The relation between driving context and drivers' self-regulation of mobile phone use

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Quick Facts

Drivers spend 9% of driving time on mobile phone

Drivers used their mobile phone less with passenger present

Overrepresentation of *Visual-Manual* tasks during standstill

Clear indications of self-regulatory behavior

Next Steps

Place results against theoretical background of self-regulatory behavior

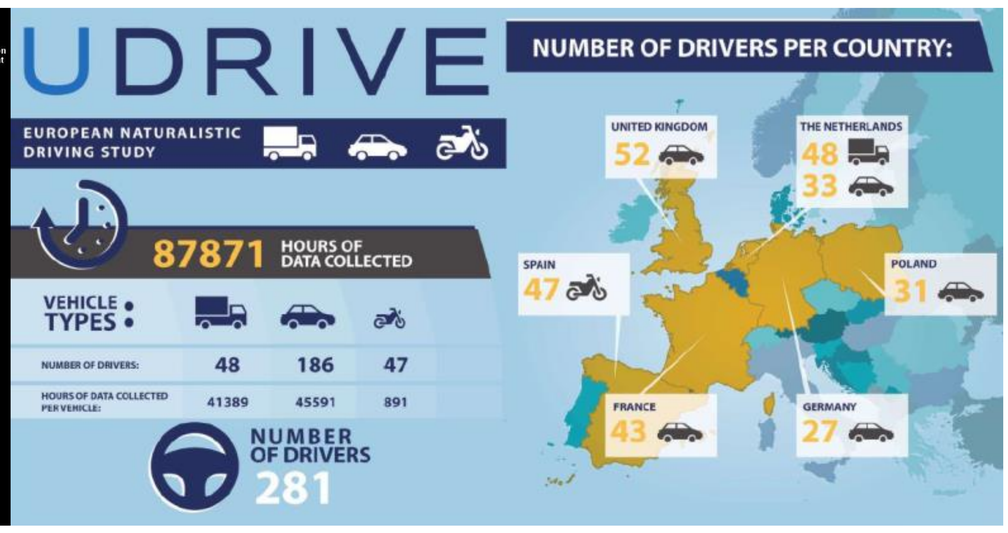
Study distraction in vehicles with higher levels of automation

Introduction

Mobile phone use while driving is considered as a major concern for traffic safety. Various studies indicate negative effects of distracted driving and Naturalistic Driving studies report substantial increases in crash risk of mobile phone use while driving. The majority of drivers are likely to be aware of the dangers of mobile phone use behind the wheel, partly because of public campaigns. Nevertheless, a significant proportion of drivers do it anyway. **The objective of this study is to investigate what mechanism of self-regulation is underlying drivers' decision to engage in mobile phone activity while driving. This study will focus on the effect of driving context as a factor in the mechanism of drivers' self-regulation.**

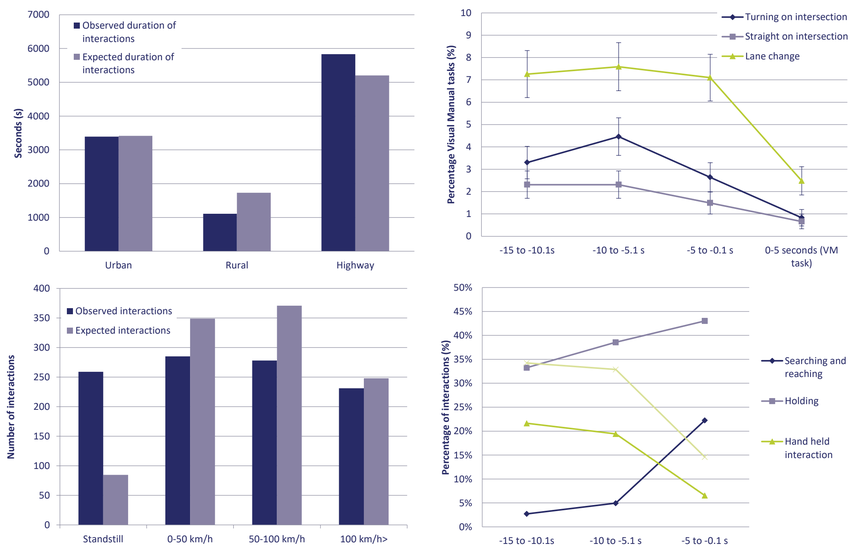
Method

For this study naturalistic driving data collected in the European **UDRIVE** project has been used to carry out the analyses. The analysis includes passenger car data collected in the Netherlands from **28 Dutch drivers**. A sample of all data collected in the Netherlands has been manually inspected for episodes of mobile phone use by a team of five video annotators. The sample used for the analysis consists of **656 trips, 225 hours** of driving data. Mobile phone use, divided into several sub-tasks, as well as several aspects of driving context were annotated from the video data.



Results

On average, Dutch drivers spend 9% of all driving time using their mobile phones. Large individual differences were observed. Drivers used their mobile phone significantly less when a passenger was present. Clear indications of self-regulatory behavior were observed with the driver 'timing' the VM-task in relation to driving context factors such as: driving maneuver, speed and road type.



Concluding remarks

The driver sample from this study were frequently using their mobile phone while driving. From previous research we know that drivers are aware of the danger of mobile phone while driving. This study shows that drivers seem to find *'the most suitable'* moment to engage in mobile phone activity. Drivers slow down while using the phone, the number of interactions while standing still is overrepresented and drivers seem to avoid interaction with the mobile phone during maneuvers. Nevertheless 75% of the operations take place when the driver is driving and occasionally visual-manual tasks are performed during more complex maneuvers.

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