

Moral Reasoning in Traffic

*How does it show in traffic and how
can it be improved by training*

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TPI Meeting April 11, 2019



Overview

- Driving and moral reasoning
- Self-assessments for moral reasoning
- Research results
- Conclusions and implications



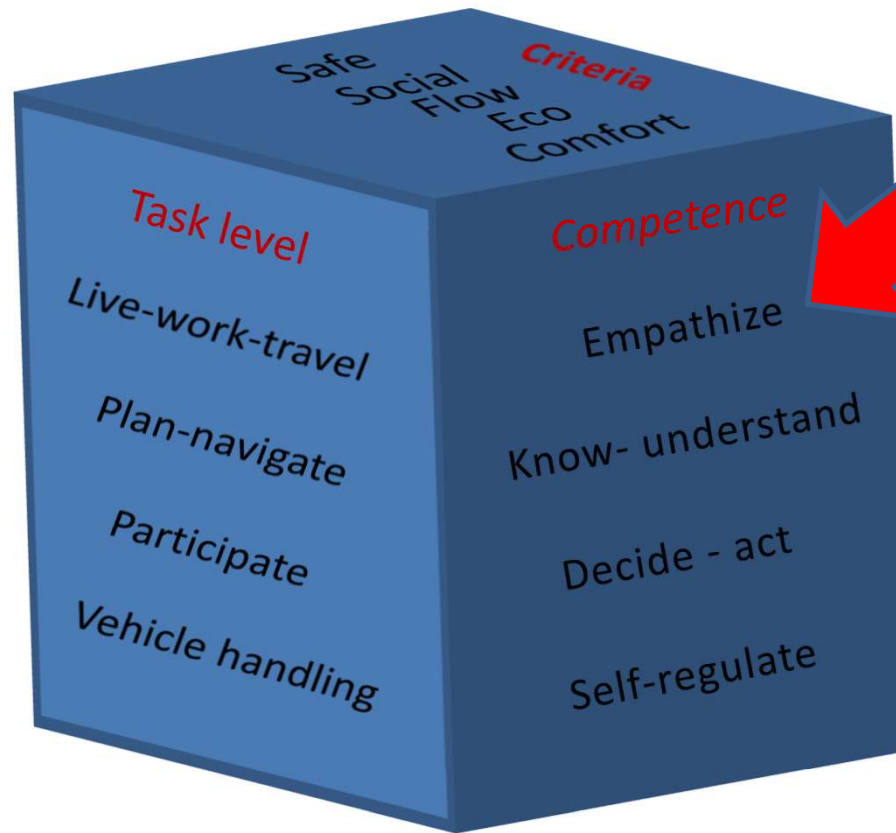
Driving and moral reasoning



Life tasks & driving: triggers of moral choices



Cube of driving competence



Neglected part of driving: social-emotional competence

Moral reasoning (Gibbs)

Based on research in juvenile delinquency

What is wrong-right in a personal situation?

Concept adapted to solving situations in traffic

Obey speed limit? Others go first? Lie? Be honest?

“Immature” reasoning

- **Level 1:** Punishment and reward; short term thinking.
- **Level 2:** Own preferences and pragmatics are central. Give a little, take a little.
- **Level 3:** Well being of others. Awareness of consequences of own behavior for others. Reciprocity: I would like others to do the same for me, so I will do it for them
- **Level 4:** Functioning of society important; Common interest is preferred above one's own interest.

“Mature” reasoning

Moral reasoning and anti-social behaviour

Moral reasoning

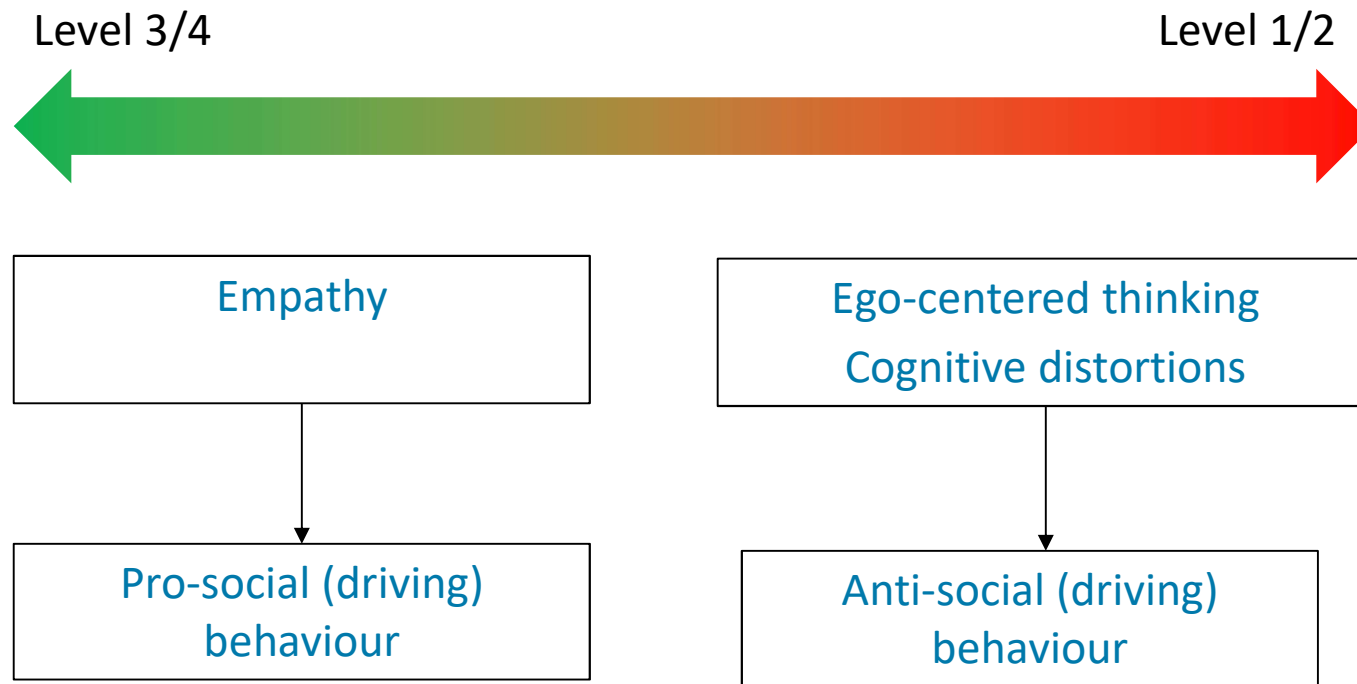
- Non-delinquents justify their behaviour often with mature moral reasons: well-being of others or society (levels 3-4)
- Delinquents justify their behaviour with level 1 and 2 reasons: concerns about the risk of punishment

Cognitive distortions

- Research has shown an association between immature moral judgments and cognitive distortions.
- Cognitive distortions:
 - blame others
 - protect oneself, prevent negative self-concept
 - let anti-social behaviour occur easily

Positive message: delinquents can be trained to attain more advanced levels of moral reasoning and pro-social behaviour. ***Why not drivers?***

Moral reasoning: pro-social or anti-social driving behavior





Research context



Context: different target groups



Research focus

- 1) Levels of moral reasoning observed amongst drivers at the start of a training program (risk profile)
- 2) Associations of moral reasoning with driving behaviour (self-report, offences and accidents)
- 3) Differences in moral reasoning between traffic roles



4) Training of moral reasoning



Assessment instruments



Three web-based assessments

- Motives for rule compliance (15 items)
- Cognitive distortions test (43 items)
- Conflict of space test (18 items)
- Specific versions for each target group
 - Learner drivers from cyclist perspective
 - Young novice drivers
 - Professional bus drivers

Motives for rule compliance test

7A. Out of 10 times that you come across this situation, how many times would you run the red light?

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

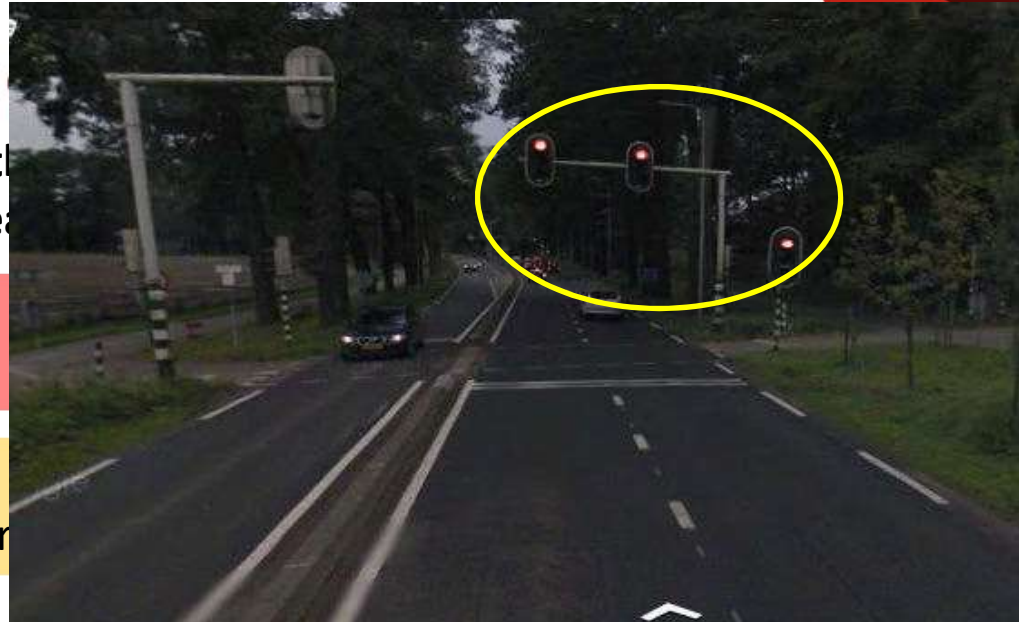
7B. In those cases that you do NOT run the red light, distribute in total 100 points over the reasons below.

I want to prevent getting fines or being stopped by the police

I want to prevent that I end up in a troublesome situation (danger, discomfort)

I do not want to bother other road users (nuisance, danger, discomfort)

I want to prevent the traffic to become unsafe or disturbed because of me



00 10 20 30 40 50 60 70 80 90 100
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

00 10 20 30 40 50 60 70 80 90 100
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Cognitive distortions test



Young driver version

Self-Centered: “If I want someone to hurry up, I allow myself to drive within a shorter distance behind him.”

Blaming Others: “I tailgate on the highway because drivers are not moving quickly enough.”

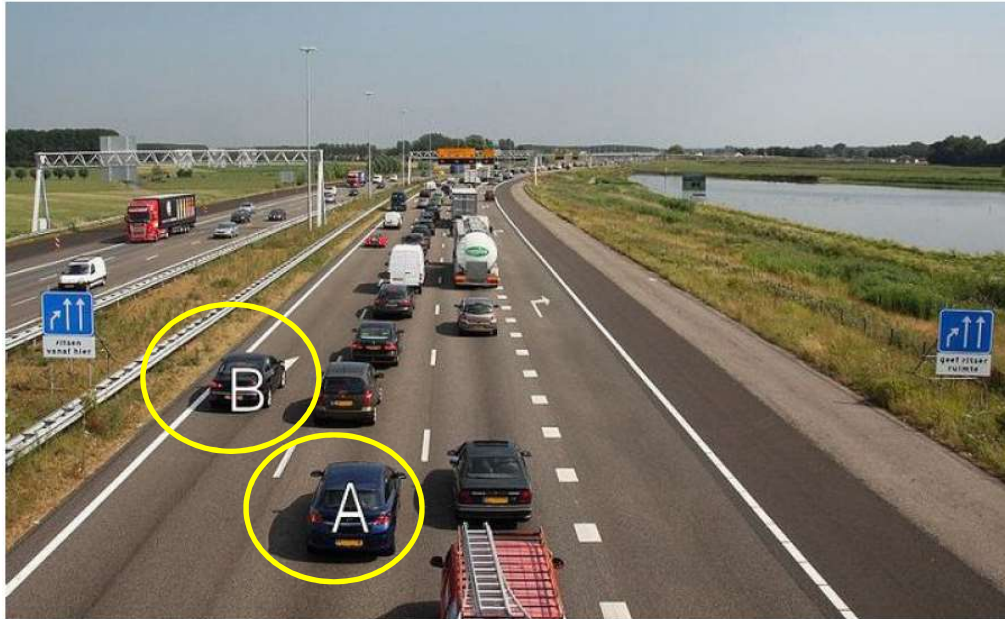
Minimizing/Mislabeling: “If I am only staying a short time, it is okay for me to park my car in a restricted zone.”

Assuming the Worst: : “When I want to merge into traffic, other road users won’t voluntarily let me in.”

Disagree strongly Disagree Disagree slightly Agree slightly Agree Agree strongly



Decisions in situations with a conflict of space



***“What would you do?”
Distribute 100 points over the
options below.***

I accelerate to prevent car B from moving into the middle lane (space competition)

00	10	20	30	40	50	60	70	80	90	100
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I reduce speed in order to let car B in (pro-social driving)

00	10	20	30	40	50	60	70	80	90	100
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Instruments for driving behaviour

Speed on different roads



Speed under different conditions

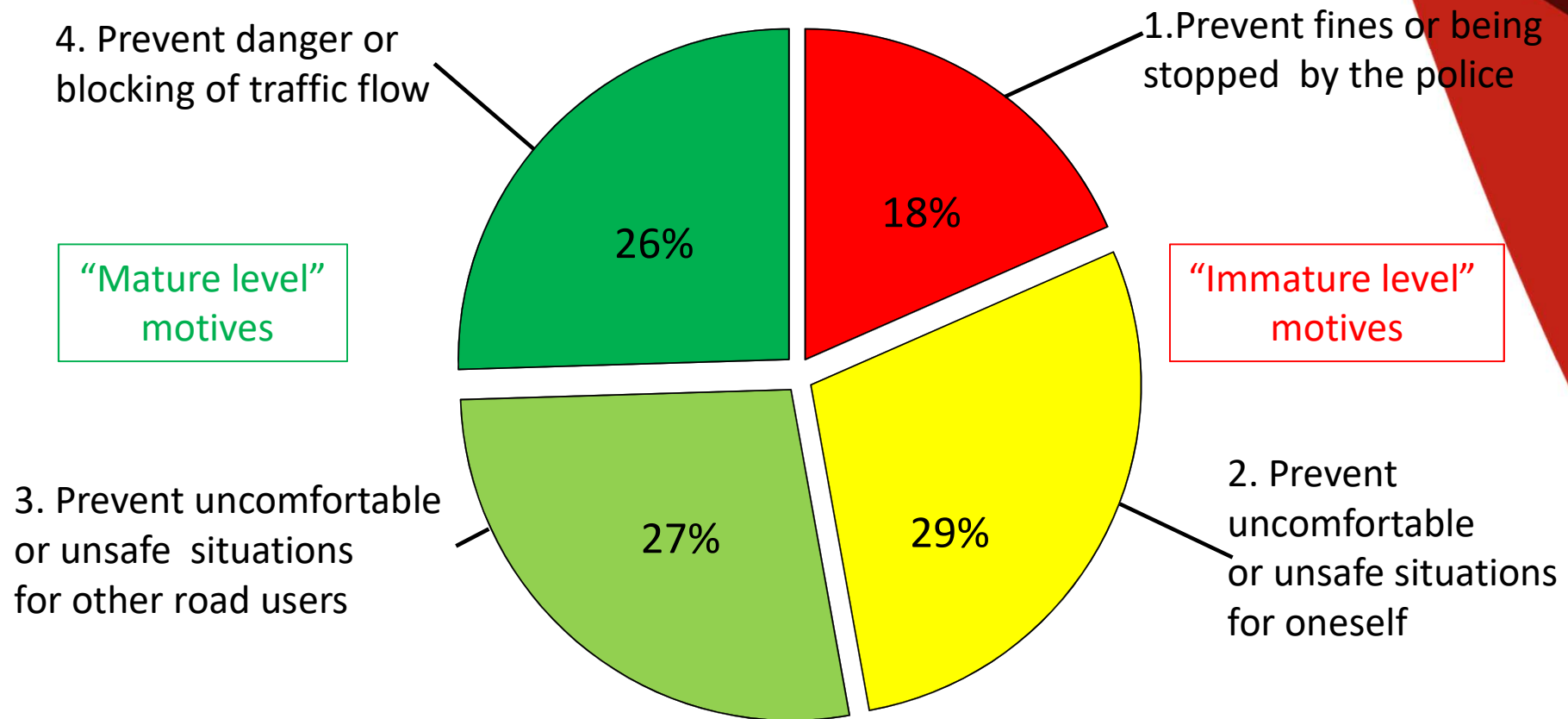


Number of fines (12 violations)

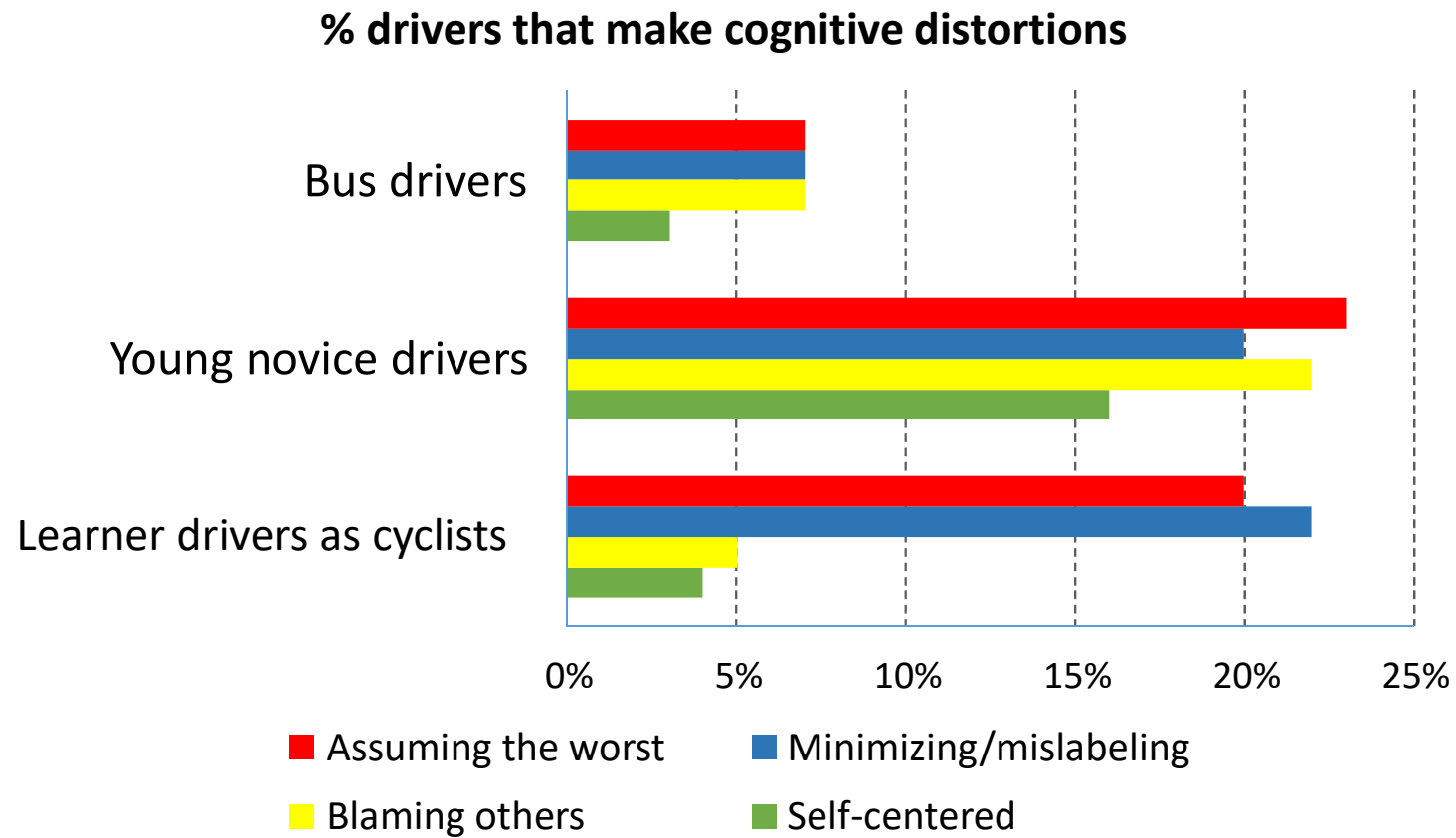
- Not wearing seat belt
- Speeding
- Making hand-held phone calls



Justification levels (young drivers)



Cognitive distortions by traffic role

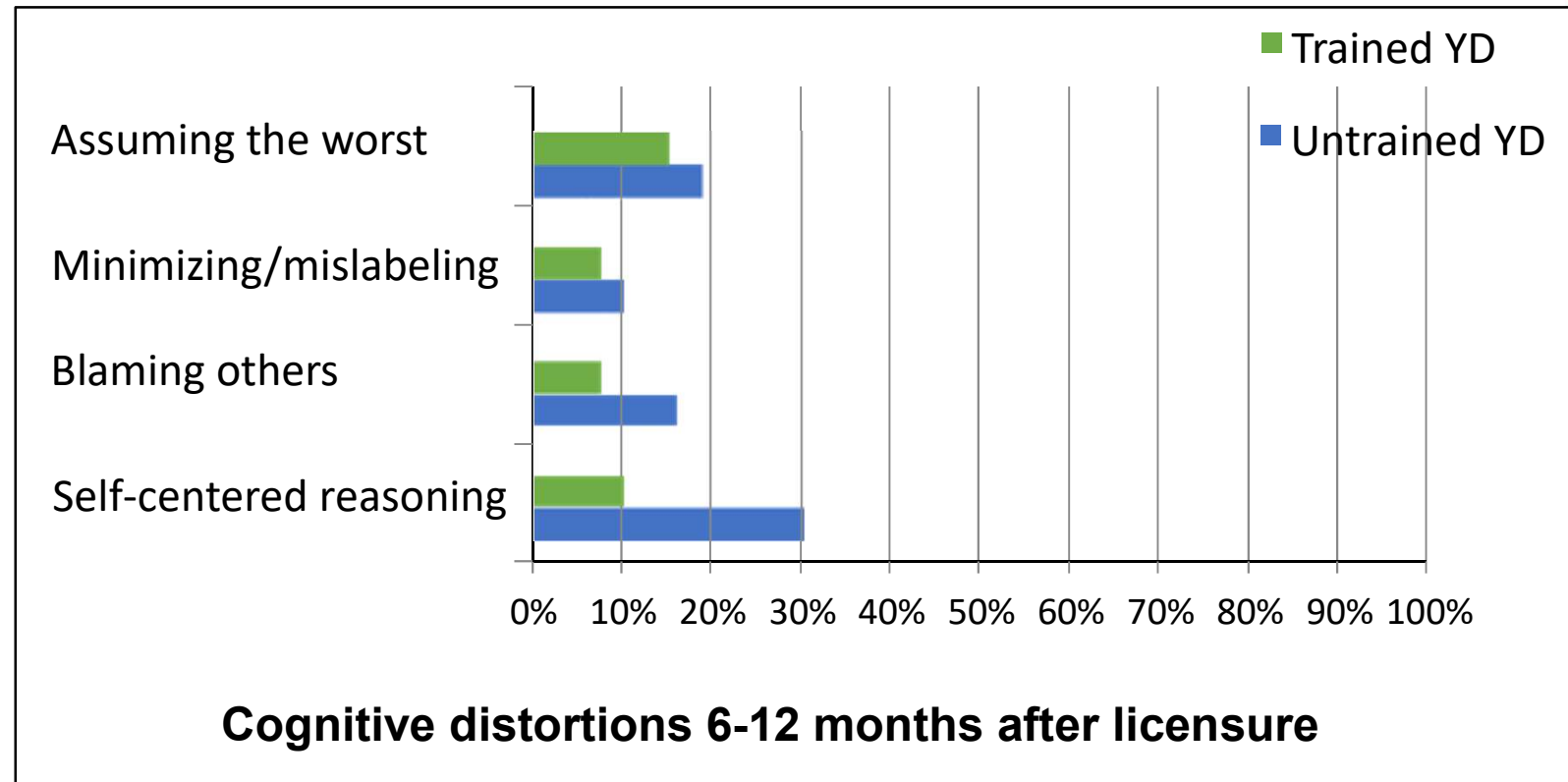


Prediction of driving behaviour

- **Immature motives for rule compliance** are predictive for:
 - higher driving speed
 - more violations
- **Cognitive distortions** are predictive for:
 - higher speeds
 - violations
 - space competing driving
- **Mature moral motives for rule compliance** inhibit:
 - driving speed
 - space competing driving
- Low levels of moral reasoning correlate with over-estimation of own driving skills and lead to a higher accident risk

Effects of training

- Risk profiles stimulate socio-moral reflection
- Better adaptation of the training to the individual





Conclusions and implications



Implications for driver training and beyond

- Moral reasoning is an element of competence that affects driving style and outcomes and should be given attention in training and testing
- Moral reasoning can be improved by training
 - Assessments are useful to address personality related competencies (level 4 of the GDE matrix)
 - Tool supports driving teachers in their coaching role
- Have driving teachers competences to address moral reasoning?
- Can moral reasoning be assessed in a reliable way in the driving test?



Thank you for your attention!



Questions????



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