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The interplay between travel behavior and public participation in sustainable urban mobility

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This work addresses the following topic(s) from the Call for Contributions:
(Please check at least one box)

- Placemaking to integrate urban spaces and mobility
- Promoting sustainable mobility choices in metropolitan regions
- Governing responsible mobility innovations
- Shaping the transition towards mobility justice
- System analysis, design, and evaluation
- other: _____

Extended Abstract

Problem statement

The sustainable transformation of the mobility sector implies fundamental changes in urban infrastructures and mobility habits. In particular, shared mobility options such as car, bike or e-scooter sharing as well as other environmentally friendly mobility modes gain importance. The literature suggests that these mobility services are currently not equally attractive to and acceptable for all population groups. Some people appear more willing to abandon well-established social norms such as car ownership and to shift to shared and public transport mobility services. Past studies on the profile of shared mobility users revealed the importance of multiple sociodemographic characteristics such as gender and income to the adaption of shared mobility. To improve the attractiveness of shared mobility and their contribution to a sustainable future, it is significant to understand the level of accessibility and inclusiveness in their design. This is especially important for commonly vulnerable groups who might have uneven physical, cognitive and digital capabilities or experience other forms of exclusion concerning their mobility opportunities. Public participation can help identify the diverse interests of vulnerable groups and incorporate them into appropriate mobility planning.

Research objectives

Mobility justice conceptualizes justice not only in terms of distribution but suggests a nested approach including distributive, deliberative, procedural, restorative and epistemic justice. Thus, not only the allocation of actual and potential mobility comes into focus, but also the visibility and recognition of different groups of individuals and their characteristics. Recent research evidence suggests that people with stronger active or passive social participation are more inclined to travel by sustainable modes of transport. In participation research, the participation paradox describes an underrepresentation of certain vulnerable population groups. This paper deals with the empirical interplay of involvement in participation and co-creation processes and mobility behavior. More specifically, the present study aims to expand our understanding on how people's inclusion and involvement in

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public participation processes relates to their established and preferred mobility habits. The study aspires to answer the following questions: "How does individuals' involvement in public participation processes relate to their mobility profile? What inter-individual differences can be observed for the various sociodemographic and vulnerability profiles?". The main hypothesis that the present study targets to test is that people who are more involved in public participation processes are also more likely to welcome and adapt sustainable choices such as shared and active modes of transport.

Methodological approach

Methodologically, this paper builds on the analysis of survey data collected in four different European urban areas (Vienna, Munich, Brussels, and Rotterdam/The Hague). The survey design focused on gathering data on people's experience with public participation as well as their interest to get involved in participation and co-creation processes in the future (participation profile). To enable the analysis of the relationship between people's participation profile and their mobility profile, the survey also prompted respondents to report their familiarity with various modes of transport, both conventional and emerging modes such as bike and car sharing. More specifically, people reported their travel frequency by the various mobility offers and their likelihood to use in the future (mobility profile). Moreover, to enable the investigation of how the effect varies among different population groups, especially vulnerable-to-exclusion groups, the survey inquired individuals' sociodemographic characteristics such as age, gender, and income and education level. Additionally, the survey asked for other potentially influencing characteristics, like respondents' digital skills and physical abilities. In total, 2515 people provided valid responses during the data collection period (December 2022 – March 2023).

(Expected) results

The study draws conclusions on the interplay between participation and mobility profile based on statistical analysis of the obtained dataset. The analysis includes statistical testing of group differences and modelling of the predictors of mobility profile. In addition, data are examined with respect to various characteristics of vulnerable groups. This allows interpreting the results in terms of distributive, deliberative and procedural justice. The findings of the study contribute to further understanding the requirements for inclusive design of shared mobility. Furthermore, the results are useful for determining the potential of emerging concepts such as shared mobility and mobility hubs in relation to the level of citizen engagement in various public participation processes, especially regarding vulnerable population groups. Local authorities should consider the study results to consider how involvement of citizens in decision making could prompt not only more active society members but also citizens that are more sensitive towards the impact of their mobility decisions.