Car use of young adults: The role of travel socialization

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ABSTRACT

This study evaluates how different aspects of travel socialization during childhood and adolescence contribute to the explanation of travel mode choice in young adulthood. In an online survey with 2612 students who had access to a car three different socialization aspects were measured retrospectively: communication with parents about the environmental impact of travel mode choice at the participants' age of 15, the symbolic-affective importance of driving and acquisition of a driver's license at the age of 18, and finally multi-mobility in the peer group at the age of 18. It was expected that socialization constructs would have a direct effect on social and personal norm as wells as on car use habit and an indirect effect on car use, mediated by norms, habit and intention. Structural equation modelling showed a significant impact of all socialization constructs on either norms or car use habit or both. Moreover, the postulated mediator effect could be confirmed. The paper encourages widening the perspective of transport studies by aspects of socialization, which have been neglected in former research on adults mobility behaviour.

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1. Introduction

Car use produces serious global and local problems with respect to health and environment (cf. Gärling & Steg, 2007). Main causes of these problems are emissions of greenhouse gases and toxic air pollutants as well as noise and accidents. In addition to technological solutions and an optimization of the infrastructure, an effective overall solution to these problems would require behavioural change of individual car use.

So far, psychological studies on travel mode choice focus on the influence of psychological determinants of mobility behaviour that are active in the situation when the decision is made, such as personal norms or travel mode choice habits. However, the analysis of the formation of these determinants has rather been neglected. In this paper, we consider how different aspects of travel socialization during childhood and adolescence contribute to the explanation of personal and social norms, car use habits, and travel mode choice in young adulthood in order to detect new starting points for the change of car use behaviour.

1.1. Travel socialization

The concept of socialization refers to "the ways in which individuals learn skills, knowledge, values, motives, and roles appropriate to their position in a group or society" (Bush & Simmons, 1981, p. 134). *Travel* socialization focuses on learning processes in relation to mobility behaviour. Baslington (2008) has recently introduced "a social theory of travel mode behaviour".

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According to her theory children learn about travel modes in the same way as they learn about other aspects of culture, namely through agents of socialization. The agents Baslington refers to are family, school, media, and peer group. Qualitative interviews with children suggested that the liking of various transport modes as well as the desire to drive or buy a car in the future is influenced by peers. Moreover, Baslington could show that in car-free households a higher percentage of children can imagine living happily without a car in adulthood than in households that own a car. This result is taken as an indication for the socializing influence of the parents. Results of other studies confirm the correlation between parents' car ownership and children's attitudes towards different transport modes (e.g., Cahill, Ruben, & Winn, 1996; Sandqvist, 2002).

Meaton and Kingham (1998) showed that children learn at very early age how to differentiate between different modes of transportation and form their preferences. According to their results, seven year old children already associate different modes of transportation with different levels of prestige, e.g., old people are more likely to be associated with bus driving, whereas successful looking people are linked with car brands, such as Porsche or BMW. The latter are also types of cars that children want to own when older, which Baslington (2008) takes as evidence for media influence. Although this interpretation might be overestimating the media influence as the only cause of the children's preferences, the image of certain types of cars communicated by advertisement and media might at least have contributed to this result.

With increasing age car access and car ownership become even more salient and certain life events stress this importance. Klöckner (2004) for example identified the acquisition of a driver's license as one of the most important travel mode related life events. Similarly, Schönhammer (1999) described it in terms of an "initiation rite", which does not only imply the "technical" dimension of acquiring the necessary skills to drive a car but also the social dimension of crossing a very important threshold to adult life by acquiring the license to drive.

Previous research on travel socialization mainly deals with children's perception and problem awareness (e.g., Kingham & Donohoe, 2002) regarding different transport modes. So far, impacts on later travel mode choice have been analysed mostly from a projective perspective, asking children what kind of travel mode they can imagine to use later as adults (e.g., Flade, Hacke, & Lohmann, 2001). However, there seems to be hardly any empirical research on the impact of travel socialization on later mobility behaviour, attitudes, norms, or habits from an adult's perspective. The authors suggest that especially habits and norms should be affected by socialization processes, as will be elaborated in the following. First empirical support for this hypothesis is provided by Klöckner and Matthies (2008), who showed that habits mediate the influence of three aspects of travel mode socialization on car use: frequency of parents' use of public transportation, experiencing acquisition of driver's license as initiation to adulthood, and multi-mobility of the peer group. In the paper on hand we want to expand the theoretical framework by examining the role of travel socialization in the context of norms, habits, intention, and behaviour.

1.2. Norms as determinants of travel mode choice

Norms have been frequently shown to be an important predictor of behaviour[1]. At least two different kinds of normative influences can be differentiated: personal norm (PN) and social norm (SN)[2]. SN is defined as the perceived social pressure to engage or not to engage in behaviour and is determined by normative expectations of important referents (Ajzen, 1991). According to the theory of planned behaviour (TPB; Ajzen, 1991) SN is a direct predictor of behavioural intentions besides attitude and perceived behavioural control. In TPB, intention is assumed to be a direct determinant of behaviour. Intention is regarded as a summary of all pros and cons a person takes into account when deliberately reasoning whether or not to perform a behaviour. Studies referring to TPB confirmed the influence of SN on travel behaviour or intention respectively (e.g. Bamberg & Schmidt, 2001, 2003; Haustein & Hunecke, 2007; Heath & Gifford, 2002).

In contrast to the TPB, which has been developed to predict all kinds of behaviours where individuals have incomplete volitional control, the norm-activation model (NAM; Schwartz, 1977; Schwartz & Howard, 1981) focuses on pro-social behaviours. Here PN is regarded as the central predictor of behaviour. PN is defined as the intrinsic feeling of moral obligation to behave in accordance with the person's individual value system (Schwartz, 1977). PN is therefore a link between the value system of a person and behavioural decision making in a certain situation. Compared to SN the reference system of PN is not social influence but *personal*, which means internalized values. According to the NAM, PN is a direct, unmediated causal determinant of pro-social behaviour. Several studies have demonstrated a positive effect of PN on the use of environmentally-friendly travel modes (e.g. Harland, Staats, & Wilke, 1999; Hunecke, Blöbaum, Matthies, & Höger, 2001; Nordlund & Garvill, 2003). However, when controlling for TPB constructs PN often did not show a direct effect on travel mode choice (Bamberg & Schmidt, 2003; Heath & Gifford, 2002). Instead, the relation between PN and behaviour was found to be mediated by intention (Bamberg, Hunecke, & Blöbaum, 2007).

In most studies either PN or SN are considered, depending on the psychological model referred to (TPB vs. NAM). Assuming that both normative variables have a (direct or mediated) impact on behaviour, the question about their interrelation arises. According to Vygotsky (1981, p. 164) "all higher mental functions are internalized social relationships". From his perspective the internalization of SN into PN can be viewed as a social construction process influenced by the dialogue with

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[1] For a general overview on the relevance of norms for private car use see Matthies and Blöbaum (2007).

[2] Some authors suggest a more sophisticated differentiation between normative processes. Thøgersen (2006) for example proposes an extended taxonomy of norms (descriptive, subjective social, introjected, and integrated norms). However, as personal norms and social norms have received the most empirical support we decided to analyse only these two kinds of normative influences.