

## Identifying and understanding non-cyclists: typology development for sustainable urban mobility

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# Identifying and understanding non-cyclists: Typology development for sustainable urban mobility

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## 1. Problem Statement

The promotion of active travel modes (e.g. walking, cycling) has emerged as a central pillar of global efforts to promote sustainable urban mobility. Active modes do not emit greenhouse gases, are quiet, require less (parking) space, are affordable, flexible and support good health. Beyond being a transport mode favoured by urban sustainable mobility advocates, cycling has also become central to international movements campaigning for more liveable cities.

However, almost half of the German population never or only seldom uses their bike for transport or leisure purposes. This contrasts with only 13.4% not owning a bike, pointing to interesting contradictions between bicycle ownership and use (infas et al. 2008). Reasons for not using the bike are manifold and include infrastructural issues, socio-cultural norms about mode use and related aspects of mobility socialization, and personal factors such as shifts in people's mobility biography relating to major life events. Concerning infrastructure, deficits continue to exist that affect people's ability and willingness to cycle. For example, safety concerns around junction design and gaps in cycling-specific infrastructure remain key barriers to cycling uptake in cities. Similarly, social and cultural norms prevail that prioritise car use. Personal factors such as fitness levels, age and gender have been shown to influence people's propensity towards selecting an active mode of travel. In addition, life events and 'mobility milestones' (Rau and Manton 2016) such as the arrival of the first child or involvement in a cycling accident frequently result in a shift

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towards modes that are perceived to be safer (e.g. car use, public transport). Overall, efforts to understand why people do not cycle need to acknowledge the multitude and complexity of barriers, thereby challenging monocausal explanations such as those that focus solely on infrastructure deficits.

Adult non-cyclists form a rather heterogeneous group of transport users that has not yet received adequate attention from scientists and policy makers. This contrasts with a wide range of initiatives developed and implemented by pro-cycling activists, including cycling safety workshops and skills training programmes for elderly people, women and refugees, to name but a few. To address the aforementioned research gap, RadAktiv („*Identifizierung, Typisierung und Aktivierung von Nicht-Radfahrern: Transdisziplinäre Entwicklung regional transferierbarer Maßnahmenpakete, die identifizierte, typenspezifische Barrieren mit dem Ziel der (Wieder-)Nutzung des Fahrrads gezielt aufgreifen*“) advocates an approach to social-scientific mobility research that prioritises learning about different types of non-cyclists. In particular, it seeks to advance scientific understanding of the diverse and frequently interlocking barriers that non-cyclists face and that prevent them from (re)starting cycling. In an effort to move beyond a ‘one size fits all’ logic, results from RadAktiv are also meant to feed into future urban sustainability policies at local, regional and national scales.

## 2. Research Objectives

RadAktiv contributes to the advancement of knowledge about barriers to the uptake of cycling, in particular those that have been identified in the context of past urban sustainable mobility initiatives. At the same time, it seeks to develop recommendations for future pro-cycling strategies. To achieve these twin goals, the project adopts a transdisciplinary, two-step research design that connects research elements with more applied, policy-focused work that involves local practice partners in the Munich region as well as former non-cyclists. The research part delivers the first-ever encompassing typology of non-cyclists and their barriers for Germany.

Throughout the project, we adopt a biographical perspective (Lanzendorf 2010, Chatterjee and Scheiner 2015) that draws explicit attention to life events that may change modal choice such as getting the driving license or being involved in an accident. This interest in people’s mobility biographies is mirrored in the methodological approach, with interviews in Phase I focusing on events and ‘mobility milestones’ in people’s lives that have resulted in a shift in modal choice away from cycling.

## 3. Methodological Approach

The project uses a transdisciplinary multi-method approach combining semi-structured qualitative interviews with a diverse sample of experts and non-cyclists (Phase I) with a representative telephone survey in Germany (Phase II). The main aim of the qualitative interviews is to identify motivations and barriers in relation to non-cycling, with key insights being fed into the design of the questionnaire. The subsequent survey is intended to deliver large-scale quantitative data for the development of a typology of non-cyclists.

In Phase III RadAktiv develops sets of measures for the activation of non-cyclists based on the evidence collected throughout the project, examples of international good practice and results of a series of co-creation workshops with experts and (former) non-cyclists. Existing activation programmes will be examined in light of the typology developed during Phase II. Building on this examination, packages of measures will be designed for selected non-cyclist types, with a view to encouraging them to (re)start cycling. These will include measures relating to 1) infrastructure, 2) information provision, and 3) monetary and non-monetary incentives.

The poster for the mobil.TUM conference 2018 presents first results of the qualitative phase of RadAktiv. It speaks directly to the conference topics “Strategies for Sustainable Mobility Systems” (esp. behavioural changes and retrofitting of infrastructure and services as well as promotion of liveable urban spaces and non-motorized transportation) and “Governance of Urban Mobility” (policy analysis, co-creation of innovative solutions).

## 4. Expected Results

Based on insights from the qualitative part of the research and to illustrate the diversity of non-cyclists, the poster presents a selection of typical cases and their specific motivations and sets of barriers. These typical cases are

subsequently used to structure the classification of non-cyclists as part of the typology work in Phase II as well as the subsequent design of targeted programmes.

## **References**

- Chatterjee, K., Scheiner, J., 2015. Understanding changing travel behaviour over the life course: Contributions from biographical research. A resource paper for the Workshop “Life-Oriented Approach for Transportation Studies” at the 14th International Conference on Travel Behaviour Research (19-23.07.2015), Windsor, UK.
- infas, DLR (eds), 2010. *Mobilität in Deutschland 2008. Ergebnisbericht. Struktur – Aufkommen – Emissionen – Trends.* Projekt-Nr. 70.801/2006. Bundesministerium für Verkehr, Bau und Stadtentwicklung. Bonn und Berlin.
- Lanzendorf, M., 2010. Key Events and Their Effect on Mobility Biographies: The Case of Childbirth. *International Journal of Sustainable Transportation* 4(5), 272–292.
- Rau, H., Manton, R., 2016. Life events and mobility milestones: Advances in mobility biography theory and research. *Journal of Transport Geography* 52, 51-60.