

Barriers and motivators to bicycle in cities with low cycling maturity: Lisbon case study

Summary

Changing behaviours can be seen as one of the biggest challenges for sustainability. Despite growing public interest in cycling, cities with low cycling maturity - with low numbers of bicycle trips and little cycling infrastructure - are still common. This research explores the barriers and motivators for cycling adoption in Lisbon by modelling the determinants that may lead to behaviour change.

Through a survey, barriers, motivators and factors inducing cycling were compared between cyclists and non-cyclists. Both considered safety, effort, lack of a cycling network and not having a bicycle, relevant barriers to cycling in Lisbon. However, the factors that led cyclists to use bicycle are different from those that non-cyclists claim would lead them to adopt this mode, although related to their barriers. It was also observed that the factors that triggered mode shift have evolved over time, a consequence of bicycle promotion policies and infrastructure investments in recent years.

Starting from Prochaska's Theory of Stages of Change, potential cyclists were segmented according to sociodemographic variables, experience in cycling, and willingness to change. The probability of switching from "Pessimistic" to "Optimistic", "Enthusiastic" and finally to "Cyclist" was modelled with binary logistic models. The results suggest that infrastructure impacts are highest in the definition of belonging at the early stages of change; while equipment and practical needs have higher relevance in the intermediate stages - closer to being a cyclist; and finally, that the social influence and personal concerns of the individual give a final impetus to the behavioural change to start cycling. These findings were schematised into a Pyramid of Needs for Cycling, inspired by Maslow's Pyramid, which translates the behavioural transition process, and summarises the hierarchy of needs for using the bicycle. This Pyramid informs the impact that interventions and public policies can have - and for whom - on behaviour change, potentially increasing bicycle use if the respective needs are met.

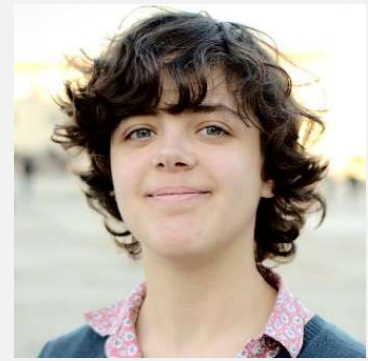
This thesis contributes to understanding how the modal split of cycling can be increased in cities of low cycling maturity by adopting a public policy approach targeting different groups of the population who are willing to cycle but have different needs, and encouraging progressive behaviour change, potentially becoming cyclists.

Keywords

Cycling, typologies of cyclists, potential cyclists, urban mobility planning, market segmentation.



The Stages of Change, adapted to taking up cycling.



PhD student

Rosa Melo Félix

PhD program

Transportation Systems (IST, University of Lisbon)

Supervisor

Filipe Moura (CERIS, IST, University of Lisbon)

Co-supervisor

Kelly Clifton (Portland State University)

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