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Identity and travel behaviour: A cross-sectional study on commute mode choice and intention to change

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A B S T R A C T

Introduction: Social and self-identities have been conceptualised to prevent travel behaviour change, as threats to one's identity may cause resistance to change. This study focuses on the role of social, transport, place, and self-identities on commute mode choice and intention to change mode choice.
Method: Data were collected in June 2015 in Utrecht, the Netherlands. Invitations to participate were distributed by mail using data from the municipality, resulting in 1062 adult participants.
The outcome measures were the transport mode shares based on a 14-day travel-to-and-from-work record of trips (i) involving any car use, (ii) involving any bicycling, (iii) involving any walking, and (iv) involving any public transport use. The second series of outcome measures concerned the willingness to change the amount of car use, bicycle use and walking, determined by the question 'to what extent do you intend to change the use of ...?'. Identity was measured on a seven-point disagree/agree scale for 17 items by asking to what extent the respondent 'sees him/herself as ...'. Separate multinomial regression models were estimated stepwise adjusting for socioeconomic and transport characteristics.
Results: Multiple identity items were associated with the use of all commute modes. In the maximally adjusted models, identities associated with the respective modes remained significant. For example, whether someone identified themselves with being a cyclist corresponded with higher likelihood of cycling occasionally (relative risk ratio (RRR): 1.84; 95% confidence interval (CI):1.47–2.30), or always to work (RRR: 2.86; 95% CI: 2.16–3.79). In addition, we found that a family-oriented identity was negatively associated with occasional commuting by car, and a 'sporty' identity was negatively associated with always cycling to work.
Transport identities were also associated with stated intentions to change as were several social, place, and self-identities. Identifying with being a car driver decreased the likelihood of intending to reduce car use, but it increased the likelihood of intending to increase car use, as did identifying with being career-oriented. Individuals that identified with being a cyclist were less likely to have an intention to reduce bicycle use, whereas countryside-lovers had greater intentions of increasing cycling. Individuals that identified themselves as pedestrians had a lower intention of decreasing their walking levels, and a higher intention of increasing them, as did those who identified themselves as being family-oriented.
Discussion: The results confirm limited previous findings that identifying with users of a transport mode correspond with its use. Nevertheless, questions around causality remain.

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The intention to change mode choice was associated with several identities, including transport-related identities, place-related identities, social/family-related identities, and self-identities. Future research should focus on the associations between identity and actual behaviour change to further our understanding of the effect of identity on travel behaviour.

1. Introduction

Car travel causes several societal problems: it creates spatial barriers; it may prevent social interactions; it is linked to reductions in physical activity; it causes noise and air pollution; and it may, therefore, have a negative effect on public health. In urban areas, these problems may be amplified, as congestion is more prevalent. Reducing these problems can be achieved by reducing the impact of transport (e.g., noise barriers) or reducing the negative output of transport (e.g., cleaner transport). More effective, however, is changing individual behaviour, as this has potentially larger effects and removes the necessity for reductions in impact or output of the car-based transport system. Changing individual mode choice has been a primary focus of policies (e.g., encouraging a change from car travel to journeys by bicycle, by public transport or on foot). Countless behaviour change initiatives, including commercials and policies, have been launched, but most have failed thus far.

Perhaps one reason for this ineffectiveness of such measures is that research providing insights into travel behaviour rely on few theories. Conventional research on travel behaviour is based on utility theories, assuming that individuals make conscious decisions based on the evaluation of the alternatives in terms of cost, time and effort (e.g., Van Acker, Goodwin, & Witlox, 2013). However, these hard factors fail to explain why individuals in similar situations and with corresponding socioeconomic characteristics make different choices (Heinen, Maat, & van Wee, 2011). In the last decade, so-called 'soft factors' have received increased attention as a predictor of travel behaviour change. The theory of planned behaviour and the role of attitudes in particular have been the focus of much attention (e.g., Kamruzzaman, Shatu, Hine, & Turrell, 2015; Busch-Geertsema & Lanzendorf, 2015; Cao, Mokhtarian, & Handy, 2009; Heinen et al., 2011; Schwanen & Mokhtarian, 2005; Van Acker, Mokhtarian, & Witlox, 2011; Van, Choocharukul, & Fujii, 2014). However, several other theories and constructs may have greater potential to explain behaviour and effectuate change.

One potential promising construct is personal identity. Identity has been found to be associated with pro-environmental behaviour (e.g., Mannetti, Pierro, & Livi, 2014; Van der Werff, Steg, & Keizer, 2014). It has also been indicated that habit, which has been repeatedly connected to predicting travel behaviour and travel behaviour change, may be an expression of identity (Verplanken & Orbell, 2003). In some studies, identity has been shown to explain more variation in behaviour than frequently used theories on behaviour change, including the theory of planned behaviour (Fekadu & Kraft, 2001; Whitmarsh & O'Neill, 2010). However, the connection between identity and travel behaviour is not well established (Anable, Lane, & Kelay, 2006). Although this statement is not particularly recent, only a few studies on the influence of identity on travel behaviour have been conducted since then.

The few existing recent studies have corroborated the suggested association between identity and travel behaviour. For example, Murtagh, Gatersleben, and Uzzell (2012a) showed that identities were significantly associated with mode choice and that different identities prevailed for different types of journeys. Lois, Moriano, and Rondinella (2015) tested the theory of planned behaviour on behavioural intention about commuting by bicycle using stages of change adding social identity and concluded that including social identity—identifying as a cyclist—improved explanations of bicycle commuting.

Whereas recent studies seem to support the proposed association between identity and (changes in) travel behaviour, empirical evidence to support the assertion of this relationship is still limited. Moreover, existing studies have shortcomings themselves. One main shortcoming is that existing studies generally consider only a small number of identity items, whereas individuals are known to have multiple. In addition—and perhaps the greatest shortcoming—the majority of studies investigate the association with existing travel behaviour, whereas it has also been suggested that identities could prevent behaviour change.

This study will contribute to this debate with a focus on the influence of identity on mode choice as well as on intention to change this mode choice considering a wide range of identity items, including items relating to transport, place, social, and self-identity. In this paper, first an overview of literature will be discussed, which will end with a fuller presentation of the existing research gaps. This is followed with a description of our methods and results of the analyses. In the final sections, these results are discussed.

2. Literature review

Identity has received relatively limited attention in the scientific literature on travel behaviour and other concepts and theories have prevailed in this scientific area. Identity was determined to be a promising concept for explaining travel behaviour a few years ago (Anable et al., 2006). More recently, the role of identity has been also been conceptualised by Murtagh,