

# Human Factors in the design of travel and traffic information

---

*Matthijs Dicke, Frans-Luuk Bouwers, Eva Koenders,  
Roelijn Kok, Rolf van der Veer, and Karel Brookhuis  
University of Groningen  
The Netherlands*

## **Abstract**

It is argued that designers of travel and traffic information should take into account cognitive ergonomic guidelines. However, this is not a guarantee that the traveller will comply with the advice given. Meeting the cognitive ergonomic guidelines is important if not necessary, but not sufficient. It seems that habit and uncertainty have an effect on choices travellers make. Two experiments were carried out in order to learn more about habit and uncertainty. The first experiment examined the connection between cognition and intention of behaviour with respect to choice for means of transport. The second experiment examined how travellers rated different Full Colour Information Panels that had as aim to reduce uncertainty.

## **Introduction**

Congestion on road networks increasingly causes severe problems in and around, especially large, cities. It is the source of pervasive economic inefficiency as individuals, households and companies adjust their activities to avoid or compensate for time lost in travelling and to hedge against the possibility that trips take longer than expected. Congestion develops mostly as a result of too many cars on a road at the same time. It will not be easy to reduce the amount of cars in traffic, since a car is usually considered a symbol of individual freedom (Steg, 1996). Also, travellers are reluctant to use public transport or share their car (carpooling).

Solutions for congestion must be sought in using the traffic network more efficiently and/or by changing the way we travel. Traffic participants can choose between three different ways of travel change (Koo & Yim, 1998): change of departure time, change of route, and change of transport mode. There is a need for better travel and traffic information that supports the traveller in making decisions concerning these three ways of travel change.

One initiative to accomplish optimal use of the traffic network is the process of chain mobility. Chain mobility has been defined by the Dutch Ministry of Transport as the fine-tuning of various means of transportation by smart solutions to effectively improve accessibility and the quality of life. Chain mobility, as an alternative to exclusively travelling by car, is mainly about making combinations of transport