

Go Ahead – I will follow you! Social pull-factors in driving manoeuvres

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Abstract

In Germany more than 26% of all road accidents outside towns involving personal injury occurred in curves and thereby 1,322 people died. This study concentrated on a person's steering abilities and velocity in curves with regard to social risk factors precipitated by social pressure from other road users. The assumption is that drivers orient themselves toward the driving characteristics of the preceding car (pull-hypothesis). Thirty-nine participants (divided in groups of low/highly experienced drivers) participated in a simulator-based study using a rural road scenario. Two conditions were simulated: a sharp bend with (1) and without (2) a fast vehicle in front of the participant.

The results showed that the speed of the preceding vehicle is principally contributory to the total number of accidents (e.g. car going off the road). The comparison between the two conditions indicated that accidents occur significantly more often in the first condition. Furthermore the results indicate that less experienced drivers produce more accidents than experienced drivers. This result led to the conclusion that the ability to steer in curves may underlie a social pull-effect. This social pull-effect is caused by their adjusting to the inappropriate speed of the preceding car, regardless of the possible dangers within the road scenario.

Introduction

Accident studies suggest that misperceiving and therefore misestimating of traffic hazards lead to critical moments. Especially young and inexperienced drivers tend to the unrealistic self-assessment in safe-driving by believing themselves to be more capable and skilful than the average driver (Gregersen, 1996). Schönbach (1996) investigated social interaction in foggy traffic conditions. Driving in fog involves a lot of elements of uncertainty and that is why a typical phenomenon in these traffic circumstances is that drivers tend to follow a car without maintaining an appropriate distance to the preceding car (Schönbach, 1996). The absence of a safety clearance can cause serious accidents or even multiple pileups. Schönbach explains this with the overestimating of the own capabilities paired with a high degree of subjective uncertainty. Drivers seem to *glue* to the backlight of the car in front of them, which is interpreted with a pull-hypothesis. One of the reasons for this pull-effect can