

Transportation Psychology / Angela Francke

That path is too unsafe! Analysing the challenges for elderly cyclists.

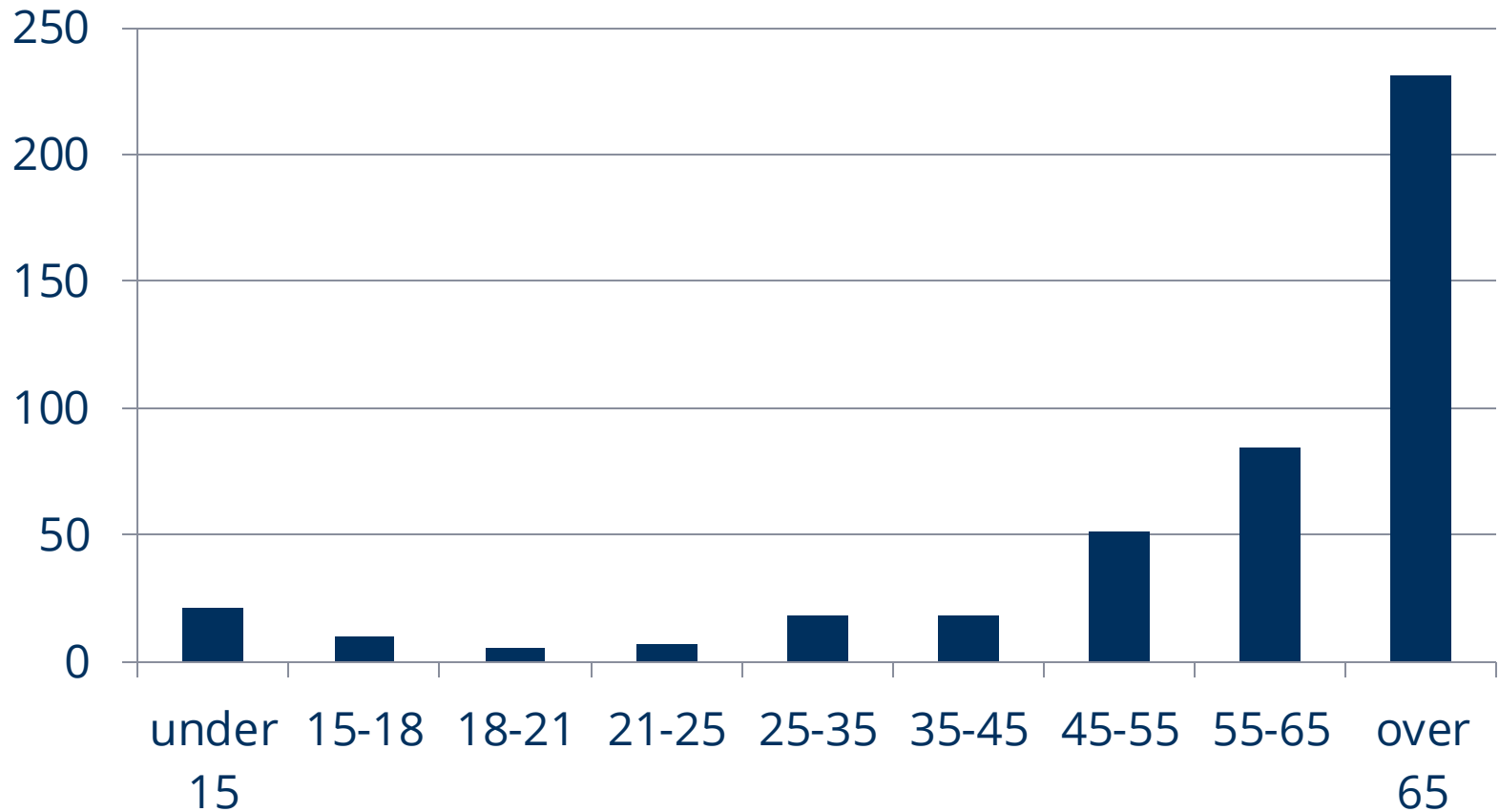
Velocity Conference 2019

Dublin / 27th June 2019

Motivation

- Cycling with increased popularity in all age groups
- Cycling supports mobility, health, social contacts and independency (Engbers 2018)
- Aging population with more cyclists and cycling at a higher age (Wegman, Zhang & Dijkstra 2012)
- Older cyclists with increased risk of being killed or severely injured in road traffic

Number of cyclists killed in road traffic in 2018 in Germany (Statistisches Bundesamt, 2019)

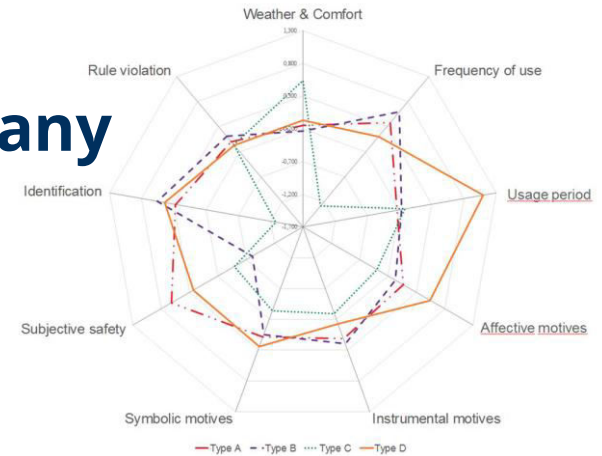


More research needed

Method

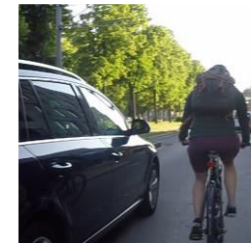
1st step: National online survey in Germany

10 294 persons
goal: identification of cyclists types



2nd step: Field study with GPS tracking and mobility diaries

318 persons
goal: subjective safety of participants



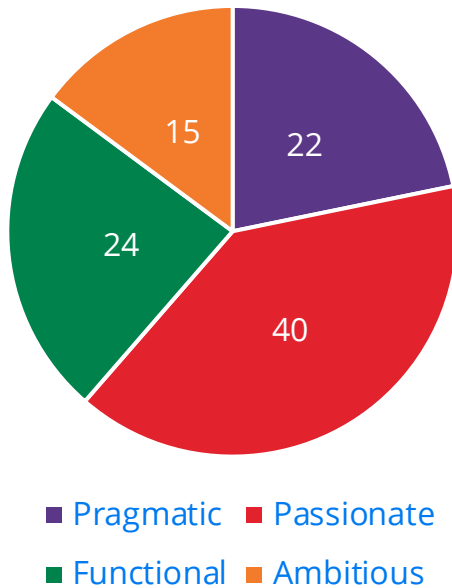
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Typology of cyclists

Types



- Uses the bike very often and for many routes.
- Feels safe on the bike and is not getting nervous by traffic

Passionate Type (40%)



- Often on the bike
- Slogan: What should be has to be. They cycle because family and friends do so, too.
- Feel rather unsafe.

Pragmatic Type (22%)



- Occasional cyclists
- Not in bad weather conditions
- In holidays or at the weekends they like to go on a cycling tour
- But doesn't feel very safe

Functional Type (24%)



- Fun while cycling, but only few opportunities
- Long distances
- Sportive cyclists
- Enjoying the ride to relax mentally and physically

Ambitious Type (15%)



Used age groups for analysis

Data set: Online study
N = 10 294

Young

- 14 – 20 years
- n = 241

Young to middle aged

- 21 – 65 years
- n = 9 696

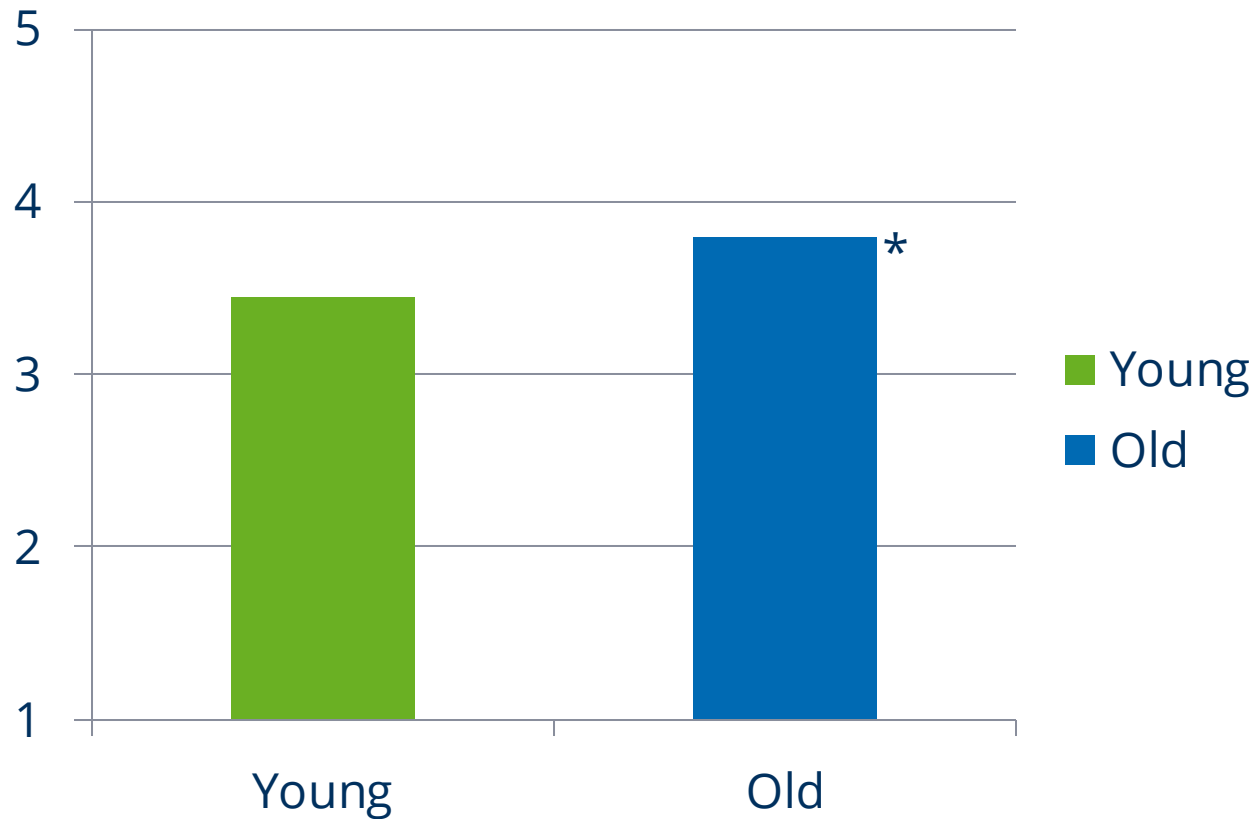
Old adults

- 66 – 100 years
- n = 357

Online survey: Subjective safety

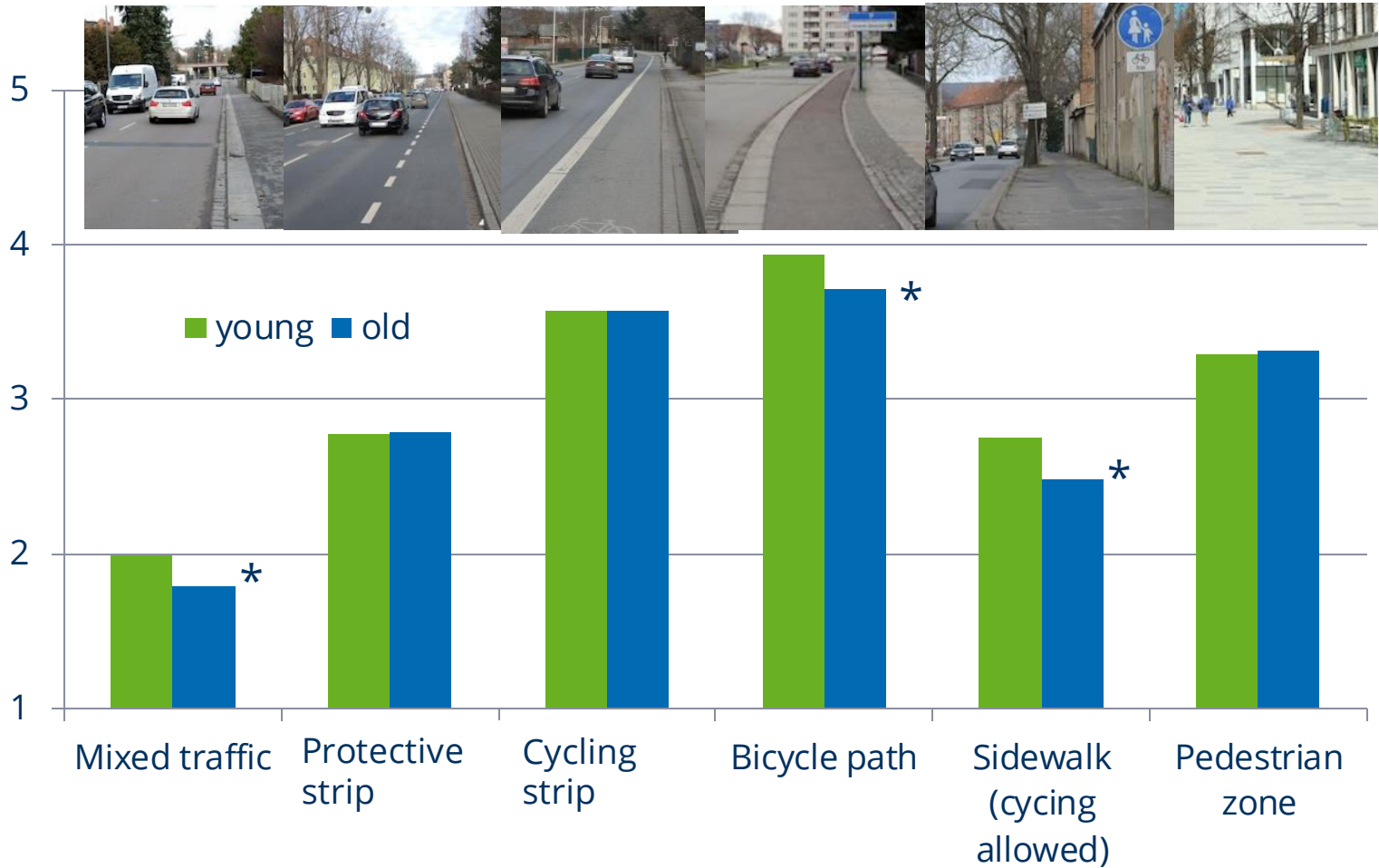
“I feel safe on the bike in traffic.”

(1 = very unsafe, 5 = very safe)



Online survey: Safety ratings of different infrastructures

Safety ratings on 5 point Likert scale
(1 = very good - 5 = very bad)



Evaluation of critical situations

Data set: 318 persons

Tram rails are located in the direction of travel

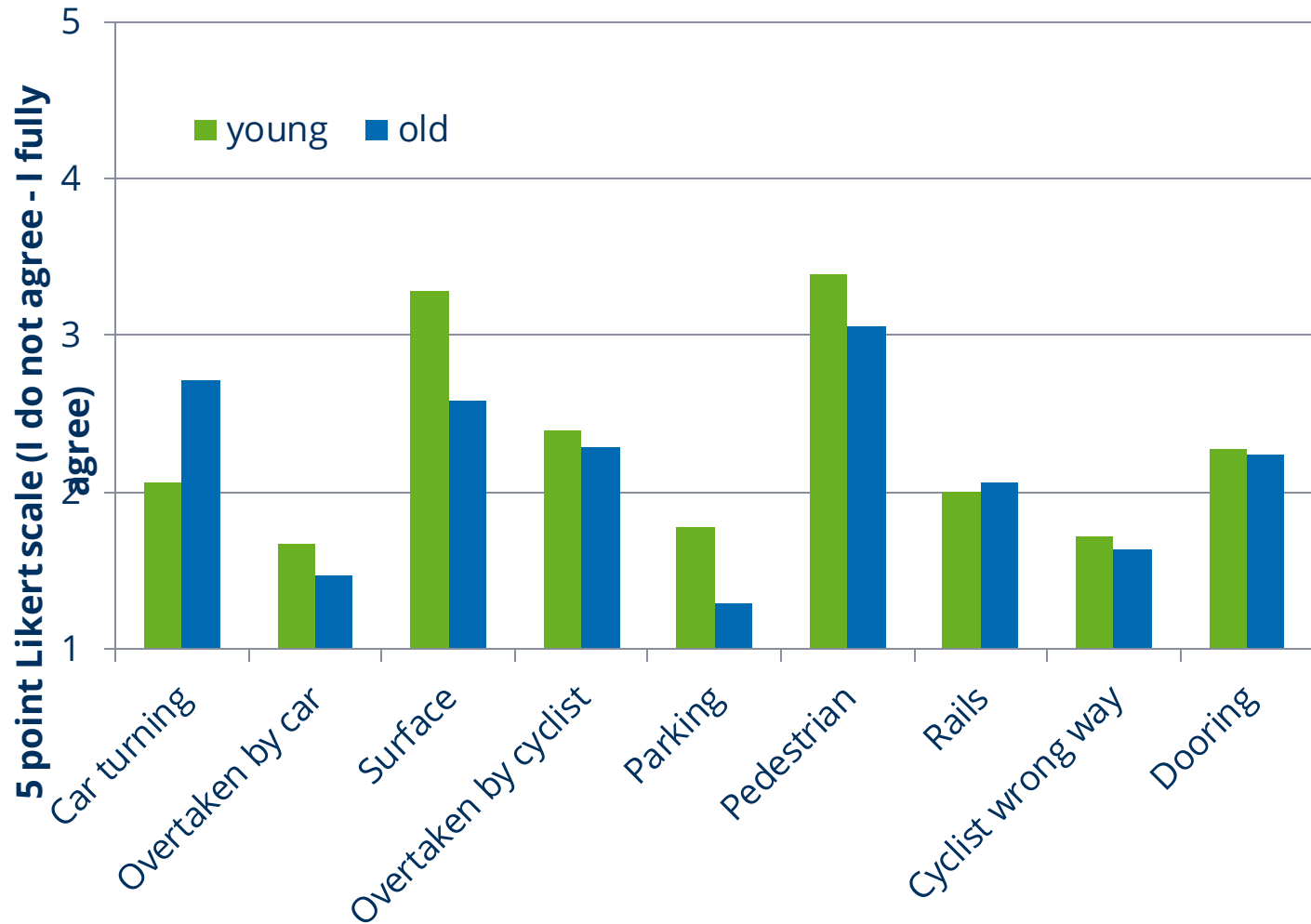


A car overtakes with small distance to the cyclist



Critical situations

“The situation is safe from the cyclist’s perspective”



Questions for discussion

What is the trend for cycling/accidents with cyclists of different age groups in your country?

Which compensation strategies are used by elderly cyclists?

What interpretations for the evaluation of the infrastructure of the elderly cyclists are possible?