The Research on Mobility and Lifestyle – What Are The Results?

Konrad Götz
Institute for Social-Ecological Research (ISOE)
Frankfurt/Main (Germany) (corresponding author)
Email: goetz@isoe.de

Timo Ohnmacht
Lucerne University of Applied Sciences and Arts (Switzerland)
Email: timo.ohnmacht@hslu.ch

The following paper shall (1) provide a critical resumé of the results from research into mobility and lifestyles during the last 15 years, (2) shed some light on the results generated by such research in analytical and practical terms, with reference to a project currently running in Switzerland, and finally (3) discuss general conclusions about the kind of issues to which this kind of typology-based target group research can usefully be applied.

1. Research on Mobility, LifeStyle and Mobility Styles

Over the past 12 years, lifestyle and attitudinal research have been identified as important additional approaches with which to explain travel behaviour, particularly with regard to leisure mobility (Goetz et al. 1997, Lanzendorf, 2002; Goetz, 2007; Scheiner and Holz-Rau, 2007; Anable, 2005, Kitamura, 1988, Krizek and Waddell, 1999).

The approach of mobility styles involving a combination of lifestyle orientations/attitudes and traffic behaviour was developed by the Institute for Social-Ecological Research, Frankfurt/Main (Germany) with a special focus on reducing the environmental impacts of travel (for leisure mobility see Götz et al., 2003). One of the research goals was to estimate the environmental effects of travel behaviour in a way that is lifestyle-specific. For these purposes a CO2-emission model was combined with the travel behaviour data of the lifestyle groups. Based on five mobility styles it was possible to develop group-specific measures.

A further study on mobility styles, also concentrating on mobility and leisure activity, was undertaken for Cologne, Germany. Lanzendorf (2002) observed a correlation between mobility styles and travel participation, travel frequency, and car use for leisure travel at the weekend. Using multivariate analysis it could be shown that mobility styles largely explain people’s participation in travel for different leisure purposes and the distance travelled by car.
Bamberg and Schmidt (1994) applied the theory of planned behaviour (see Ajzen 1980) to explain people’s choice of travel mode. The results predict students’ intention to travel to their university lectures by car or bicycle by applying structural equation models. They can explain nearly 80 percent of the variance in people’s intention to use a car or bicycle by referring to attitude, subjective norm, and motivation. Despite showing how mode choice is affected by attitudes towards much-frequented destinations, they do not focus on choice of activity and destination, nor work with a typology design. The logical conclusion of this was for Hunecke (2000) to combine the theory of planned behaviour with the typologising method of lifestyle research.

Scheiner and Holz-Rau (2007) discuss theoretical considerations concerning the link between life situation, lifestyle, choice of residential location and travel behaviour. For the survey area of Cologne their results indicate that, when testing for socioeconomic factors, lifestyles appear to have a significant influence on mode choice, while changes to the strength of impact are somewhat negligible.

For Switzerland, Lücking and Meyrat-Schlee (1994) likewise worked with a simplified ‘lifestyle approach’. They develop lifestyles according to sociodemographic characteristics in combination with information on the course of people’s lives. For leisure travel in urban areas they find that lifestyles have a small but significant effect on mode choice.

Much earlier on, the focus on lifestyles also became established in US American research. Salomon and Ben-Akiva (1983) utilise the concept of lifestyles to estimate models for the combinations of chosen modes and shopping destinations. The results demonstrate that the lifestyle groups account for taste variations better than the classical explanatory factors found in the vertical dimension of social stratification. Like others, this early branch of research faces the disadvantage of not defining lifestyle according to mobility and leisure orientations. Instead, Salomon and Ben-Akiva (1983) define lifestyle groups by using individual and household items as proxy variables.

In summary we see that in various research projects the concept of lifestyle has been included in the conceptual and empirical research framework to explain travel behaviour. These different approaches vary in the way they operationalise lifestyle. In some empirical frameworks the concept of lifestyles was operationalised using various proxy variables taken from sociodemography. On the one hand one can argue that such operationalisations do not capture the dimension of lifestyle theory, which argues: in modern societies the pluralisation of motivations and orientations has to be taken into account to understand behaviour. On the other hand: research in attitudes and orientations is very expensive.
2. A example from recent research: leisure mobility styles in Swiss agglomerations

As a current example we want to discuss some results about mobility styles in leisure time for Swiss agglomerations. The results depend on a representative survey for the urban population living in the French and German-speaking parts of Switzerland (N=823).

In this project, mobility styles are again constructed using factor and cluster analysis – the result is four types which we named:

- The Sporty Type (pro bicycle) 28%
- The Fun and Distraction Seekers (pro car) 16%
- The Culture Oriented (critical of cars &multi-modal) 33%
- The Neighbourly Home-Lovers (pro car and public transport) 23%

(for detailed description of the groups see Ohnmacht et al., 2008a, Ohnmacht et al., 2008b).

Mobility styles and their relation to travel behaviour

The data for traffic behaviour were evaluated once the typology had been fixed. To measure bivariate effects of mobility styles on travel, various indicators were used. A dichotomised variable was computed to indicate whether a person participated in travel the day before the survey. The results showed significant differences in travel according to type (chi-square test). In fact, comparing all mobility styles, the ‘Sporty Types’ were more likely to have participated in travel, followed by the ‘Fun and Distraction Seekers’, ‘The Neighbourly Home-Lovers’, and the ‘Culture Oriented’. We applied a one-way ANOVA procedure (F-test) to test the H0 hypothesis that the means of the variables with interval scale are equal according to cross-tabulation with the mobility-style groups. Furthermore, we tested whether the variances of the groups are equivalent to fulfilling an important assumption of the F-test.

The H0 hypothesis can be rejected for travel distance in total [km] as well as for leisure travel distance [km]. Interestingly, the ‘Sporty Type’ group travels most, whereas the differences between the other groups are quite minimal.

The number and duration of trips do not differ significantly, whether for leisure or in general. With regard to leisure activities the mobility style groups differ only in the frequency of participation in active sports. As expected, it is the ‘Sporty Type’ that is most active in sports, followed by the ‘Culture-Oriented’. No further significant differences between the mobility style groups are observed, especially with regard to the following leisure activities: visiting restaurants, hiking, visiting friends and relatives.
Generally speaking, there are significant differences with regard to mode share for car, bicycle, walking and public transport. The ‘Fun and Distraction Seekers’ have the highest overall car share, both against travel distance and modal choice. As expected, the ‘Sporty Types’ lead the field with regard to frequency of bicycle trips and share of bicycle against travel distance, trips and leisure trips. In fact, the ‘Culture-Oriented’ are those who travel longest with public transport and also have the highest share of public transport. One can conclude that the greatest differences between mobility styles is their degree of participation in travel and the way they use modes of transport in general and for leisure in particular. Although we discovered significant differences according to bivariate analysis it can be argued that this is only due to effects lying behind the correlations. Hence, to control for other variables, we applied multivariate methods (see Ohnmacht, et al. 2008a, Ohnmacht et al., 2008b).

In summary, we can ascertain the following:

Attitudinal, motivational and lifestyle dimensions can make an additional contribution towards clarifying variance in traffic behaviour. There is a significant correlation between mobility styles, participation in travel, and the share of car, bicycle, and public transport, based both on distance and trips. If other variables are controlled for, we still can detect significant influences between the mobility styles regarding key figures for travel behaviour. Thus the inclusion of mobility styles may lead to more satisfactory ways of explaining travel behaviour – with the main advantage being that one is taking into account the social realities of individualisation and pluralisation.

Furthermore, policymakers and researchers want to know more about leisure travel with regard to reducing greenhouse gas emissions from motorised leisure travel. Hence, a knowledge of target-group-specific orientations and motivations is helpful in devising methods, and can also be used for social marketing that influences behaviour in the direction of sustainability. It was possible to develop group-specific recommendations, measures and offers. The focus lies on the avoidance of trips and a shift towards public transport, cycling and walking (see Ohnmacht et al., 2008a, p.112-116). So in sum it is now possible to provide pointers for practical interventions – e.g. sociologically managed traffic and spatial planning. The approach outlined an extension of the well-known planning tools. Anyone wishing to influence leisure mobility and leisure traffic can now take into consideration all three possible influences: the spatial structural, the social and the socio-cultural.
3. Discussion

Taking the results described here as an example, while looking at the past years of research into mobility and lifestyles, we want to discuss the following questions: What additional results has this kind of research produced with regard to traffic behaviour? What are the connotations for science – in an analytical sense and in practice – relating to behavioural intervention? Is this kind of complex and expensive research worth doing? To tackle what kinds of questions? What militates in favour and what against this kind of research? What is the international perspective?

References:


Ohnmacht, T., H. Maksim and M. Bergman (eds.) (forthcoming) Mobilities and Inequality, Ashgate, Aldershot.
