Recent research on traffic psychology recognize the influence of cultural factors in driver's behavior, stimulating research into the socio-cognitive aspects involved. In this sense, a social representation can be defined as an organized set of beliefs or cognitions (Philogenes, 2002) or a set of behavioral prescriptions (Flament, 2000). Thus, this study aimed to identify the social representation of drivers in a large Brazilian city. The sampling was random (N = 490), including drivers of the national license holders to drive in both sexes and aged between 21 and 65. The instruments were a matter of free recall from word inducing (traffic), scales of perception of the relationship between risk and driving style (straight and self-perception), and a scale with risk factors of an accident. The results show that traffic is generally depicted as chaotic, and the main risk factors are in the driver's behavior. The results also indicate that drivers evaluate their way of conduct as little or no, while the driving style of the other drivers is perceived as a producer of high risk.

The social dilemma of traffic flow improvement: using the example of Connected Cruise Control

Risto, M. & Martens, M.H. Centre for Transport Studies, University of Twente, The Netherlands

Connected Cruise Control (CCC) is an in-car driver support systems that aims to improve throughput in dense motorway traffic by advising drivers how to drive. The system is currently under development within a HTAS project. It will integrate lane advice, headway advice and speed advice. The advice that drivers receive does not always work in their individual benefit. However, collective action by a greater amount of CCC users can improve the traffic situation as a whole, resulting in reduced overall travel time. Therefore CCC runs the risk of creating a social dilemma (a give-some dilemma). A situation where individual road users contribute to a common good (that is traffic flow) while refraining from actions that would work in their individual benefit, but that on the other hand could pose a harm to traffic flow. We will present the social dilemma underlying traffic flow improvement using the example of CCC. An emphasis is put on (1) benefit perception, (2) individual differences in the evaluation of individual and collective benefits and (3) the perceived inequity of efforts in the creation of a collective benefit. Finally, we will discuss how CCC design can mitigate the dilemma character inherent in traffic flow improvement.

How to foster a low-noise and environmentally friendly driving style

Fischer, M., Moser, S., Lauper, E., & Schlachter, I. Interdisciplinary Centre for General Ecology, University of Bern, Switzerland

Although it is widely known that eco-driving reduces noise and CO2 emissions, little is as yet understood about the psychological factors that make car users adopt eco-driving. Therefore, this study was set up to gain insight into the possible psychological factors that explain an individual’s willingness for eco-driving. The starting point of the study was a theory-based stage model. By means of qualitative interviews, stage-specific predictors of the model were identified that could predict whether or not individuals would change their driving style. Currently, an online survey that quantitatively tests this model is being conducted (N> 800). Results from that survey will be presented and discussed. Questions that will be addressed are whether the data support the hypothesized model, and which psychological factors best explain the intention for and the self-reported application of eco-driving. In a subsequent step we will use the results from the survey to design interventions that foster eco-driving. These interventions will be fine-tuned and evaluated in focus groups with the relevant stakeholders (e.g., noise abatement experts, car drivers).

Introducing “social forgivingness”: how the traffic setting influences the extent to which car drivers are inclined to compensate for potentially unsafe acts of other road users at intersections.

Houtenbos, M. & Hoekstra, A.T.G. SWOV Institute for Road Safety Research, The Netherlands

This presentation will present the results of two online questionnaire studies (N=269 and N=710) on the way that car drivers interact with vulnerable road users (in this case moped riders and bicyclists respectively). The studies focused on the extent to which car drivers are inclined to compensate for potentially unsafe acts of other road users (i.e. act “socially forgiving”) and how this is influenced by the level of formal regulation of the traffic setting (e.g., traffic signs and road markings can be present or absent). Results of the first study showed that less explicitly regulated intersections gave more rise to socially forgiving responses towards the moped rider than intersections explicitly regulated by traffic signs and road markings. The results also suggest that in traffic situations where people feel less safe, drivers show more socially forgiving behaviours.

To further elaborate upon these results, the second questionnaire study was conducted. This study incorporated some additional traffic settings and made use of different types of stimuli in the form of animations followed by animation stills. It also employed a different answering protocol that allowed respondents to bring more nuance into their responses. The results of the latter study will be analysed and reported at the time of the conference.