see "The social meaning of the transport good" section for a number of references), studies into urban service delivery (e.g., Miranda and Tunyavong 1994; Talen and Anselin 1998; Neutens et al. 2010a), as well as the vast literature on spatial mismatch (see "Transport as a separate sphere" section), the growing number of publications on transport and social exclusion (see "Transport as a separate sphere" section), and more recent explorations into the ethics of mobility (e.g., Bergman and Sager 2008) and the ethics and distributive impacts of transportation planning (e.g., Martens 2006; Martens and Hurvitz 2011; Martens (2011); Van Wee 2011). It is well beyond the scope of the paper to provide a review of this diverse body of literature. For insightful reviews into a large part of the literature, see Schweitzer and Valenzuela (2004) and Schweitzer and Stephenson (2007).

## Walzer's Spheres of Justice

The theoretical starting point for the proposed justice approach to transport is Walzer's 'Spheres of Justice' (Walzer 1983, 1995). In line with most other contemporary scholars

<sup>1</sup> Throughout the paper the term justice is employed, rather than the terms equity or fairness. While each of these terms may refer to different concepts in certain contexts, in common usage the terms strongly overlap and are used interchangeably. See also Hay (1995).

(but see Young 1990), Walzer takes a distributive approach to social justice by asking the question how benefits and burdens are and should be distributed over members of society. However, unlike other scholars of social justice like e.g. Rawls (1971), he does not focus on the distribution of an abstract set of basic goods. Rather, he views society as a distributive community in which people produce a *wide variety of goods* that are subsequently shared, divided and exchanged in specific ways. These goods, according to Walzer, can neither be reduced to a set of abstract goods, nor be idiosyncratically valued. Goods are, by definition, social goods; their meaning is socially constructed. “Goods (...) have shared meanings because conception and creation are social processes” (Walzer 1983, p. 7). Subsequently, goods can have different meanings in different societies; the same ‘thing’ may be valued in one place, while it is hardly valued or even disvalued in another. Likewise, goods with a comparable ‘market value’ may differ fundamentally from a distributive perspective, because they differ in terms of the social meaning members of particular society attach to them. Precisely because of these differences in the social meaning of goods, Walzer argues, there can be no single criterion in virtue of which all goods are to be made available to members of society. Commonly defended criteria like free exchange, need or desert cannot determine the distribution of *all* goods available in society. Furthermore, distributive criteria and arrangements are intrinsic not to the good-in-itself but to the social good: “If we understand what it is, what it means to those for whom it is a good, we understand how, by whom, and for what reasons it ought to be distributed” (ibid., p. 9). The social meaning of a good is therefore of crucial importance in Walzer’s approach. It is the basis for determining what constitutes a fair distribution: “All distributions are just or unjust relative to the social meanings of the goods at stake” (ibid., p. 9).

Based on this ‘theory of goods’—only briefly summarized here—Walzer then develops the concept of ‘distributive spheres’. Distributive spheres are the prerogative of goods that have a *distinct* social meaning in a particular society, which sets them apart from regular goods. While regular goods, like necklaces or mobile phones, may also have a social meaning, they can be distributed through the market and their distribution can be determined through the principle of free exchange. Goods to which a particular society ascribes a distinct social meaning, in contrast, are to be taken out of the sphere of free exchange. Typical examples in modern Western societies are health and education. These and comparable goods, Walzer argues, ‘deserve’ their own distributive sphere.

For Walzer, a distributive sphere is characterized by two basic features. First, it requires that the distribution of a particular good be guided by another distributive principle than free exchange. As discussed, these principles can differ—ranging from equality to need—but are to match the social meaning of the good in a particular society (Trappenburg 2000). Second, a distributive sphere should guarantee that the distribution of the particular good is autonomous from the way in which other goods are distributed. According to Walzer, injustice occurs if spheres are not autonomous. In that case, the distribution of one good or one set of goods can become dominant and determine the distributions in all, or many, spheres of distribution. Typically, according to Walzer, money and power are the goods to claim dominance, and much of the policy debates, like those in the fields of basic education or health services, are about limiting their domination. Ultimately, autonomy guarantees what Walzer terms ‘complex equality’: a situation in which inequalities *within* spheres may exist, but in which the autonomy of distributive spheres will guarantee that inequalities will not necessarily *sum up across* different goods or spheres.

Walzer’s approach is certainly not without problems (see e.g., Dworkin 1983b; Teuber 1984; Fabre 2007). Its strength lies in the theoretical foundation it provides for the political reality in modern societies. In modern societies, government intervention is not concerned

with the distribution of abstract primary goods, such as those distinguished by Rawls (1971), but with the distribution of a wide variety of real, tangible, goods. Prominent among these are income, education, health care, and housing. Principles of justice play a central role in the distribution of each of these goods, although these principles may differ between societies.

The importance of Walzer's theory of justice, and its core concept of spheres, lies in the fact that it can provide a theoretical foundation for a distributive approach to transport. From Walzer's perspective, a distributive approach to a particular good is called for if that good has a distinct social meaning: 'When meanings are distinct, distributions *must* be autonomous' (Walzer 1983, p. 10—author's emphasis). If this condition holds for the transport good, i.e. if the transport good has a socially distinct meaning, then a distributive approach to transport can be justified.

Walzer's theory of justice thus raises three key questions for the field of transport. The first concerns the social meaning of the transport good ("The social meaning of the transport good" section). Only if a clear social meaning can be ascribed to the transport good, is it fruitful to enter a discussion about the relevance of a separate transport sphere. The second, and perhaps principal, question is whether the social meaning ascribed to the transport good is distinct enough to draw boundaries around the good and set it apart from other goods and create a separate 'transport sphere' ("Transportation as a field of policy intervention" and "Transport as a separate sphere" sections). Then, if the answer to this second query is yes, the third question is how the transport good should be distributed, i.e. which distributive principle is appropriate to guide the allocation of the transport good ("Towards a distributive principle for transport" section). Below, I turn to each of these three questions.

### The social meaning of the transport good

The first question raised by Walzer's approach concerns the social meaning of what has thus far been referred to as 'the transport good'. Obviously, and in line with the critique of Dworkin (1983a), the demarcation of *the* social meaning of the transport good is not a simple one. Opinions may differ widely between and within societies, depending on people's backgrounds, perspectives and personal lives. Hence, the discussion below is not a final answer, but a first attempt to demarcate a social meaning that might be widely shared in modern, industrialized, societies.

First, when people relate to transport, it is about the possibilities it offers to travel to places, to access people and opportunities, or to experience the freedom to escape one's locality (see e.g. the contributions in Bergman and Sager 2008). The social meaning of the transport good therefore seems to lie in the benefits related to transport, rather than in the burdens. Even in academic discourse, the burdens related to transport, such as greenhouse gas emissions, are defined as negative externalities, emphasizing that they are not a core part of the transport good. This suggests that the distribution of the transport good should first and foremost be guided by the benefits that are related to it, rather than based on the burdens it may generate.

This is a fundamental point, as much of the debate on transport and equity has focused precisely on the distribution of transport-related burdens (e.g., Feitelson 2002; Forkenbrock and Schweitzer 1999; Schweitzer and Valenzuela 2004). Walzer's approach does not suggest that the distribution of these burdens is not a matter of justice. In line with his theory, it can actually be argued that in current Western societies, a healthy environment is

a good with a distinct social meaning that deserves to be set apart from other goods. Walzer's approach thus suggests that the distribution of the transport-related environmental burdens should be related to environmental burdens from other sources and that their distribution should be jointly considered. The principle guiding the distribution of the total set of environmental burdens should subsequently be derived from the social meaning ascribed to a healthy environment. Note that the desired distributions in the 'environment sphere' may well have implications for the possible distributions in the 'transport sphere'. It is beyond the scope of the paper to further explore this issue. For now, it suffices to conclude that Walzer's emphasis on the social meaning of a good as the basis for its distribution, suggests that the benefits of transport should be the starting point for the debate about the distribution of the transport good.

Second, it may be clear that the transport good as such does not exist. The good—however conceptualized—is a combination of objects like cars and bicycles; artifacts like roads and railways; services like public transport lines, car repair services and guarded parking facilities; and less tangible goods like driving licenses, traffic regulations or route guidance systems. In this sense, the transport good is comparable to a good like basic education, explicitly discussed by Walzer in his book. Like transport, basic education is not a concrete good that is transferred from one person to another. Basic education as a social good is the outcome of the combination of a multitude of tangible and less tangible goods: class rooms, teachers, school books, teaching materials, learning methods, etcetera. These goods combine to the good which Walzer refers to as 'mediated education': the systematic transfer of knowledge and skills to pupils and students. It is this good, rather than the different parts constituting it, which, according to Walzer, should be set apart in a separate sphere and distributed in a way compatible with the social meaning of the good in a particular society (Walzer 1983, pp. 197–226).

Following this line of reasoning, the distributive question in transport does not relate to the individual objects, artifacts, etc. that constitute the 'transport good', as the social meaning of each of these parts stems from the social meaning of the overarching 'transport good'. Following Walzer, it is the social meaning of the overarching good that should provide the compass for the distribution of the good over members over society. The allocation of the composite parts should be derived from this; not the other way around. This is, again, a fundamental point, as much of the literature and policy debates on distributive justice in transport have focused on precisely the composite parts, such as road and gasoline taxes (Altshuler 1979); transit investments and subsidies (Cervero 1981; Hodge 1988; Garrett and Taylor 1999); infrastructure investments (Lucy 1988; Bröcker et al. 2010); road user charges (Smeed 1964; Richardson 1974; Ecola and Light 2009); and transit service (Murray and Davis 2001; Rucker 1984; Wu and Hine 2003).

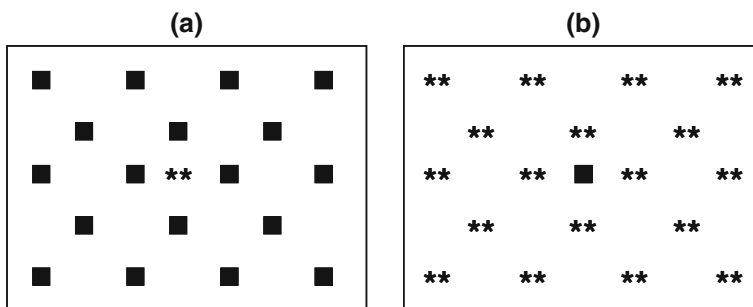
For Western societies, and increasingly so for non-Western societies, and in line with much of the transport literature, two distinct meanings of the overarching transport good can be distinguished: potential mobility and accessibility (e.g., Garb and Levine 2002; Vigar 1999).

Potential mobility, often simply referred to as mobility, refers to the ease with which a person can move through space (e.g., Sager 2005). Since the term mobility is frequently used to describe the (growth in the) actual movement of people, I explicitly distinguish between mobility and potential mobility, or movement and potentiality of movement (Kaufmann 2002, pp. 13–14). An increase in mobility implies that a person travels over longer distances, more frequently, or both. In contrast, an increase in potential mobility only implies an increase in a person's capacity to overcome distance in space—it does not imply the actual realization of this capacity (Sager 2005, pp. 3–4).

Accessibility has a meaning quite distinct from potential mobility. It refers to the ease with which destinations can be reached from a given location in space (see e.g., Farrington and Farrington 2005; Dong et al. 2006; Niemeier 1997). Two different forms of accessibility have been distinguished in the literature: person accessibility and place accessibility. While the terms are often used interchangeably, it is important to clarify the difference between them (see Pirie 1979; Kwan 1999; Miller 2007 for more elaborate discussions). Person accessibility is an attribute of a person: a person has accessibility (or not) to a certain set of locations. Place accessibility, in turn, is an attribute of an (activity) location: a location is accessible (or inaccessible) for a certain set of people or from a certain set of other locations. Person and location accessibility are thus each other's mirror image (Fig. 1). The distributive perspective taken in this paper directs the attention to people rather than locations, as people and not locations are the recipients of socially valued goods. Hence, from a distributive perspective person and not place accessibility should be the focus of analysis.

Both the concepts of potential mobility and of person accessibility—in the remainder of the paper simply referred to as accessibility—are directly related to a wider system of values dominating Western societies. The conceptualization of the transport good as potential mobility can be linked to notions such as freedom of movement and freedom of choice. (Potential) mobility is often even equated with freedom of movement (e.g., Cresswell 2006), although the latter refers to a right rather than to a capacity varying in strength. Freedom of choice and potential mobility are strongly intertwined—with a high level of potential mobility implying a high level of choice in terms of employment opportunities, health care services, leisure facilities, and so forth. Mobility is also closely linked to widely cherished values such as open-mindedness, discovery, experience and adventure (Kaufmann 2002, p. 37), and to notions like escape and autonomy (Zeitler 1999, pp. 21–22; Lomasky 1997). Perhaps most importantly, high (potential) mobility is linked to the ambition to break the tether of physical friction—a desire enshrined in Western society and exemplified in the expansion of the Roman empire, the discoveries, and the search for speed since the industrial revolution (Couclelis 1996; Harvey 1990; Sager 2005).

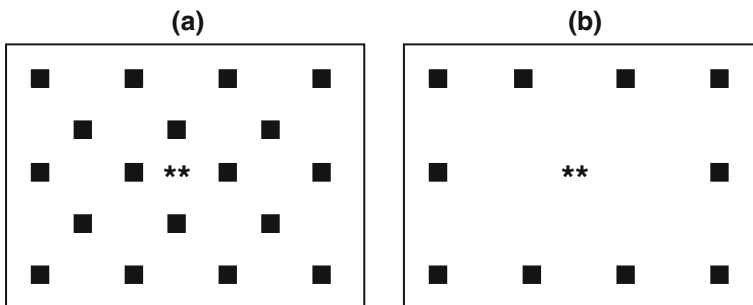
The concept of accessibility also has deep roots in Western value systems. Accessibility indicates ability, i.e. the ability to accomplish a broad range of actions, by linking to places and people that are set apart in space and time (Talen 2001). As such, accessibility is also



**Fig. 1** Person accessibility (a) versus place accessibility (b). The borders of each diagram indicate the area that can be travelled within e.g. a certain time budget or time-money budget. *Source* Dijkstra (1995, p. 28). \*\* = person, ■ = activity location

linked to freedom of choice, with higher levels of accessibility indicating higher levels of choice and hence a higher potential for personal fulfillment and satisfaction. Yet, at the same time, accessibility also stresses that choice and freedom of movement are limited: a person has accessibility to certain places but not to others, a person has the ability to accomplish certain actions but not others. Accessibility, precisely because it links transport to land use, stresses the fact that space creates a friction, a barrier between origin and desired destination. Moreover, the notion of accessibility pre-supposes knowledge about destinations (see Kwan and Hong 1998 for an empirical study), thus eliminating connotations of adventure, discovery or even new experience, so closely intertwined with potential mobility. Accessibility as a concept is thus at odds with key values of Western society like autonomy and freedom, by underscoring the place-boundedness of people, bounded as they are to an ‘origin’ and a given set of destinations, linked together by a known set of links. In this sense, accessibility contrasts starkly with potential mobility, which stresses freedom rather than limitations, endlessness rather than place-boundedness, and autonomy rather dependence.

It thus seems that potential mobility rather than accessibility has the firmest roots in Western culture. This may also explain—at least to some extent—why (potential) mobility rather than accessibility has been the locus of much of transportation planning in the twentieth century (see e.g., Vigar 1999; Cervero et al. 2001). Yet, it can be argued that ultimately accessibility best reflects the social meaning of the transport good in Western societies. The emphasis in popular discourse on potential mobility, as reflected in values like freedom of movement, is a result of an individualistic approach to mobility. For a given person in a given space–time setting, a higher level of potential mobility always implies more choice, more experience, more adventure, and, ultimately, more freedom. However, this conceptualization is fundamentally flawed in a comparative perspective. Because space is neither a uniform nor a static entity, households with comparable levels of potential mobility may well differ fundamentally in the level of choice, the possibility of adventure, and the level of freedom they experience (Fig. 2). Hence, in a comparative perspective, potential mobility cannot be equated directly with key values like choice, experience or freedom. This, in turn, suggests that it would be incorrect to equate the transport good with potential mobility. Because, if the distribution of potential mobility does not necessarily correlate with the distribution of more fundamental, and highly



**Fig. 2** Potential mobility and choice level. The person in diagram (a) has the same level of potential mobility as the person in diagram (b), as indicated by the identical size of the diagram. However, person (a) has a substantial higher level of choice of activity locations than person (b). Figure based on Dijkstra (1995, p. 29). \*\* = person, ■ = activity location



valued, goods, it can hardly be defended as a proper conceptualization of the social meaning of transport in society. Ultimately, transport is first and foremost a derived ‘need’ (e.g., Rimmer 1985); the social meaning of the good should therefore also be derived from the underlying needs. Since accessibility, in contrast to potential mobility, does link transport to these underlying needs, I argue that accessibility rather than potential mobility best captures the social meaning of transport in current Western societies. This conceptualization is in line with the increasing number of studies into the distribution of accessibility over different population groups (e.g. Kawabata and Shen 2007; Hess 2005; Benenson et al. 2010) building on much earlier work in this direction (e.g. Wachs and Kumagai 1973; Black and Conroy 1977), and the rising attention for accessibility in transportation planning, as highlighted by a.o. Garb and Levine (2002), Cervero et al. (2001), and Bertolini et al. (2005).

Note that person accessibility is shaped by a wide range of factors, such as mode availability, money and time budgets, or the temporal organization of society, all of which create disparities in accessibility levels between different persons (e.g., Kwan 2000; Neutens et al. 2010b). Furthermore, the focus on person accessibility still leaves unaddressed the question how person accessibility should be measured. As illustrated by a number of authors, the type of accessibility measure has significant ramifications for the representation of differences in person accessibility (e.g., Kwan 1998; Neutens et al. 2010a) and, hence, for preferred policy responses (e.g., Lucy 1981). This important issue requires a separate discussion that will be left to another occasion; for a first exploration rooted in the social justice literature, see Martens and Golub (in press).

Finally, it should be noted that the identification of accessibility as the good that best captures the social meaning of transport has implications for the conceptualization of a separate sphere. It suggests that this sphere does not coincide with the traditional demarcation of transport as a field of government intervention, as the distribution of accessibility is also strongly shaped by other fields of policy intervention, like spatial planning or various types of service delivery policies. Note that the good of accessibility does not differ in this respect from a good like ‘health’, as the distribution of the latter, too, is not only determined by health care in a narrow sense, but also by government programs to provide e.g. proper sanitation (Daniels 2008). Below, I will abstract from this complication for now and assume, in order to further develop the argument, that land use patterns are given and accessibility levels are primarily shaped through transport-related interventions (typically, investments in transport infrastructure and services). In a future paper, I aim to relax this strongly simplifying assumption and explore its consequences for the framework outlined here.

### **Transportation as a field of policy intervention**

Now that the social meaning of the transport good is more clearly demarcated, it is possible to turn to the second question raised by Walzer’s approach: Does the transport good, defined as accessibility, deserve to be set apart from other goods and distributed in a separate sphere? A likely first response to this question may be that transport as a clearly demarcated field of policy intervention has, by and large, already created a separate sphere around the good of accessibility. More specifically, it could be argued that the policy field of transport, through large-scale investments in transport infrastructure and services, already strongly shapes the distribution of accessibility levels over members of society. While this can hardly be denied, I would argue that the transport field has hardly created

a truly distributive, Walzer-like, sphere around the socially valued good of accessibility, even if we would abstract from the strong interrelationship between transport and land use. Three interrelated arguments can support this claim.

First, in traditional transport planning, explicit distributive considerations seem to play a secondary role at best. What guides most transport planning efforts in the industrialized world is a systems perspective. Policy success is first and foremost measured in terms of the performance of (parts of) the transport system, and hardly in terms of how various groups in society benefit from policy measures (Khisty and Zeitler 2001). A clear symbol of this line of thinking is the use of the level-of-service criterion, which guides much of the investments in the road system (e.g. de Dios Ortuzar and Willumsen 2001). This criterion is merely an indicator of the performance of separate links of the road network, i.e. the extent to which ‘free flow’ traffic conditions occur on each link. Contrary to what the wording suggests, the criterion does not generate any insight into the service the transport system provides to the actual user, in terms of quality of travel between real origins and real destinations, let alone into the service provided to different user groups (Martens and Hurvitz 2011).

Second, a closer look at transport demand modeling reveals that transport policies are actually heavily guided by market-based distributive principles. As the term suggests, transport demand modeling, which is widely used in the industrialized world as a tool to inform decision-making about investments in transport infrastructure (e.g., Bates 2000) is about *demand* for transport. Following the common economic definition of demand, transport demand can be defined as a desire for transport backed by the ability to pay for it (Sullivan and Sheffrin 2003). Demand-based modeling thus reflects the distributive mechanisms of the free market, as it takes past travel behavior—i.e. revealed *demand* for transport—as the basis for forecasting future travel demand. In doing so, it ignores the possible existence of latent demand or of transport needs for which the existing transport system does not cater (Cass et al. 2005; Denmark 1998; Martens 2006). The consequence is that the distribution of transport infrastructure founded on demand-based modeling will, by and large, reflect the way in which money—as a dominant good—is distributed over society. Rather than creating a separate sphere around the good of accessibility, demand-based modeling does exactly the opposite.

Third, when distributive criteria do play an explicit role in transport policy, they tend to address only specific issues rather than the distribution of the overarching transport good, i.e. accessibility. Examples of such distributive policies include regional redistribution of fuel taxes (Taylor and Norton 2009), the provision of public transport in low-demand areas (Hodge 1995), welfare-to-work transportation programs (Lucas 2004), and the application of universal design principles to transport systems (Audirac 2008). While distributive principles are a key element of each of these policies, the distributive arrangements fall far short of establishing a true transport sphere within which accessibility is distributed in a fair way over members of society. First, the distributive arrangements typically solve only part of the accessibility problems of the target population, e.g. in terms of the number and variety of destinations being served. Second, and more importantly, a truly *distributive* approach to transport would not be limited to certain target groups, transport-related revenues or transport systems only. Rather, it would focus on the *overall* distribution of accessibility over members of society, i.e. it would link the level of accessibility provided to one group to the accessibility levels received by other groups (cf. Preston and Rajé 2007).

Thus, while the field of transport is certainly a clearly demarcated area of government intervention, and distributive concerns sometimes play a formative role in policy

development (e.g., Hay and Trinder 1991; Trinder et al. 1991; Langmyhr 1997), it has hardly resulted in a Walzer-like sphere around accessibility as a socially valued good. This stands in sharp contrast to goods like health and education, around which, in many countries over the course of the twentieth century, Walzer-like spheres have been created to guarantee that the distribution of those goods is not shaped primarily by the distribution of money or power.

### Transport as a separate sphere

The conclusion that the policy field of transport has not created a Walzer-like sphere around accessibility as a good, still leaves open the question whether accessibility *should* be singled out and a separate sphere created to guarantee a certain level of autonomy in the distribution of accessibility. Two lines can assist in answering this question. The first focuses on the value of the transport good in current societies, while the second explores the way in which the transport good defined as accessibility is currently distributed over members of society.

There can be no discussion that the social meaning of transport has changed tremendously over the past two centuries (e.g., Knowles 2006). In traditional societies, transport was primarily a matter of walking. Space was organized around the particularities of transport by foot, with necessities of life located within walking distance of most homes (Mumford 1961). Only a small segment of society could afford regular travel by horse or horse-drawn carriages. The near-universal ability to walk—with the exception of small infants and the disabled—implied that accessibility, at least to everyday destinations, was possible for all, although in many cities regulations and social codes de facto curtailed accessibility levels for e.g. women or lower classes (Muellner 2002; Braidotti 1994). Thus, while accessibility levels will have differed between people, depending on the exact residential location of a person within the city (walls) and vis-à-vis key land uses like the central market place, the dominance of walking guaranteed minimal accessibility levels for all and relatively small differences in these levels, at least to everyday destinations.

The introduction of motorized transport for movement of people, but especially the ascent of private, individualized, motorized transport, changed the situation fundamentally (e.g., Illich 1974). The widespread availability of the motorcar, triggered by vast investments in the road system, implied a fundamental shift in the meaning of transport. The dominance of the motorcar resulted in a vast dispersal of urban functions over space, eliminating walking as a feasible alternative for most trips. As a result, motorized transport changed rapidly from a luxury into a necessity—few people in industrialized societies are now able to manage their daily lives without, individualized or collective, motorized transport. Mobility became a structuring dimension of social life (Kaufmann et al. 2004; Urry 2000).

The rise of motorized transport has thus re-shaped the social meaning of the transport good. Once, transport was hardly perceived as a good, but rather taken-for-granted, as a natural extension of life itself. Now, the ability to travel through space has become so important for everyday lives, that mobility can be considered an asset. Kaufmann et al. (2004) even consider mobility—or motility as they term it—a form of capital, that may form links with, and can be exchanged for, other forms of capital, whether economic, cultural or social in shape. The availability or in-availability of transport, in other words, shapes people's life opportunities. It is this interrelationship that shapes the social meaning of transport in today's industrialized societies.

The second line of argumentation that can provide ammunition for the qualification of transport as a separate distributive sphere, relates to the way in which transport is currently distributed over members of society. The aim of the paper is not to provide a full overview of these distributive patterns (see Schweitzer and Valenzuela 2004), but rather to point at patterns and tendencies in industrialized societies. These tendencies can be derived from various strands of literature, including the spatial mismatch literature, which addresses the interrelationship between decentralization of employment and job accessibility of low-income residents; studies on transport and gender, which explore the problems of women to access work and combine multiple tasks in a spatially fragmented environment; and the more recent body of work on transport and social exclusion, which has added a more qualitative picture of the accessibility problems experienced by mobility deprived groups like the (urban) poor, ethnic minorities, children and the elderly. Taken together, these strands of research draw a picture of how the lack of motility limits the possibilities for personal accumulation of economic and social capital, to paraphrase the words of Kaufmann et al. (2004). The spatial mismatch literature, for instance, has generated substantial evidence that the concentration of low income groups in central cities, the decentralization of low wage jobs, and the lack of investment in new public transport facilities, have in combination led to a sharp decline in job access among the urban poor (e.g., Ihlanfeldt 1993; Ong and Miller 2005). The literature on women and transport provides insight into the mobility problems experienced by women combining multiple tasks, especially if they do not own and operate a car (e.g., Blumenberg 2004). The social exclusion literature draws a qualitative picture of the everyday transport dilemmas faced by deprived population groups: the decisions to forgo a doctor's appointment, a meeting with family and friends, a job interview, or even a full-fledged job opportunity, due to lack of adequate transport means. By doing so, this literature also highlights the intricate relationship between lack of mobility and the wider process of social exclusion (e.g., Cass et al. 2005; Hine and Mitchell 2001; Lucas 2004).

Taken together, I claim that a strong case can be made for the recognition of transport as a separate distributional sphere. Transport has developed from a taken-for-granted and hardly disputed good, to a highly desirable good, an indispensable resource shaping one's life path, and a good whose availability is subject of public debate. Furthermore, current policy arrangements allow the distribution of transport to be dominated by the availability of money, resulting in substantial inequalities between population groups and even in a lack of accessibility among a considerable part of the population. The evidence, only briefly summarized here, seems strong enough to draw boundaries around the transport good and set it apart from other goods.

### **Towards a distributive principle for transport**

The recognition of transport as a separate distributive sphere raises a third question. For, if the distribution of the transport good is to be organized in a separate policy sphere, what criterion should guide the distribution of the good? Walzer's theory provides no direct guidance here, as he upholds that the distribution of a good should be guided by *internal* reasons only, i.e. be derived from the social meaning a particular society ascribes to a good (see also Trappenburg 2000). Lacking a widely-shared agreement on the social meaning of the transport good, the discussion of possible distributive principles is necessarily an open-ended one. The explorations below start from the conceptualization of transport as accessibility. By critically reflecting on the applicability of a number of widely used and

defended distributive principles to the distribution of accessibility, some progress may be booked. The goal is not to reach a final understanding, but at least to reach beyond a mere overview of possible criteria (see e.g., Hay 1995; Khisty 1996; Langmyhr 1997). The arguments brought to the fore will be eclectic, drawing as much on the particular nature of the transport good as on moral reasoning and theories of justice.

As mentioned above, for reasons of simplicity, the analysis below is developed from the viewpoint of the policy-maker(s) responsible for decisions regarding investments in (public) transport infrastructure and services. Obviously, investments in infrastructure are only one possibility to change the distribution of accessibility over households. Accessibility levels may also be influenced through careful urban planning, through a spatial (re-)distribution of services, or through information and communication technologies. The distributive criterion defended below might also be applied to these types of government interventions in households' accessibility levels, although it may require a further development of the criterion.

Furthermore, it needs to be noted that the impact of transport infrastructure provision on accessibility levels is not a straightforward matter, as changes in accessibility levels are often accompanied by changes in travel patterns and, in the longer run, by changes in land use, both of which can have substantial impacts on accessibility levels (e.g., Hansen 1959). Due to feedback mechanisms between transport and land use, improvements in accessibility levels for a large share of the population may actually result in decreasing accessibility levels for other, often marginalized, groups (Baeten et al. 1997). The analysis below abstracts from these dynamics and, for reasons of simplicity, assumes that the impacts of new transport facilities on accessibility levels can be assessed in a relatively straightforward way.

In line with much of the social justice literature, I start my exploration of possible justice principles to guide the distribution of accessibility with the criterion of equality. Equality refers to a situation in which a good is distributed evenly over people, irrespective of the differences between those people. As Smith (1994) and others (e.g., Kolm 1996) have argued, the challenge for scholars of social justice is to provide convincing arguments why to deviate from the criterion of equality. Lacking such arguments, equality remains as the correct way to distribute a good. However, a strong argument can be put forward against the distribution of accessibility based on the principle of equality. Experiments carried out as early as the 1920s have pointed out that even if starting from an even distribution of opportunities over space, centers will develop over time as a consequence of the advantages connected to spatial proximity (e.g., Puu 2005). In other words, space *by its very nature* is divided into center and periphery. As a result, inequality in accessibility is inevitable. Transport policies cannot correct the differences between center and periphery; they would at best redefine the relationship between them. The principle of equality, in short, is hardly suited to guide the distribution of the transport good if defined as accessibility.

The principle of desert or merit is a second, widely defended, distributive criterion. Sadurski (1985, p. 134) distinguishes three elements of merit: it is always related to a burden; it is related to a moral judgment of the actions of someone (and therefore fundamentally different from entitlement); and it is related to past actions. The principle of merit has especially been applied to the distribution of income, as it provides the moral foundation for linking income to work (as a burden) rather than other criteria (such as need or equality). For our purposes, the question is to what extent the principle of merit could be applied to the field of transport. What sort of burden and past action would make a person deserving of a higher accessibility level than another person? There does not seem to be an

obvious link between any particular burden and the provision of transport, in the same way as there exist a widely accepted link between work and income. The only link that might be made is to location choice. It could be argued, for instance, that a person willing to accept the ‘burden’ of a high-density neighborhood in a central location, e.g. in terms of pollution levels or mortgage payments, is more deserving of a high accessibility level, than a person opting to live in a low-rise, suburban, neighborhood. But much can be brought against this argument. For instance, to what extent is residential location a matter of choice? To what extent is inner city living truly a burden? And, if it is, to what extent is transport an appropriate reward for the burdens of inner-city life? The link between location as a ‘burden’ and transport availability as an appropriate ‘reward’ is at best a tacit one, and hardly provides a solid basis for the distribution of transport.

Another widely defended justice criterion is the principle of need (e.g., Sen 1973). This criterion, if applied to transport, would imply that individuals or groups that need higher accessibility levels than others—e.g., because they have to access more places—would also ‘receive’ more accessibility through a targeted design of transport infrastructure and additional policy measures. While the need criterion may appeal to some, its application to the field of transport is extremely problematic. The challenge is twofold: first, to distinguish needs from wants, and, second, to translate basic needs—such as the need for food or health—into travel needs. The first is an extremely touchy subject, although the literature on basic needs can provide guidance (e.g., Doyal and Gough 1991; Braybrooke 1987). The second is extremely precarious given the fact that it has become increasingly problematic to relate needs to well-defined travel needs to “pre-defined ‘public’ goods and services located within pre-determined ‘formal’ locations/destinations” (Cass et al. 2005, p. 551). Cass et al. actually argue that the increasing importance of social networks in maintaining a ‘good life’ has resulted in a dispersed pattern of travel needs that can hardly be captured through regular transport analysis. But even if these problems could be solved, a more practical barrier for the application of the need criterion to the transport field remains. This barrier is a result of the fact that transport infrastructure and services are provided to collectives rather than individuals, and for the long-term rather than the short-term. As a result, the current needs of individuals are of little relevance in the provision of transport facilities. The needs of collectives, such as neighborhoods, now and in the future, are what counts. Since population structures of neighborhoods can and will change over time, the consequence would be that near identical levels of transport service would have to be provided to each and every neighborhood. Hence, our conclusion is that the criterion of need lacks distinctive force to guide the distribution of the transport good (see also Apparicio and Seguin 2006).

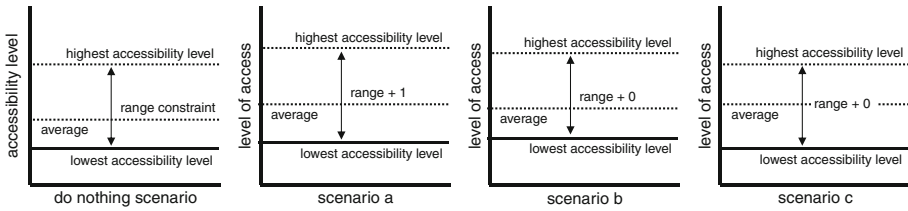
The last two distributive principles have in common that they relate the distribution to the characteristics of a person, i.e. burdens or needs. Another set of principles does not take these characteristics into account, but rather distributes a good in an arithmetic way. Rawls, in his ‘A Theory of Justice’, suggests that at least four such principles should be discussed between the individuals placed behind his famous veil of ignorance (Rawls 1971; see also Frohlich and Oppenheimer 1992): maximizing the average income; maximizing the average income with a floor constraint for the minimum; maximizing the average income with a range constraint; and maximizing the lowest income (Rawls’ difference principle). Each of these principles could be easily transposed to the field of transport, by replacing the word ‘income’ with ‘accessibility’. While Rawls by no means argued that his approach could or should be transposed to specific policy fields (see Blocker and Smith 1980), for the purpose of the paper it is useful to explore the applicability of these four principles to the distribution of accessibility. The question here is, whether each or any of the principles

could serve as a guiding principle for the transport sphere. When looking at the options, the first of these criteria (maximizing the average accessibility level) seems to be of little relevance, as it hardly guides the actual distribution of the transport good over population groups. Rawls' difference principle (maximizing the lowest level), in turn, also has its problems when applied to accessibility. Rawls developed this criterion for income, based on the understanding that differences in income might result in a better working economy, which would then, in turn, generate a higher level of income for the worst-off. The question is if a comparable mechanism could be at work in transport, i.e. whether by allowing differences in accessibility the whole transport system would perform better, thereby generating a higher accessibility level for the worst-off. The argument seems at best far-fetched and surely falls far short of providing a practical criterion to guide distribution in the transport sphere.

This brief analysis of possible distributive criteria suggests that two potential principles remain as possibly relevant for the field of transport: (1) maximizing the average accessibility level with a floor constraint for the minimum; and (2) maximizing the average accessibility level with a range constraint. The difference between these two principles is a qualitative one; the second criterion simply defines the height of the floor constraint in relation to the maximal accessibility level experienced by the best-off person. In case the second criterion is employed in policy making, the floor constraint will be automatically adjusted in accordance with changing accessibility levels. The first criterion lacks such an adaptive mechanism, implying that the floor constraint will have to be re-assessed whenever substantial changes in accessibility levels occur across-the-board.

Following these latter observations the so-called 'maximax' criterion for the distribution of accessibility has been defined. The criterion combines the goal of maximum average accessibility with a limit on the maximal gap allowed between the worst-off and the best-off in terms of accessibility levels. The application of the maximax principle in transport planning and policy would assist decision-makers in the selection of transport projects that maximize average accessibility levels, while ensuring that the accessibility gaps between population groups remain within an acceptable range (Fig. 3). In comparison to the equality principle, the maximax criterion does not demand uniformity and is thus in line with the inevitable differences in accessibility created by space. And in comparison to the need criterion, the maximax principle does not require a paternalistic approach in which transport institutions rather than people themselves determine which trips count as 'needs' and which as 'wants'. Given these features, the maximax principle seems to be a practically applicable principle to guide the distribution of the transport good within a separate distributive sphere. Note that maximum average accessibility not necessarily implies maximum mobility, as accessibility can also be achieved through e.g. land use interventions. It neither has to imply an increase in accessibility levels across-the-board, as the requirement to limit accessibility gaps up to a certain maximum may well imply policies that increase accessibility levels for some at the expense of the (high) accessibility levels of others.

It may be clear that the suggested distributive approach, and the application of the maximax principle, would have profound implications for transportation planning. It would imply a shift from a systems approach to the transport network, as is common today, to a systematic assessment of the accessibility gaps between the transport disadvantaged and those groups in society that experience the highest accessibility levels. The application of the maximax principle would require policy makers to guarantee that these gaps do not exceed a pre-defined threshold. Whenever the threshold would be exceeded, as might be the case for e.g. car-less households in certain 'pockets' of the urban region, transport investment priorities would have to be set so that the gaps in accessibility levels would be



**Fig. 3** Example application of the maximax principle. The diagrams depict the impact of four alternative infrastructure investments on the distribution of accessibility over households. The *left-hand diagram* describes the situation at  $t_1$  for the do-nothing scenario. As in case of regular cost-benefit analysis, this scenario is used as the base line against which to compare alternative investment scenarios. Note that the *do-nothing scenario* exactly satisfies the range constraint in accessibility level between the worst-off and best-off, as set by policy makers. *Scenario A* depicts a situation in which accessibility levels are improved across-the-board: both the worst-off and best-off experience an improvement in accessibility, while the average accessibility level also increases. However, following the maximax principle, this scenario has to be rejected as the gap between the best-off and the worst-off exceeds the range constraint set by policy makers (as indicated by 'range + 1' in the diagram). *Scenarios B and C* both satisfy the range constraint and can therefore be considered as possible investments strategies. The choice between these scenarios and the do-nothing scenario is subsequently made through a comparison of the average accessibility level in each scenario. *Scenario C* results in a substantially higher average accessibility level than *scenario B* or the do-nothing scenario. Hence, *scenario C* is to be preferred, despite the fact that it results in a lower accessibility level for both the worst-off and the best-off household than *scenario B*

reduced to the pre-defined level of acceptance. In practice, this might imply, for example, investing in a system of bus lines and lanes that serves deprived neighborhoods, rather than in a new railway line or highway extension that alleviates a highly congested corridor.

**Conclusion**

In this paper, I have sought to apply the ideas of Walzer to the field of transport. Walzer maintains that justice is a matter of fences, fences between spheres in which goods with distinct social meanings are being distributed solely on the basis of criteria that are relevant for those goods. I have argued that, given the distinct meaning of transport in current societies, as well as the emerging gaps in its distribution, transport 'deserves' its own distributive sphere. The establishment of such a sphere would ensure that the distribution of accessibility over people will be guided by a deliberate distributive policy, rather than strongly shaped by the distribution of money. I have subsequently explored what kind of justice principle could guide the distribution of the transport good, defined as accessibility, once a separate sphere would be established. This preliminary exploration has resulted in the elimination of a number of widely supported distributive principles, and in the tentative identification of a criterion that seems to match the particularities of the transport good.

Many issues still remain. First, for reasons of simplicity, the explorations in the paper have been based on a simplified, static, perspective on the land use–transport interaction. A proper distributive perspective to transport defined as accessibility will have to take into account the inherently dynamic interplay between changes in accessibility levels and land use patterns. It also will have to take into consideration the notion of choice, e.g. the fact that people may trade-off higher levels of accessibility against e.g. lower housing costs, and its consequences for the way in which gaps in accessibility levels should be assessed. Furthermore, the definition of transport as accessibility requires a broader conceptualization of government intervention, to include e.g. service delivery policies and ICT



measures. Also, the defended maximax principle, and the underlying indicator of accessibility levels, will have to be operationalized, so that its value can be assessed in practical case studies. Finally, and perhaps most importantly, the proposed distributive approach to transport will have far-reaching consequences for the institutional framework of transport planning, perhaps comparable to those generated by proposed schemes for personal carbon rationing (see e.g. Fawcett 2004), which will have to be explored and addressed.

For these and other reasons, the paper hardly provides final answers to its central questions. Rather, it should be viewed as the opening of an (explicit) debate about the social meaning of the transport good in current hyper-mobile societies, the need for an explicit distributive transport policy, and the distributive principle that should guide such a policy.

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## Author Biography

**Karel Martens** is an assistant professor at the Institute for Management Research, Radboud University Nijmegen, the Netherlands. His main research interests include transport and justice, the land use–transport interrelationship, parking, and multi-modal transportation. He has published and presented a number of papers on transport and justice, among others in *Transportation* (2011), *Transportmetrica* (2011, with co-author), *The Annals of Regional Science* (2010, with co-authors), *Transportation Research Records* (2010, with co-authors), *Berkeley Planning Journal* (2006), and at the Annual Conference of the Transportation Research Board (2007, 2009, 2011).