Online information-sharing: A qualitative analysis of community, trust and social influence amongst commuter cyclists in the UK

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ABSTRACT

Research into the use and behavioural effects of travel information has concentrated on top-down information from transport providers, but little is known about the role of informal information, shared through word-of-mouth, in everyday travel behaviour. Social interactions about travel may exert not only an informational influence, whereby beliefs are updated based on the experience of other individuals, but also a more subtle normative influence: conveying information about norms of behaviour within a particular social milieu. This research aimed to explore, using a qualitative approach, the social processes which occurred when a group of 23 commuter cyclists interacted with one another through a specially designed, map-based website over six weeks, sharing their routes and other cycling-related information. Methods comprised observation of website interactions, participant questionnaires and semi-structured interviews; the analysis drew on the theory of normative and informational social influence, and self-categorisation theory. It was found that the process of sharing information could perform not only a functional role in diffusing instrumental travel information, but also a social one whereby perceived in-group membership and high levels of trust reinforced positive views of cycling as a commuter mode. Both roles were found to offer particular encouragement to those who were new to cycling or new to a particular workplace. This suggests that 'user-generated' information may hold potential as one of the tools for promoting sustainable travel within a group setting such as the workplace.

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1. Introduction

Research in the fields of tourism and consumer studies has shown the significance of word-of-mouth information from family, friends and other social contacts in the process of decision-making with regard to holiday travel (e.g. Bieger & Laesser, 2004; Murphy, Mascardo, & Brenckendorff, 2007; Um & Crompton, 1990). More recently, the phenomenon of 'digital word-of-mouth' (Dellarocas, 2003) has received growing research attention across a number of disciplines, including the expanding role of social media websites in leisure travel information-search and planning (e.g. Gretzel & Yoo, 2008; Pan, MacLaurin, & Crotts, 2007). Little is known, however, about the ways in which word-of-mouth information – communicated through either face-to-face interaction or electronically via internet-based social media – might be used, and how it might influence the beliefs, attitudes, and intentions which contribute to everyday, utility travel behaviours such as choice of transport mode

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or route. Within transport studies, there has been research on traveller information which has focussed on top-down travel information supplied by, for example, transport providers and governmental agencies (e.g. Chorus, Molin, & van Wee, 2006a, 2006b; Kenyon & Lyons, 2003; Lyons, Avineri, Farag, & Harman, 2007). However, national surveys in the UK show that word-of-mouth provides a further source of traveller information. For example, results from the 2005 and 2006 UK National Travel Survey showed that 24% of those who had sought travel information for a public transport journey during the previous six months had 'asked a friend', whilst 28% of those who had sought information to plan a car journey had done the same (Department for Transport, 2008). However, there is a lack of knowledge about the nature and effects of such 'social information'.

The role of social interactions is receiving growing attention in travel behaviour research as a means of elaborating current understandings of travel decision-making (Dugundji, Páez, & Arentze, 2008; Dugundji et al., 2011). Social influence effects on decision-making in the context of modal choice have been investigated through laboratory experiments (Sunitiyoso, Avineri, & Chatterjee, 2011), whilst a range of studies have combined spatial and social network models with specific application to activity-based transport modelling (e.g. Carrasco, Hogan, Wellman, & Miller, 2008; Carrasco & Miller, 2006). However, the emphasis of such research on the quantitative and geo-spatial aspects of social interactions means that less attention has been paid to understanding the *nature* of the interactions and how this may affect both information diffusion, and the mechanisms through which social influence on travel behaviour might occur. In the field of traveller information, a greater understanding of the role of information which is shared between transport-users, rather than directed from a 'top-down' provider to the individual, has potential applications for both information provision as a policy tool, and the design of specific traveller information systems.

Recent exceptions to the quantitative emphasis of research into social interactions and travel behaviour are provided by qualitative investigations of: social influence and telecommuting (Wilton, Páez, & Scott, 2011); social influences on driving speed (Fleiter, Lennon, & Watson, 2010); and social influences on the purchasing of plug-in hybrid vehicles (Axsen & Kurani, 2011). For example, Wilton et al. (2011), using semi-structured interviews, found that interaction with other telecommuters can both inform an individual's decision on whether to telecommute, and validate a decision which has already been taken; positive information flow about telecommuting can thus help to normalise this practice within workplace culture. This paper reports on social processes which were observed within a different travel behaviour setting: amongst cyclists commuting to a group of neighbouring workplaces and interacting electronically.

Cycling information was the chosen focus of the study because word-of-mouth can provide a particularly useful source of local information for trips made by bicycle, especially with regard to route-finding (Bartle, Avineri, & Chatterjee, 2009). In addition to conventional (face-to-face) interactions, the development of 'Web 2.0' applications, such as online maps which allow users to mark routes and share them with others, has increased the opportunities for digital word-of-mouth in this area. For example, in the US, Priedhorsky, Jordan, and Terveen (2007) identified an unmet need amongst cyclists for a comprehensive and up-to-date web-based information resource. This led to the development of the editable online map *Cyclopath*, on which cyclists are invited to *"share (their) cycling knowledge with the community"* (http://www.cyclopath.org). There has so far been no exploration of the social influence effects of this form of information-sharing amongst cyclists, although there is limited evidence for the influence of social norms on the propensity to cycle to work. Dill and Voros (2007) found that individuals are more likely to commute by bicycle if their co-workers also cycle, whilst Heinen, Maat, and Wee (2011) found that the decision to cycle to work is influenced by the perceived opinions of others over short, but not longer distances.

This paper reports on qualitative research which aimed to explore the social processes that occurred when a group of commuter cyclists interacted with one another through a specially designed, map-based website, sharing their routes and other cycling-related information. Research questions were kept deliberately open to allow themes to emerge from the data (rather than test specific hypothesis or analyse relationships between variables). The questions were: what form (if any) would social influence take in this specific context, and what contributory social-psychological factors might be identified? The analysis was informed by theoretical concepts relating to social influence within group settings, and drew predominantly on qualitative interviews.

2. Theoretical background

The theoretical background to the study is provided by two related areas of social psychology theory: the dual process theory of social influence (Deutsch & Gerard, 1955), and self-categorisation theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Deutsch and Gerard (1955) reinterpreted some of the 'classic' experimental studies of social influence of the 1930–1950s by differentiating between *informational* and *normative* social influence. Self-categorisation theory, a development of Tajfel and Turner's (1986) social identity theory, adds the concept of *referent informational influence* to those of normative and informational influence. These theories offer a fresh approach to travel information-use by locating it within a social context, in contrast to more conventional accounts which view information-use from the perspective of individual, cognitive processing. They offer insights into how travel information, when communicated through word-of-mouth, might comprise not only instrumental 'facts', but also social messages about the participants in the interaction, which may, in turn, affect the influence of such information on travel behaviour.

It may be useful to clarify at this point that, in drawing on this area of social-psychological theory, we use the term *information* in its broadest sense – that is, raw data which require interpretation in order to derive meaning (Floridi, 2010). Thus,