



University of HUDDERSFIELD

University of Huddersfield Repository

Nikitas, Alexandros and Wallgren, Pontus

Understanding Public Attitudes to Bike-Sharing in Gothenburg

Original Citation

Nikitas, Alexandros and Wallgren, Pontus (2014) Understanding Public Attitudes to Bike-Sharing in Gothenburg. In: Nationell Konferens i Transportforskning (3rd Swedish National Conference on Transport Research), 21st - 22nd October 2014, Norrköping, Sweden.

This version is available at <http://eprints.hud.ac.uk/25003/>

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: E.mailbox@hud.ac.uk.

<http://eprints.hud.ac.uk/>

Understanding Public Attitudes to Bike-Sharing in Gothenburg

By: Dr Alexandros Nikitas and Dr Pontus Wallgren

Division of Design & Human Factors,

Department of Product and Production Development, Chalmers University of Technology

A predominately car-oriented transport has been the cornerstone of urban development in a worldwide scale for decades now; a cornerstone that is associated mostly with the short-term individualistic benefit of the road user in terms of comfort and convenience, but also with severely adverse effects on societal and environmental sustainability. The problem for society – and policy – is therefore how to retain the social and economic benefits linked to mobility while reducing the negative environmental, economic and social impacts from transport (Lathia et al., 2012). Considering this and the ever-increasing number of people who live in cities, the development and promotion of alternative social, attitudinal, behavioural and technological niches to the current automobile-focused transport regime is needed more than ever before.

One of the prime non-regulatory frameworks to promote this transition to a more sustainable transport paradigm refers to the shared-use of mobility innovation mechanisms. Bike-sharing is perhaps the most characteristic and greener example of this sort of alternative transport solutions. It can be described as a short-term bicycle rental service for inner-city transportation providing bikes at unattended stations (Vogel et al., 2011). Bike-sharing systems have been introduced as a means to extend the reach of public transit services to final destinations in a way that promotes the development of sustainable and aesthetically pleasing urban environments that prioritize people over cars (Nikitas et al., 2014). By integrating with other public transportation systems and providing free or affordable access to bicycles for city travel, the public bicycle systems are used to lessen the use of automobiles for short trips, thereby alleviating traffic congestion and reducing noise/air pollution (Lin and Yang, 2011). Bike-sharing also acts as a door opener for increased bicycle use since it works as a powerful on-street reminder ‘advocating’ that cycling is practically supported by policy-makers. The most distinctive function of such a scheme however, is clearly the concept of “sharing” since individuals use bicycles on an “as-needed” basis without the costs and responsibilities of bicycle ownership (DeMaio, 2004). This could initiate or reinforce the process of building a culture of shared responsibility for the “well-being” of the scheme in particular and the city’s transport system in general (Nikitas et al., 2014).

Despite the vast potential of bike-sharing outlined herein and more importantly despite the numerous (at least 500) schemes of variable sizes and types that run in more than 50 countries worldwide, the impact of its use and the factors that can make it successful or not constitute a topic that is still only modestly negotiated by research. This abstract refers to a study aiming to frame the attitudes of people towards the rapidly expanding bike-sharing scheme of Gothenburg some of them referring to their experience of the scheme as users.

With over 600 km cycling routes, Gothenburg provides an extensive bike road network that makes cycling a valid transport option for the city’s road users. Gothenburg has in place Styr & Ställ, which is a self-service bike rental system, spread across 62 stations throughout the city centre with an excess of 600 bicycles. This fairly inexpensive system can be accessed 24 hours a day and seven days a week between 1st of March to 31st of October. The scheme is financed by the revenue generated from its

**Abstract Submission:
Nationell Konferens i Transportforskning,
21-22 Oktober 2014, Linköpings Universitet, Campus Norrköping**

users and from the commercial billboards placed throughout the city. Approximately 50,000 annual users signed up in 2012 for using this service (including tourists) a number that has really forced the rapid expansion of the scheme in what it is today and calls for research pointing to two directions; research that could either attempt to captivate what it seems to be a formula for success or understand how a scheme with such a potential could become even more publicly acceptable.

The research study that will be presented is founded on a primarily quantitative online survey consisting of 22 questions (four of them with sub-questions). The majority of them use 5-point Likert scales. This online survey was launched relatively close to the beginning of the scheme's re-operation after the winter break. Social media were used to promote the online survey among other distribution methods.

A number in excess of 500 fully completed questionnaires were collected and analyzed. The respondents believed in general that cycling could be a sustainable, cost-saving, healthy, pleasant mode capable of reducing road traffic congestion. 90% of them agreed or strongly agreed that more bicycle-related investments are necessary for Gothenburg. More importantly though, only an insignificant proportion of the respondents (approximately 1.5% of them) disagreed or strongly disagreed with the notion that Styr and Ställ is a good scheme for the city. The respondents believed that Styr and Ställ is a pro-environmental, inexpensive and healthy travel option, which complements the other existing public transport services and promotes a more human-friendly identity for the city. The vast majority of them also believed that public bicycles provide a viable service for the city that should expand to more areas. Despite these positive attitudes and although at least one out of four respondents cycle in a daily basis and more than half of them use a bike regularly, very few of them ride a public bicycle: almost 85% of them don't or use it rarely. More than 40% of the respondents though reported that they do that because they use their own bicycles, while an excess of 30% considered that there is still a lack of good public bicycle related infrastructure in the city. Another finding of the study is that quite a few people find neither the bicycles nor the rental stations particularly attractive and they do not see a need for electrical bicycles. All in all, even the majority of the respondents that self-reported a small likelihood to ever use systematically public bicycles was positive towards the scheme.

References:

- DeMaio P.** (2004). Will Smart Bikes Succeed as Public Transportation in the United States? *Journal of Public Transportation*, 7(2), 1-15.
- Lathia, N., Ahmed, S. and Capra, L.** (2012). Measuring the Impact of Opening the London Shared Bicycle Scheme to Casual Users. *Transportation Research Part C*, 22, 88-102.
- Lin, J. R. and Yang T. H.** (2011). Strategic Design of Public Bicycle SHARING Systems with Service Level Constraints. *Transportation Research Part E: Logistics and Transportation Review*, 47(2), 284-294.
- Nikitas A., Wallgren P. and Rahe U.** (2014). Public Bicycles: How the Concept of Human-Oriented "Mobility Sharing" Technology Can Influence Travel Behaviour Norms and Reshape Design Education. 16th International Conference on Engineering and Product Design Education Conference "Design Education & Human Technology Relations", September, Enschede, The Netherlands.
- Vogel, P., Greiser, T. and Mattfeld, D. C.** (2011). Understanding Bike-Sharing Systems using Data Mining: Exploring Activity Patterns. *Procedia Social and Behavioural Sciences*, 20, 514-523.