UDRIVE

European Naturalistic Driving Study

Analytical Approach

Oliver Carsten (ITS-Leeds)

Data extraction

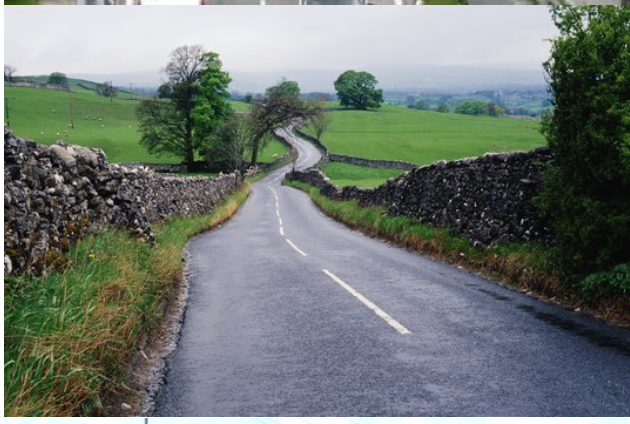
- Step 1 is to identify when the secondary tasks start and end
- Done from manual coding of videos of driving
- For a sample of trips for all the car and truck participant drivers

Coding of secondary task type

- The main focus here on use of mobile phones and electronic devices
- Each secondary task is broken down into sub-tasks, e.g.:
  - Reaching for phone
  - Interacting with phone (pressing areas on screen, dialling, texting)
  - Talking
  - Reading the screen
  - Glancing at the phone momentarily
  - Talking or listening on a hands-free device

Coding of environment

- Partly manual, e.g.:
  - Intersection approach
  - Crest approach
- Partly automated
  - Road type
  - Day, night, dawn, dusk
  - Dry or rain (from wipers)
  - Traffic density (from sensor)



UDRIVE
European Naturalistic Driving Study

Prioritised Research Questions (1)

What are the key factors influencing the willingness of drivers to deliberately engage in secondary tasks such as phone conversation, dialling or texting?	
What is the prevalence of secondary task activity in normal driving? What specific types of secondary tasks do drivers typically engage in?	
To what extent do driving task complexity and secondary task complexity influence the decision to engage in secondary tasks while driving?	
To what extent is the willingness to engage in secondary tasks while driving dependent on age, gender and cultural factors	

UDRIVE
European Naturalistic Driving Study

Prioritised Research Questions (2)

How do drivers adapt ongoing secondary task activities to the evolving driving situation?	
To what extent do drivers adapt their safety margins before, during and after performing secondary tasks?	

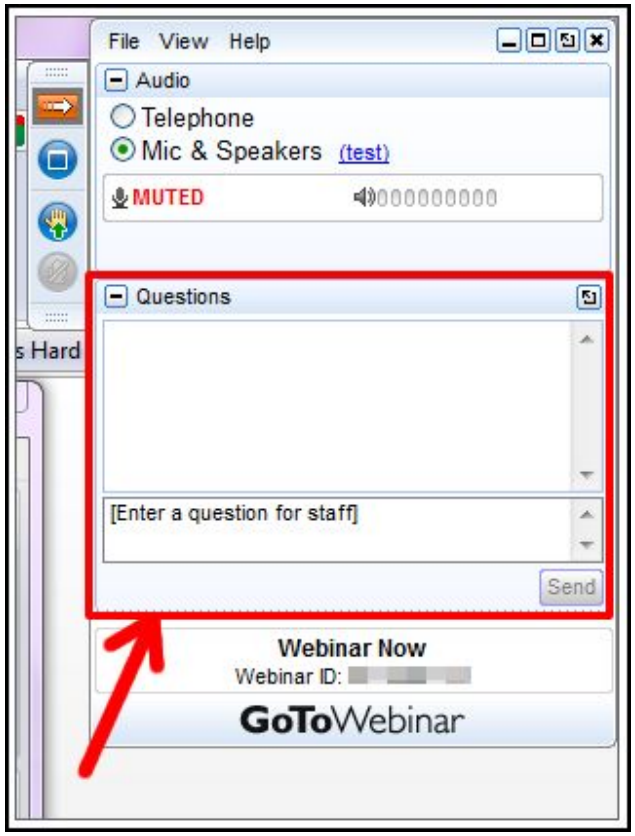
UDRIVE
European Naturalistic Driving Study

Prioritised Research Questions (3)

To what extent can an individual's willingness to engage in secondary tasks, and its effects on risk and driving performance, be predicted from psychological tests?	
To what extent can the general willingness to engage in secondary tasks and specific scheduling characteristics (e.g. extreme glances) be predicted from psychological tests?	
Which personality dimensions have the strongest predictive value	

UDRIVE
European Naturalistic Driving Study

Q&A



UDRIVE
European Naturalistic Driving Study

Further questions / Contact:

- Oliver Carsten (ITS-Leeds)
  - o.m.j.carsten@its.leeds.ac.uk
- Laurette Guyonvarc'h (LAB)
  - laurette.guyonvarch@lab-france.com
- Jonas Bärgman (SAFER)
  - jonas.bargman@chalmers.se

UDRIVE
European Naturalistic Driving Study

REGISTRATION OPEN!

Final event

The UDRIVE Experience

June 7, 2017

6th International Symposium

Naturalistic Driving Research

June 8 – 9, 2017

More information?

http://ndrsymposium.com