

Title: Dialling, texting, and reading in real world driving: When do drivers choose to use mobile phones?

Authors: Emma Tivesten ^{1,2}, Marco Dozza ²

¹ Dept 91410, Volvo Cars Safety Centre, PV21, Volvo Car Corporation, SE-405 31 Gothenburg, Sweden.

² Vehicle Safety Division, Department of Applied Mechanics, Chalmers University of Technology, SAFER, Lindholmospiren 3, SE-412 96 Gothenburg, Sweden.

Mobile phone use is the most debated and studied form of driver distraction. Naturalistic driving studies have shown that the risk of being involved in a near-crash or crash increases during manual and visual interaction with a mobile phone (e.g., when texting or dialling), while just talking on a mobile phone seems neutral or may even have a protective effect. Previous studies involving focus groups and questionnaires present conflicting results about the strategies that drivers use to decide when to engage in mobile phone use. The aim of this study is to analyse naturalistic driving data to determine when drivers decide to engage or disengage in dialling, texting or reading text messages. Video-, map-, and vehicle-data from approximately 300 passenger car trips, in average 15 minutes long, were searched for sequences involving mobile phone use. All sequences, as well as, driving prior to each initiation of mobile phone use, were coded and analysed. Results show that drivers adapt mobile phone use both to the road characteristics and to the presence of other road users. This adaptation includes both proactive behaviour, such as overtaking prior to dialling a number, and reactive behaviour, such as delaying reading a text message until the vehicle exits a curve and enters a straight road segment.

Type of presentation: Non-paper presentation.