You Can't Go Your Own Way: Social Influences on Travelling Behavior

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ABSTRACT

Travel planning is increasingly done using assistive travel planning technologies. These technologies, however, tend to focus on the traveller as an individual, while travelling can often be a social endeavour involving other people. In order to explore the influence of other people on travelling behaviour, nineteen participants from the city of Ghent, Belgium, took part in a diary study and a subsequent interview. Our results show that the social context of certain travelling behaviours can influence the three main components that make up a displacement (i.e. the route, the departure time and the mode of transportation). Additionally, other aspects of the displacement, such as activities during the displacement, can also be influenced by a social travelling context. We propose that travel planning and travel assistance software could benefit from efforts to incorporate the social aspects of travelling into their systems and offer some suggestions.

KEYWORDS

Social travelling; Daily travelling; Urban travelling; Travel planning

CHI'19 Extended Abstracts, May 4-9, 2019, Glagsgow, Scotland, UK.

ACM ISBN 978-1-4503-5971-9/19/05.
DOI: https://doi.org/10.1145/3290607.3313079

1 INTRODUCTION AND RELATED WORK

For many people, day-to-day travelling is not a goal in itself, but a means to arrive at a certain destination at or around a certain time. In order to achieve this, the traveler generally makes some sort of travel plan, which can be anything from a simple mental note to an explicitly written down list of actions one has to undertake to make a certain displacement. Travel planning is increasingly done using assistive travel planning technologies. These technologies, however, tend to focus on the traveler as an individual, while travelling can often be a social endeavor, involving other people.

Travel planning appears to be quite a complex process, in which several decisions need to be made. Research with the goal of modelling displacements in order to make travel planner software suggests that a displacement is composed of three main components: the mode of transportation (which modes one can take for the displacement); the timing of the displacement (the starting and ending times of the trip); and the route (the destination and the physical path towards it) [1]. During travel planning, one thus needs to make decisions concerning each of these aspects of the displacement. While each of these decisions can affect one another, there are also other factors that have an effect on travel decision making [4],[5],[6]. These factors include price, personal ability (e.g. having a driver's license or having certain physical limitations), attitudes (e.g. towards sustainability), or situational factors (e.g. being in a hurry or carrying lots of luggage).

To our knowledge, studies looking into travel behavior and travel planning, as well as travel planning tools and software available on the market, tend to look at travel planning from an individual perspective. However, quite often travelling and travel planning can be a social endeavor as people sometimes travel together with other individuals or groups of people in a social setting. The literature does acknowledge that other people can have an effect on the individual's travel decisions [6] and the specific social travelling context of carpooling has received some attention [2],[3], but we have been unable to find research that looks into the broader context of planning displacements in which other people are involved. In this paper we discuss the implications of social travelling based on the results of a recent diary study, investigating the travel behavior of citizens and visitors of the city of Ghent (Belgium).

2 METHOD

2.1 Participants

Participants for the study were recruited through messages that were shared on several social media channels, including the city's official channels as well as channels aimed specifically at students in Ghent. A total of 19 participants took part in the diary study. The sample included 11 females and 8 males with an age ranging from 22 to 69 years ($M = 40.7$, $SD = 15.2$). Participants included inhabitants of Ghent, people working or studying in Ghent and people visiting Ghent on

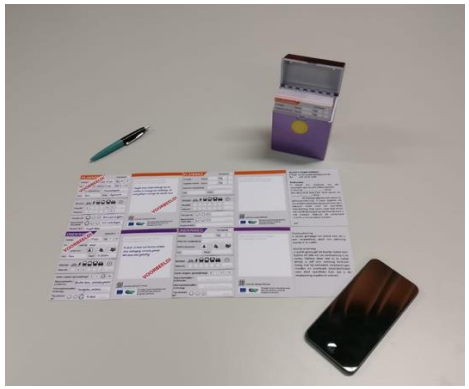

Figure 1: Diary materials used by the participants during the two weeks of diary-keeping

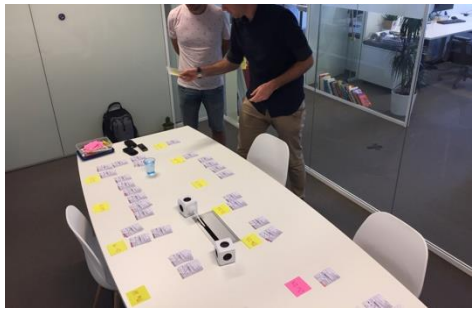

Figure 2: Discussing the diary cards with a participant during an interview

a regular basis for different reasons. Furthermore, a sample containing people with different available and habitual modes of transportation was selected based on a registration survey.

2.2 Materials

Participants in the study received an easily portable box which included a small pen, two example cards, an instructions card, a set of planning diary cards and a set of on-the-road diary cards (Fig. 1). The diary cards contained a predefined set of questions regarding their travel planning and travelling behavior and experiences, designed as such that they could be filled out quickly. Furthermore, some space on the cards was reserved for further notes and comments.

The smartphone app Moves was used to track the participant's displacements over time and estimate the utilized transportation mode.

2.3 Procedure

Participants first signed an informed consent before receiving the diary materials and instructions from the researcher. They were instructed to fill out their planning diary cards every time they were planning a displacement and were made aware of the fact that travel planning can sometimes be done quite subconsciously. Participants were instructed to fill out their on-the-road diary cards during or right after a displacement. Next, participants were explained what the app Moves would do and were asked to install Moves on their smartphone, if they wanted to. This was however not a hard requirement for participation. Twelve participants installed Moves, three of which encountered technical issues causing the mobility tracking to be incomplete. Seven participants preferred not to install Moves. Lastly, an appointment for an interview was made and the participants were instructed to start the diary two weeks before the interview date.

Participants filled out the diary for two weeks, after which an interview was conducted with each participant individually (Fig. 2). Interviews were audio-recorded. During this interview, all of the filled-out diary cards were spread across a table to create a timeline of the participant's travel behavior over the last two weeks. The participant was asked to describe the planning and travel process for each of the cards. Further questions were asked to get a more detailed idea of the behavior, for instance about recurring displacements or differences between planning cards and their related on-the-road cards. If participants had installed Moves, the recorded data from Moves was compared to the cards the participant had filled out, to understand which types of displacements were not recorded by the participant because they might have been forgotten or they might not have been interpreted as a displacement. At the end of the interview, participants were helped with uninstalling the Moves app if they wished to do so and received a gift coupon of 40 euros.

2.4 Analysis

A total of 18 interview recordings were transcribed, one recording had failed and was excluded from further analysis. NVivo 12 was used to highlight 1402 quotes in these transcriptions. We

coded these quotes with 224 individual codes, which were clustered in nineteen themes by the original coder and an additional researcher using affinity diagramming. The themes were again clustered in four main categories: travel planning, travelling, context and interacting with information. In this paper, we will not discuss these four categories in detail, but focus on a selection of codes concerning social travelling that belong to these categories.

Discrepancies were found when comparing the displacements tracked with Moves and the displacements reported on the diary cards. These discrepancies were found especially for short, unplanned displacements and did not particularly relate to social aspects of travelling.

3 RESULTS AND DISCUSSION

Results of the diary study show that many displacements are influenced by other people who travel with the participant, instances of this influence appeared for every participant in the sample. In fact, as a quote by P15 illustrates, the other person(s) with whom one travels may be the main reason for which a certain displacement is being made.

> P15: So the children stayed in daycare and then I actually went home by bicycle and took the car to go and pick them up at the daycare.

Additionally, travelling with other people can affect other aspects of displacements as well as the decisions that are made in the travel planning process. As illustrated by our results, travelling in a social context can affect the three main components of a displacement, route, timing and mode, as well as some other aspects of travelling and travel planning.

3.1 Social influences on route

The diary study results show that social travelling can have implications for the route that one takes. An example of what is probably the most direct effect on route would be if a traveler were to make a detour to pick up their friend so they can both travel to the final destination together (P15). Other implications may however be slightly less obvious, whilst still being quite important. For instance, in several interviews (P12, P13, P16), parents mentioned to have deviated from the most efficient route, in favor of a safer or more bicycle friendly route when cycling somewhere with their young children.

> P13: In the afternoon we also went to Blaarmeerse and you can get there relatively quickly but [...] that is a roundabout with 5 or 6 streets and it is quite busy, while, it may be two kilometers further but you can perfectly take a cycling path actually. And that way you don't encounter any cars until you actually arrive. So in that case I always choose the latter.

3.2 Social influences on departure time

Many times, instances of social travelling were planned in advance. The schedules of all the people involved in the displacement should be matched, hence the departure time could be influenced by the others involved in the displacement. Also, P1 reported that she would often go to

work using public transport but when her husband takes her to work by car, it allows her to leave almost an hour later as this would be much faster. Also, P14 mentioned that he may decide to leave work later so he can travel home together with his colleagues, while this was not planned.

P14: I might sometimes leave a little bit later to wait for a colleague and take a train later by doing so, but I don't structurally alter my plans for it, no.

3.3 Social influences on transportation mode

When travelling with multiple people, transportation mode decisions depend on much more than only one's individual preferences. For instance, P5 described how she usually travels by public transport, however her partner does everything by car. The result is that when they go on a trip together, they will both suggest their own preferred alternatives, most often ending up using the car but at times she will also convince her partner to go by public transport. The amount of people joining on a trip can also have an impact on mode choice due to the financial implications of travelling as a group. P11 mentioned that, for a displacement with five people, using the car was a much cheaper (and therefore preferred) solution than using public transport. Sometimes travelling with other people will also make modes of transportation available that wouldn't have been available if travelling alone, for instance if one does not own a car but the travel companion does. The inverse could also occur if a travel companion does not have access or the possibility to use a certain mode of transportation as a quote from P06 illustrates.

P06: I prefer going by bicycle but uh, my wife, she can't cycle anymore because she has muscle tension and her arms fall asleep if she has to cycle like that so that's not possible. So if we go together, we go by moped because she can't cycle.

3.4 Other influences of social travelling

Travelling together with other people can also have an impact on other dynamics of the displacement. For instance, P14 described how, if he was to meet his travel companion somewhere along the way, he would be in touch with his travel companion through instant messaging platforms to stay updated on each other's travel progress, while he was on his way to meet them. This shows that the social impact of travelling together may already exist before actually meeting the travel companion. Travelling with other people can also have an effect on the way the travelling experience is appreciated as travelling can turn from only a means for getting from one place to another into a social experience. P12 perceived it to be quality time spent with the travel companion when they were on a trouble-free train journey.

Furthermore, as shown by a quote from P18, travelling with other people can sometimes allow for strategic decisions to be made in the planning stage, as some people may have access to some interesting facilities that others may not have.

P18: My friend lives just around the corner and he has his own rented parking spot, so I called him and asked, look, do you want to drive? Because otherwise I would lose my spot again.

ACKNOWLEDGMENTS

This work was supported by the TMaaS project, realized in collaboration with the city of Gent. Project partners are Ghent University, Waylay, BeMobile, Tomtom, EPF, De Staatse Ruiter and Mintlab (KU Leuven), TMaaS is co-financed by the European Regional and Development Fund through the Urban Innovative Actions Initiative www.uia-initiative.eu

4 CONCLUSIONS AND FUTURE WORK

Current travel planning and travel assistance software is mainly aimed at providing information for the travelling individual. Our results suggest that efforts should be made to cater for the social aspects of travelling by designing specific functionalities to support travel planning. This should be done for multiple travelers with different preferences, possibilities, origins or destinations, while considering the implications of social travelling on each of the components of the displacement. We suggest some travel planning and travel assistance features to illustrate this.

Related to the *route of a displacement*, a travel planner could consider the starting points of multiple travelers who share the same destination to come up with a route that maximizes both efficiency as well as time spent travelling together (quality time). For *departure times*, it would be interesting for travelers to be kept up to date of the travel progress of people they plan to meet along the way. If certain disruptive events occur for the travel companion, the system may suggest their user to take a later option so they can still travel together. As for *modal choice*, ideally, travel planner software should be able to consider all the modes and facilities that are available to each of the group's travelers, as well as the limitations of these travelers, to suggest an itinerary that works for all the travelers involved.

More research should be done to further understand the social aspects of travelling and to investigate the possibilities of supporting social travelling. As the social aspects of travelling may depend on cultural, geographical and infrastructural factors, it would be interesting to investigate this in different areas and for different target groups. In an era in which technology is increasingly being used to connect people and to mediate and facilitate social aspects of daily life, we believe that we should fully harness the potential of technology to assist the social aspects of travelling.

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