

## Preface: Social issues in transport planning

**Rafael H. M. Pereira<sup>a</sup> and Geneviève Boisjoly<sup>b</sup>**

<sup>a</sup>Institute for Applied Economic Research—Ipea, Brasília, Brazil

<sup>b</sup>Polytechnique Montréal, Montréal, QC, Canada

The field of transport planning has been historically dominated by a technical perspective. In its origins, the planning of modern cities and regions was largely developed by engineers with a technocratic understanding of how transportation systems should work, primarily geared toward efficiency (Banister, 2002; Hanson and Giuliano, 2004). Over the last few decades, the field gradually became more interdisciplinary with growing contributions from scholars and professionals from various backgrounds such as geography, urban planning, economics, and sociology (Hickman et al., 2015; Uteng and Cresswell, 2008; Vickerman, 2021). Transport planning became more diverse. This gave visibility to a variety of social issues that pervade human mobility systems as well as to the political processes that exist alongside the technical aspects of planning.

Concerns about social issues are not new in transport studies. In the late 1960s, a growing number of researchers started to investigate transport inequalities related to access to job opportunities and car dependence (Kain, 1968; Rosenbloom and Altshuler, 1977; Wachs and Kumagai, 1973) and the distribution of transport subsidies (Abe, 1975; Hanson, 1992; Hefner, 1972). Earlier studies have also examined issues of fairness in transport decision-making processes (Booth and Richardson, 2001; Grant, 1975) and social and racial inequalities in exposure to environmental externalities (Appleyard and Lintell, 1972; Forkenbrock and Schweitzer, 1999). Several studies and reports were published as postwar urban structure changes driven by car-oriented planning exacerbated issues of race, poverty, and unemployment (Kain and Meyer, 1970; O’Regan and Quigley, 1998; Pignatar and Falocch, 1969; Sanchez, 2008). The early literature on social issues in transportation were very much concerned with transport poverty, giving particular attention to the growing importance of public transport systems in catering to the needs of transit-dependent populations, usually low-income and minority households. Since the late 1960s, we have seen a growing number of more diverse and intricate social issues emerge from how our cities and transport systems are organized.

The *aim* of this book is to present an up-to-date and critical review of some of the most pressing and sometimes overlooked social issues identified by scholars and practitioners working on transport planning. The book gathers a collection of chapters that cover a diverse range of topics such as transport poverty and car dependence, transit-induced gentrification, accessibility, gender, race, children's mobility, the governance of paratransit, equity in project appraisal as well as customer satisfaction with public transport, and the potential of research methodologies in promoting more inclusive and participatory transport planning. The book also presents a rich interdisciplinary perspective on these issues based on the expertise of authors from diverse backgrounds and speaking from different contexts, including Latin America, Africa, South Asia, Europe, and North America.

Which social issues are considered worthy of public attention in the transport planning process depends on local and historical context. In particular, it depends on the conceptions of a just city and mobility system embedded in the social norms and institutions of each society. This is because every social issue only becomes recognized as a social problem that requires policy attention inasmuch as its manifestation goes against our aspirations of justice and against our understanding of how ethics should be applied to transport planning (van Wee, 2011). While the idea of justice is constantly evolving, there is growing consensus that a full understanding of justice in modern societies involves moral concerns with equity, democracy, and diversity (Davoudi and Brooks, 2014; Fainstein, 2010; Kymlicka, 2002). Ultimately, every social issue faced by transport planners and scholars is related to how these three pillars of justice can be understood in the field of transport planning (Pereira and Karner, 2021).

The concern with *equity* is centered around distributive justice (Pereira et al., 2017). It relates to how social and economic inequalities are shaped by the institutions and rules that govern society. Questions of equity draw attention to the distributional outcomes of policies. Equity concerns provoke us to question what social groups benefit or lose from transportation policies, for example, in terms of accessibility gains or in terms of health damage due to exposure to pollution. Government policies have a crucial role to play in social democracies through the provision of public goods and services. This is particularly true in the provision of mass transportation infrastructure and services, which often involves the mobilization of substantial resources and construction of large infrastructure projects, which cannot be easily provided in a decentralized manner through local communities. In this sense, public transport services and investments will remain one

of the key drivers that can shape spatial inequalities of development and opportunities in cities (Tonkiss, 2013), making the study of equity in transport policies particularly important.

Meanwhile, the concern with *democracy* focuses on the fairness of governance, political participation, and decision-making processes. It is based on the core principle that everyone's voice should be equally heard, with particular attention to the need to engage with communities to develop the public policies that shape the built environment and transport systems around them (Bickerstaff et al., 2002; Davoudi and Brooks, 2014). In this sense, the democracy pillar of justice challenges us to move beyond periodic voting and to overcome technocratic top-down planning practices by engaging communities in the coproduction of urban space and governmental policies.

Finally, the concern with *diversity* involves the recognition of group-based differences, rights, needs, values, and identities as well as promoting diversity in decision-making processes (Verlinghieri and Schwanen, 2020; Young, 1990). It requires us to acknowledge that participatory democracy is constantly marked by structural imbalances of wealth and power that marginalize certain groups and favor others in their ability to influence policy decisions that produce urban space (Enright, 2019). The pillar of diversity reminds us that justice is also fundamentally about the uplifting of minorities and marginalized communities, and that justice involves a constant political dispute over which rights, needs, and entitlements should be recognized and for whom.

This book speaks directly about this broad understanding of transport justice and how it applies to a variety of social issues present in transport planning. The reader of this book will notice that each chapter addresses a pressing social issue in transport and touches on one or more of the three pillars of transport justice mentioned above. The first three chapters shed light on the *diversity of needs and experiences* around individuals' mobility and discuss how specific groups are considered in—often marginalized from—current transport planning practices and frameworks.

In Chapter 1 “The roots of racialized travel behavior” Jesus M. Barajas presents an in-depth review of the transport inequities that place Black, Indigenous, and people of color at disadvantage in terms of mobility and access to opportunities, with a focus on the United States. The author clearly shows that these patterns partly result from historical and contemporary racism at play at the systemic and individual levels. To start with, racial inequities are strongly rooted in transport planning and urban development

policies, which have brought about major distributional inequities in the benefits and burdens of transportation systems (Bullard, 2004; Rothstein, 2017; Sanchez and Wolf, 2007). But the transport inequities go well beyond the configuration of the land use and transport systems. Barajas puts forward several examples to illustrate other (often less tangible) ways in which racism limits individuals in their everyday mobility. These include disproportionate policing arising from racial bias, issues of safety and security in communities of color as well as suspicion arising from individuals perceived as being “out of place” in a neighborhood. This chapter highlights why race-neutral planning processes often exacerbate racial disparities, but it also draws attention to the shortcomings of planning practices and theories that solely focus on distributional effects. It then concludes on the need and challenges to appropriately account for race, namely, by considering the broader context and domains that affect travel behavior and policies, and calling for a recognition of history and experiences.

An issue that has been historically overlooked by urban and transport planners is how to make planning sensitive to the needs of women, despite women constituting roughly 50% of urban populations (Akyelken, 2020; Hanson, 2010; Uteng and Cresswell, 2008). Chapter 2 “Gender gaps in urban mobility and transport planning” by Tanu Priya Uteng presents an extensive review on the topic of gender and transport and highlights the existing gaps in this important social issue. Drawing from empirical materials of research and practice from both the Global North and the Global South, Uteng critically reviews the findings around gendered mobilities and reflects on some of the challenges to mainstream gender in transport and urban planning. The chapter starts by summarizing a range of evidence on the gendered differences in travel behavior. Compared to men, women tend to have more complex travel patterns across space and time of the day. Women also tend to do shorter trips, more trip chaining, and are more likely to use active and public transport modes and to be accompanied by small children. As noted by Uteng, these differences emerge due to the interlinks between several factors. These include how women generally have lower access to private transport resources such as cars, the ways in which trip patterns are shaped by women’s more complex and intricate scheduling of activities related to non-work activities such as care work, and how women’s perceptions of safety have a stronger influence on their travel choices or lack thereof. The chapter draws attention to the profound equity implications of how women’s mobility and access to opportunities are often limited due to economic, geographic, time-based, and fear-based exclusion. Finally, the work of Uteng

highlights how the predominant male bias in transport planning and even in travel data collection methods and analysis is deeply rooted in a lack of diversity, with little participation of women in the transport sector as employees, as decision-makers in key policy positions, and as educators.

Another social group that receives relatively little attention from transport researchers and planners are children (Mitra, 2013; Waygood et al., 2019). This is the topic covered in Chapter 3 “The social dimensions of children’s travel,” written by E.O.D. Waygood, Pauline van den Berg, and Astrid Kemperman. The authors review an extensive literature on children’s travel behavior and how it relates to social interactions and connections within a neighborhood, well-being, and life satisfaction. Since transport planning largely concentrates on the needs of adults (namely, car travel), a declining proportion of children are able to travel independently in several cities of the world. Yet, the authors gather a variety of evidence that independent travel by children is associated with multiple positive physical and mental health outcomes. By supporting social interactions and greater social capital, independent travel contributes to greater trip satisfaction and overall social well-being. This chapter therefore recommends the design of child-friendly neighborhoods (that facilitate independent travel by children), by promoting active transport and including children in the planning process. Further, the authors highlight the broader social impacts that transport can have on one’s life and make a call for researchers and planners to recognize the particular needs of children in urban and transport planning to promote more inclusive cities for all.

The second series of chapters in this book discusses the complex and multidimensional interrelationships that contribute to transport inequities. These chapters review how land use and transport development processes, together with institutional and governance structures, foster transport inequities, placing socially disadvantaged groups at risk of transport poverty and social exclusion.

A central concern from transport researchers and planners is the multiple and overlapping dimensions of transport poverty, particularly in the context of car-dependent neighborhoods and cities (Lucas et al., 2016; Mattioli et al., 2020). This is the topic covered in Chapter 4 “Transport poverty and car dependence: A European perspective,” where Giulio Mattioli makes important links between these issues and questions of transportation equity and justice. Mattioli reviews the conceptual debates around transport equity by discussing the notion of transport poverty from a broad and holistic perspective. As such, the chapter highlights that transport poverty is a

multidimensional concept that encompasses inequities and distributional issues, in terms of both burdens and benefits. By covering the multiple overlapping dimensions of transport poverty (mobility poverty, transport affordability, accessibility poverty, and exposure to externalities), the chapter demonstrates the wide reach of transport poverty across population groups, particularly in Europe and North America. Further, Mattioli emphasizes that transport poverty cannot be understood separately from the societal processes that led to the context of car dependence. As such, in the Global North, and increasingly in the Global South, car access and car use has become a prerequisite for many households to access services and opportunities and to fully participate in the society. This results in several challenges for transport disadvantaged communities not only in terms of mobility, transport affordability, and accessibility, but also in terms of transport externalities associated with car-dominant transport systems.

Transport inequities in rapidly growing cities of the Global South are a pressing concern for transport researchers and planners. In Chapter 5 “Making the links between accessibility, social and spatial inequality, and social exclusion: A framework for cities in Latin America,” Daniel Oviedo reviews empirical research on transport provision and poverty and spatial inequalities in access in Latin America, revealing how transport and urban planning contributed to the social exclusion of the poor in the urban peripheries. Drawing on the splintering urbanism and social exclusion frameworks, Oviedo provides a conceptual frame to understand the drivers behind—and impacts of—the lack of accessibility experienced by socially disadvantaged groups. Splintering urbanism, which refers to the differentiated provision of infrastructure based on power, wealth, and influence, is helpful in understanding how power and wealth have influenced, and still influence, the development of infrastructure in Latin America. The frameworks used by Oviedo in the chapter helps us understand the paths through which Latin American urbanization has led to well-connected spaces for the elite while leaving areas and communities without political power at the margins of the development processes. Such fragmented development results in a reinforcing cycle of transport disadvantage and inequities, where socially disadvantaged groups are progressively excluded from networks and connected spaces. The proposed framework also illustrates how informal transport, housing, and employment strategies work against the structural processes of exclusion. By reviewing transport, development, and urban

studies, this chapter demonstrates the necessity to consider the multiple dimensions of social exclusion.

As discussed in the previous chapters, the provision of public transport is key to supporting social equity and inclusion by improving accessibility to opportunities. However, the implementation of new transport infrastructure can also lead to gentrification and have negative impacts by pushing out low-income residents and local businesses, harming the populations that would benefit the most from these new infrastructure (Delmelle and Nilsson, 2020; Nilsson and Delmelle, 2020; Padeiro et al., 2019). This topic is thoroughly reviewed by Elizabeth C. Delmelle in Chapter 6 “Transit-induced gentrification and displacement: The state of the debate.” The chapter reviews the theoretical foundations and empirical evidence associated with neighborhood changes brought about by investments in rail transit. Delmelle questions the idea that transit alone is responsible for this phenomenon. As such, she exposes mixed findings that have been put forward in previous studies, emphasizing that gentrification-like changes are often marginal and very difficult to quantify. More importantly, Delmelle highlights the importance of the local context in determining how new transport investments will influence the changes in a neighborhood, as well as the need for more disaggregated research to effectively capture the causal effects of transport investments. Again, the complex interrelationships between transport infrastructure, neighborhood change, travel behavior, and well-being are highlighted as key questions to address the equity concerns over who are the winners and losers from transport investments.

The complex interplays between transport systems, urban development, and political institutions are further discussed by Jacqueline M. Klopp in Chapter 7 “From ‘Para-Transit’ to Transit? A Review of the Politics of Popular Transport.” The chapter sheds a critical light on the current debates around what is commonly referred to as paratransit or informal transport (e.g., privately or cooperatively owned minibus and taxi systems). The author illustrates that while these forms of transport are typically marginalized and depicted as “chaotic” and “unplanned” by researchers and planners, more and more efforts are placed into integrating these forms of transport in transport planning (Behrens et al., 2016; Cervero and Golub, 2007; Klopp and Cavoli, 2019). Klopp thereby refers to them as popular transport rather than paratransit or informal transport, which tends to hold a negative connotation. While the literature reviewed in this chapter increasingly recognizes the potential role of popular transit as first-last mile options,

the question remains of how to effectively work with these modes and engage with their users and stakeholders. If, on the one hand, popular transport has a key role to play in promoting more inclusive cities and transport systems by catering to the needs of low- and middle-income classes, it also poses numerous governance challenges. Some of these challenges discussed in the chapter include the lack of data, labor exploitation, and a profound misunderstanding of operations and issues at stake, and also more broadly the politics around them as well as common attitudes among policy makers. Having demonstrated the complexity of the challenges around the politics and power relations underlying popular transport the author calls for a holistic approach to the governance and planning of these modes in order to promote more equitable and just mobility systems.

The previous chapters emphasized the limitations of current practices in addressing inequities in transport planning. The last three chapters provide insights on emerging methods that can contribute to foster more inclusive land use and transport systems.

Customer satisfaction surveys are commonly conducted by transport agencies as a means to identify the diverse needs and experiences of specific population groups (Eboli and Mazzulla, 2010; van Lierop et al., 2018). Yet, there is little systematic understanding of how this type of data is collected and analyzed to help improve overall passenger satisfaction and long-term loyalty. This is the literature gap covered by Cherise Roberts, Emily Grisé, and Dea van Lierop in Chapter 8 “What are we doing with all that satisfaction data? Evaluating public transport customer satisfaction data collection and analysis techniques.” The chapter focuses on public transport satisfaction data and market segmentation, and how it can contribute to or limit the ability of policy makers to address the needs of all segments of the population, particularly the hard-to-reach minorities. The authors draw attention to some of the advantages and drawbacks of various techniques used by public transport agencies to collect satisfaction data, including intercept and phone surveys, online questionnaires, focus groups, and interviews. While quantitative approaches allow reaching a greater number of individuals, achieving representativeness remains a challenge. As for qualitative methods, they allow identifying concerns that are not exposed with quantitative methods and are specifically relevant to highlight experiences of specific, often marginalized, groups. Overall, the authors recommend that a mix of techniques be used to ensure that the perceptions of marginalized groups are captured. Further, the authors insist that careful attention must be placed



on the data that is collected and how it is analyzed to effectively capture the differences across segments. This chapter complements the other chapters in the book by providing a practical perspective on how agencies' practices can foster or hinder the recognition of marginalized groups in planning.

One of the most common tasks in transport planning involves assessing the potential positive and negative impacts of transport policy options. While cost-benefit analysis (CBA) has been the first go-to method used by academics and practitioners for this task, CBA is quite limited in that it does not account for social and distributional impacts of transport projects (Hickman and Dean, 2018; Mouter, 2020, 2021; van Wee, 2012). This is the starting point of Chapter 9 "Social and distributional impacts in transport project appraisals" by Ruth Shortall and Niek Mouter. In this chapter, Shortall and Mouter discuss some fundamental limitations of CBA to account for social impacts and ethical concerns of transport policies, and review the recent developments that seek to overcome the shortcomings of CBA. As discussed by the authors, CBA has been criticized for ignoring that the formation of preferences is inherently a social process that goes beyond a purely economic rationality of individual agents. The chapter also discusses the equity implications of CBA for being fundamentally guided by utilitarian and consequentialist moral reasoning, and by the individual willingness to pay paradigm that often deviates from public preferences. Recent innovations in welfare economics to overcome some of these CBA limitations are also covered in the chapter. These include participatory value evaluation and deliberative monetary valuation, which bring together citizens' participation and social interactions to help inform the allocation of scarce public resources. Shortall and Mouter move on to summarize the core elements of multicriteria assessment and deliberative appraisal methods, and review several cases in which they have been used in transport policy appraisal. Both methods can improve the valuation of transport impacts and public goods by taking into account multiple viewpoints and dimensions of well-being that are difficult to translate into monetary terms, and deliberative appraisal methods in particular also can foster democratic participation and pluralistic perspectives through reasoned discussions between participants. This chapter helps us understand the potentials and pitfalls of various appraisal methods and warns us that the capacity of each of these methods to genuinely promote a more equitable and democratic transport planning that fosters diversity depends on how participation processes are organized and facilitated.

Finally, in Chapter 10 “Innovative field research methodologies for more inclusive transport planning: Review and prospect,” Gina Porter and Claire Dungey focus on how innovative field research methodologies can support more inclusive transport planning. The authors contrast the technocratic approaches (typically centered on large-scale quantitative data and methodologies) with the need to understand and address the perceptions and experiences of marginalized populations. To do so, effectively engaging with potential users, especially the ones that are marginalized within current practices, is crucial. At the same time, the authors caution that participatory research needs to be carried out with careful consideration of the landscapes of power, politics, and vested interests. The chapter covers a wide range of field research methodologies, including in-person interviews and focus groups, go-along methods, coinvestigation practices (excluding researchers’ direct presence on the field), joint research and interventions as well as digital methodologies. The authors provide a wealth of examples where such methodologies have allowed uncovering challenges experienced by specific groups and providing a nuanced understanding, as well as challenges that go beyond the infrastructure and services as such (e.g., what surrounds the trips in terms of sociality, the urban fabric, etc.). The material presented in the chapter illustrates the importance of these innovative field research methodologies to empower communities as peer researchers. It also shows the potential role of such methodologies to have a real impact in policy design to further the recognition of the diversity and needs of local communities in local policy making. The authors acknowledge that these approaches are not straightforward and present their own set of challenges, but clearly demonstrate the potential of these methodologies and the relevance of overcoming these challenges. It is our hope that it will bring more researchers to engage with such methodologies, thereby contributing to the development of more inclusive research and planning practices.

The full set of chapters in this book cover some of the most challenging social issues in transport planning, which speak directly to the three pillars of transport justice summarized in this introduction: equity, democracy, and diversity. The chapters highlight the complexity of the social aspects of transport, given their multidimensional, multiscalar, and often less tangible nature. Social issues are interconnected with broader concerns of governance and political institutions, inequalities, social exclusion, and urban development, while at the same time being intimately related to very personal experiences. A common element that spontaneously emerged across the chapters in this book is the acknowledgment that researchers and

practitioners need to take more holistic approaches, together with a diverse set of methodologies, to properly address those pressing social issues in local urban and transport planning. Such multidisciplinary approaches and frameworks are essential to tackle the complex interplay between institutions, culture, individuals, planning agencies, transport networks, land use development, etc., in order to make transport planning more inclusive and just.

This book is a call for action for researchers, planners, and decision-makers to not be afraid to dig into these complex issues and to take upon the associated challenges. Addressing these issues demands that we go beyond mainstream traditional methods and practices. Doing so requires a lot of effort, resources, and time to make changes toward more progressive and inclusive planning practices. But it is our hope that this book will inspire researchers and practitioners in engaging with pressing social issues, and that it will motivate the research and planning communities to develop, adapt, and apply innovative approaches.

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