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Addressing infrequent car users to reduce car ownership in dense urban areas – a case study from Dreimühlenviertel in Munich

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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

In the past decades, the problem of limited public space in dense urban areas has become increasingly pressing. Demographic change and shifting lifestyles have reshaped urban life, but urban planning has struggled to keep pace with these changing conditions. The result is a lack of fairly distributed public space that meets the diverse needs and desires of urban residents. Space for recreation and social interaction, infrastructure for non-motorized transportation and parking space are examples of such needs and are related to community well-being, quality of life and climate resilience. While in most urban areas, a significant portion of public space is dedicated to cars and parking, recent city planning aims to promote alternatives to car-centric design and to reallocate urban space away from cars. In many cases, this is done by reducing parking space on and next to streets. However, this can result in reluctance of the residents if parking availability is even more limited. To achieve better acceptance and to develop meaningful measures, it is essential to identify the different needs of the residents, engage them in the process of the redistribution of urban space and provide alternative and innovative solutions.

Research objectives

In the context of the project ‘Bestandsquartier der Zukunft – Dreimühlenviertel’ by the alliance ‘Mobile Zukunft München’, various measures and actions have been implemented in the Dreimühlenviertel district in the city of Munich in 2023. The project aims to assess the residents’ needs and desires regarding a sustainable development of public space within the district. One of the many initiatives during the project focuses on individuals that own but infrequently use their private cars. By understanding and discussing their specific travel behavior, we aim to identify individuals who are able to manage their travel with other mobility solutions instead of their private car and thus reduce car ownership. A reduction in the number of cars within the district would reduce traffic and the demand for parking space. This, in turn, would open up opportunities for the alternative use of urban space, such

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as offering mobility options like car-sharing, bike-sharing, or e-scooter-sharing or transforming the space into a recreational area.

Methodological approach

To analyze the residents' travel behavior in the district, an online survey was launched in August 2023, with data collection ongoing until November 2023. The survey was promoted through district-wide posters and community engagement workshops during the summer. To date, about 160 individuals participated in the survey. The survey approach is based on the so-called 'travel skeleton' concept, which has been applied in several cities worldwide (von Behren et al., 2020). The approach captures information on the typical travel behavior of the individuals, sociodemographic characteristics as well as psychographic information such as attitudes towards different means of transportation. Additionally, questions regarding long-distance travel behavior as well as detailed information about vehicles in the household are included. With the collected information, we are able to assess the level of objective and subjective car dependence of car owners and assign each participant to one of the car dependence types presented by von Behren et al. (2018). While objective car dependence is described by the need to use a car, e.g., because of a lack of alternatives, subjective car dependence represents the psychological component of car use. Individuals with a high car orientation, e.g., because they enjoy driving, are subjectively dependent on their private car. The group "car-independent pragmatics" is specifically interesting because they own at least one car, but based on our analysis, both their objective and subjective car dependence is low. For participants assigned to this group, special emphasis should be given to analyzing the long-distance travel behavior. Previous research from Munich revealed that a part of the population rarely uses their private car for everyday travel but primarily uses it for long-distance trips on the weekends or for vacations, which can explain their car ownership (Magdolen et al., 2021). A workshop planned for November 2023 with individuals identified as "car-independent pragmatics" will allow us to assess the individual reasons for car ownership in detail and to discuss alternative mobility options besides the private car that can or could meet their specific travel needs.

(Expected) results

The first data analysis of about 110 respondents already reveals interesting insights. About half of the sample lives in a household with at least one car. Among them, 38% are identified as "car-independent pragmatics", meaning that they rarely use the private car in everyday travel and have a low car dependence. A first glimpse into the data shows that several individuals use their car only for rather seldom long-distance leisure trips. In addition, some of these people own (camping) vans, likely to be used for leisure and vacation travel. Another interesting aspect is, that the cars reported by the "car-independent pragmatics" tend to be older. At this point, these are only the first results and these aspects will be analyzed in more detail as soon as the data collection ends. Further insights into the reasons for car ownership and the potential to reduce car ownership are expected from the upcoming workshops.

References

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