Driving style

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  ■ psychometric questionnaires

Driving style

- “habitual way of driving, which is characteristic for a driver or a group of drivers” \(^1\)
- longtime interest of traffic psychologists as a component of accident causation
  - psychometric questionnaires
- also for engineers looking to classify drivers for various purposes
  - e.g. machine learning

Driving style

Typically thought be\(^1\) reflected in things like
- car following: jerky driving, tailgating
- overspeeding and lane changing
- flashing lights, horn honking

Driving style

Typically thought to be reflected in things like:
- car following: jerky driving, tailgating
- overspeeding and lane changing
- flashing lights, horn honking
- do these things appear together?
- if we can agree on how to measure them, we have something replicable
- project roots in microsimulation, so we chose to start with car following

Longitudinal driving experiment

- 15 participants in a driving simulator
- 40 minutes of driving each
- leader speed varies in a predefined way
- no overtaking
Driving intensity

We found that people tend to be situated into a continuum of

- "intense" drivers with short time headways and quick longitudinal movement and
- "calm" drivers with longer headways and more relaxed accelerations
Why does this matter?

Better understanding of variation in drivers might entail

- greater predictive power for accident causation
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- vehicle automation: limits of comfort and predictability
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Better understanding of variation in drivers might entail

- greater predictive power for accident causation
- vehicle automation: limits of comfort and predictability
- traffic simulation: congestion formation, mixed fleets
Thank you!
Read the paper at PLoS ONE:
http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0185856