Is it possible to reduce the high rate of accidents involving young drivers?

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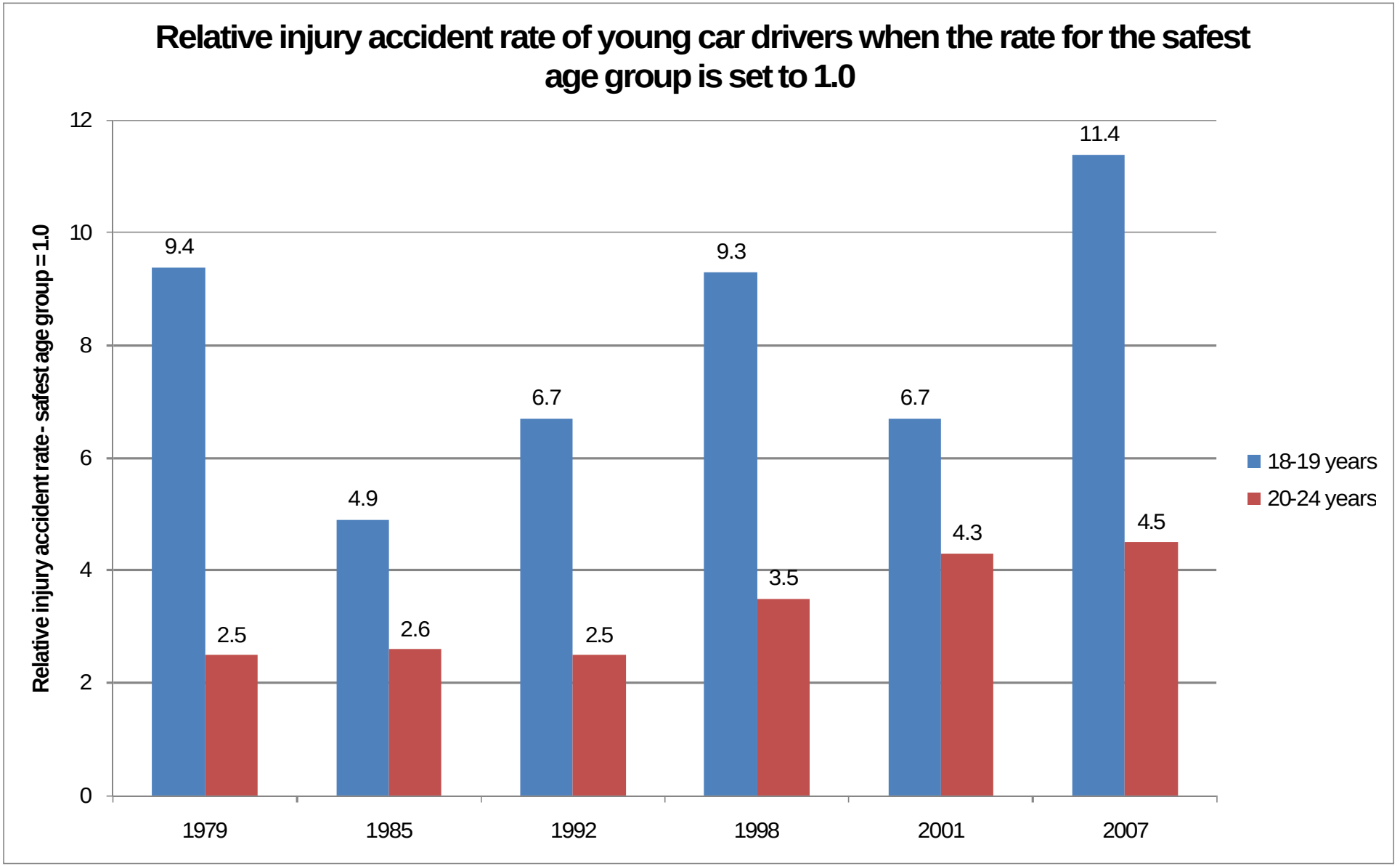
Rune Elvik, Institute of Transport Economics (re@toi.no)

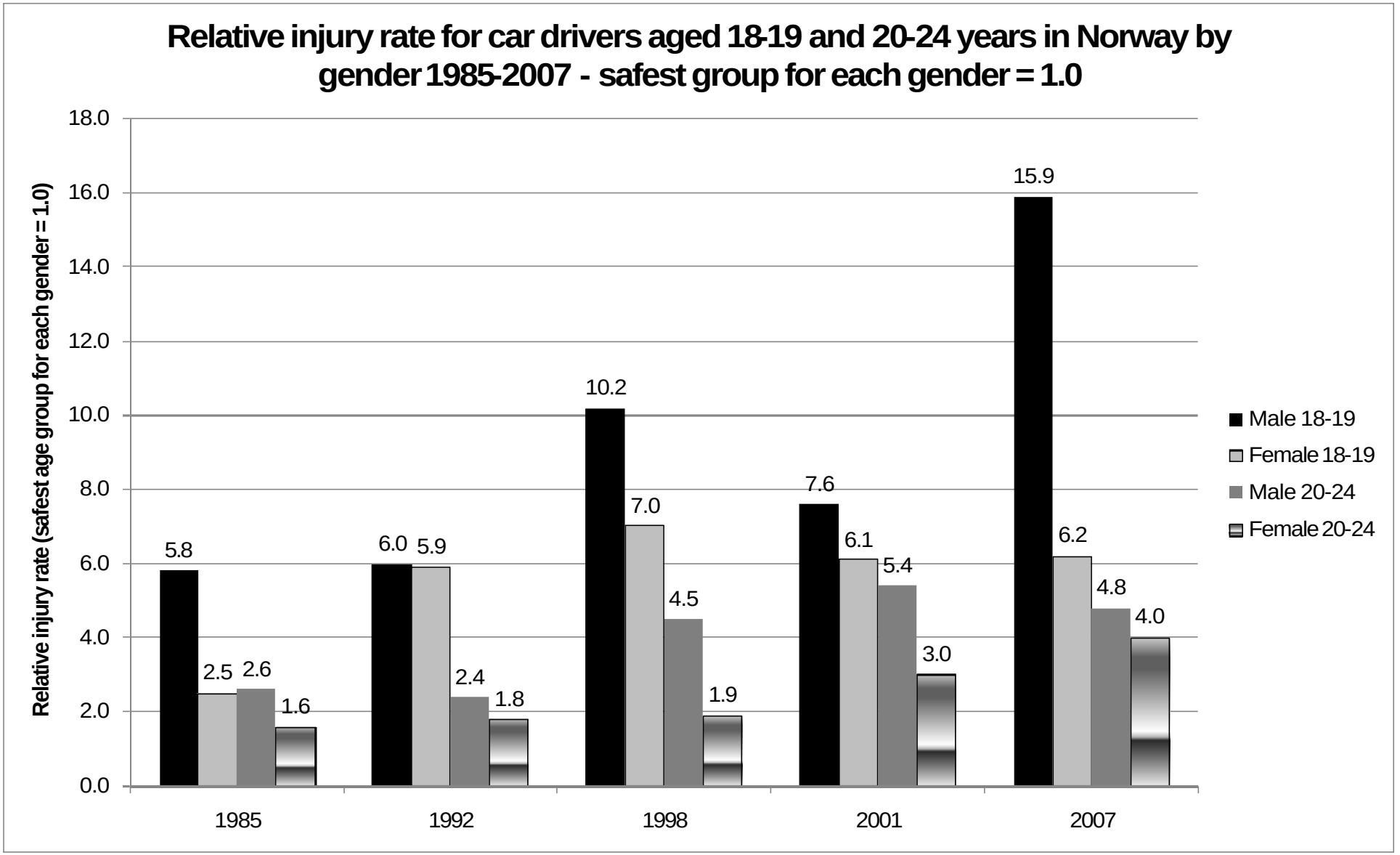
Categories of road safety problems

- Easy problems:
  - Getting most car occupants to wear seat belts
  - Convincing highway engineers that roundabouts are good for safety
- Difficult problems that can be solved:
  - Reliably detecting fatigue and preventing driving when tired
  - Ensuring compliance with speed limits (ISA will triumph in the end)
- Difficult problems that cannot be solved:
  - The complexity of dense urban traffic and errors induced by it
  - The high accident rate of young drivers

Why reducing the high accident rate of young drivers is difficult

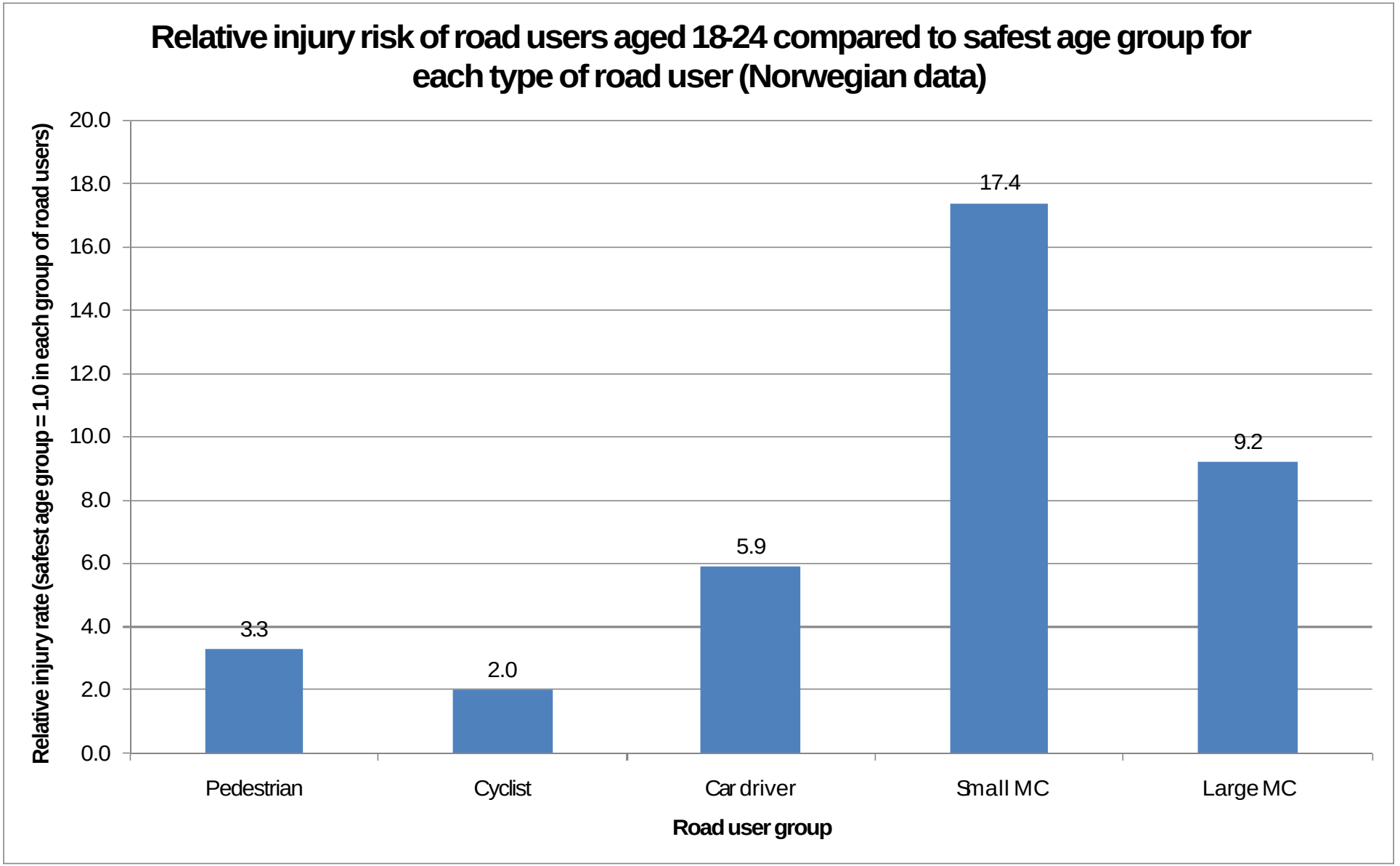
- The problem has persisted for a very long time, despite repeated attempts to solve it
- The problem is universal: it is found in all societies and applies not just to drivers but to all groups of road users
- Research suggests that some of the factors contributing to the problem are very basic in their nature and, for all intents and purposes, impossible to influence
- The challenge facing driver training is enormous: it is to teach people that they do not know anything (or know very little)

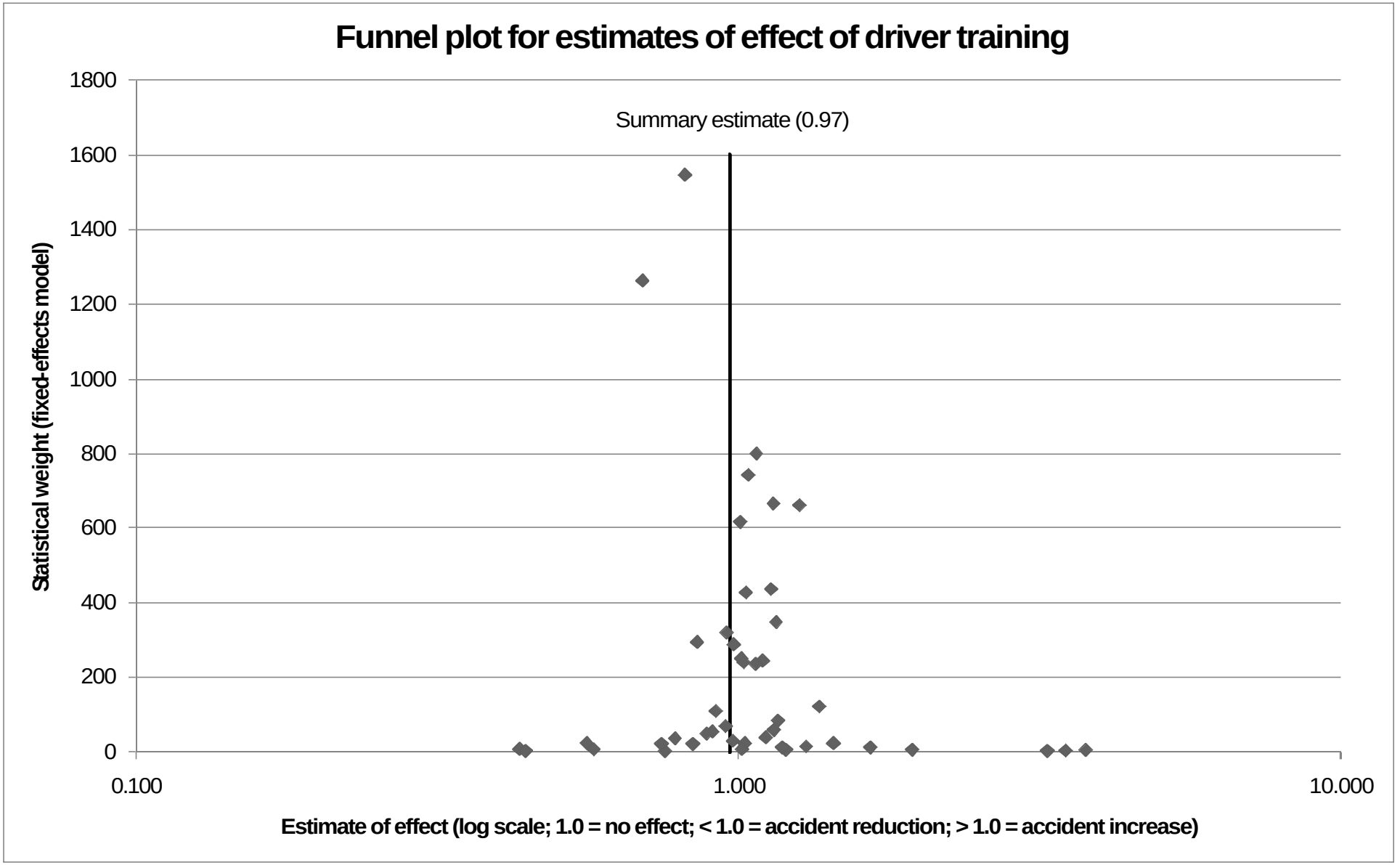


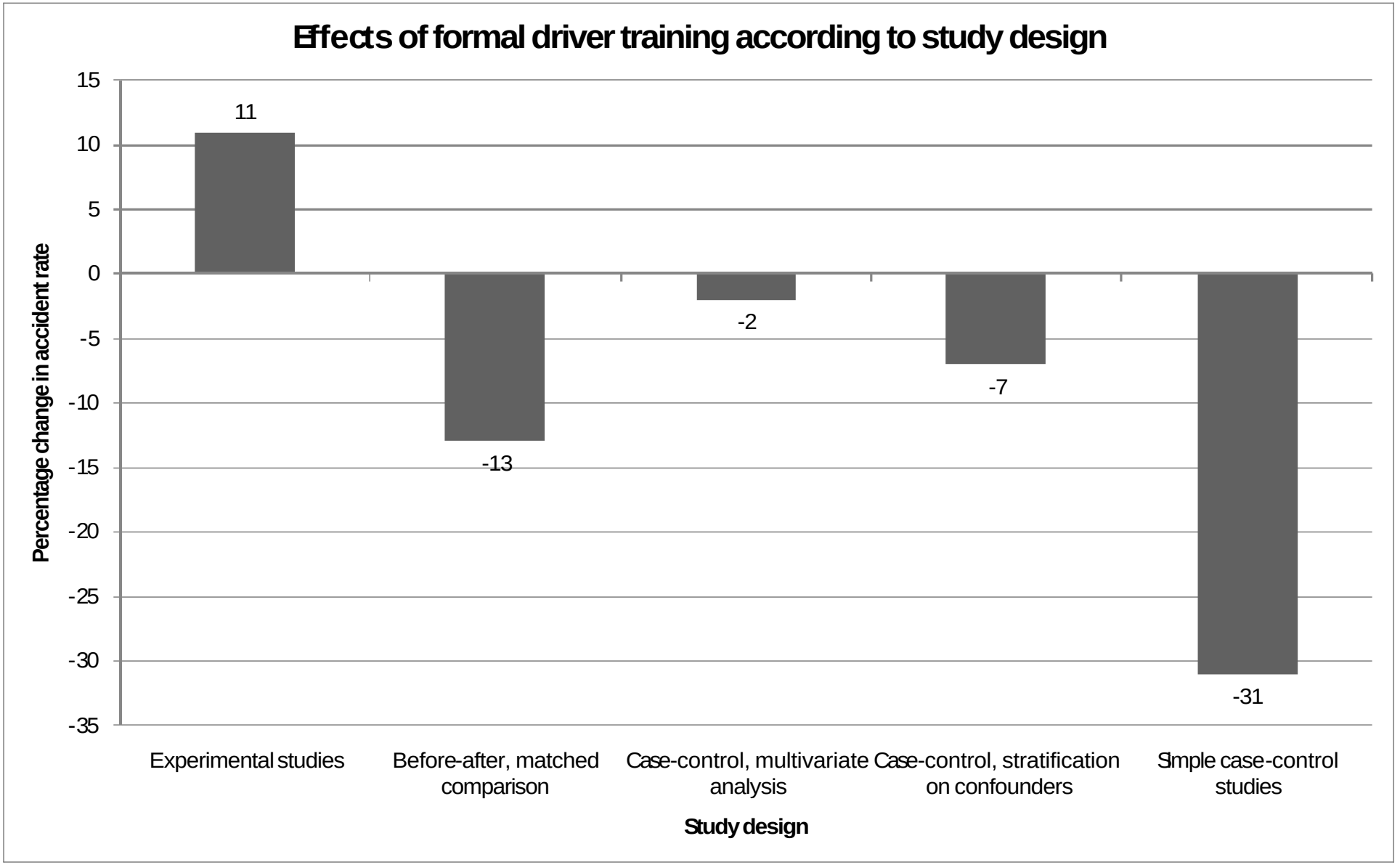


These patterns are not unique

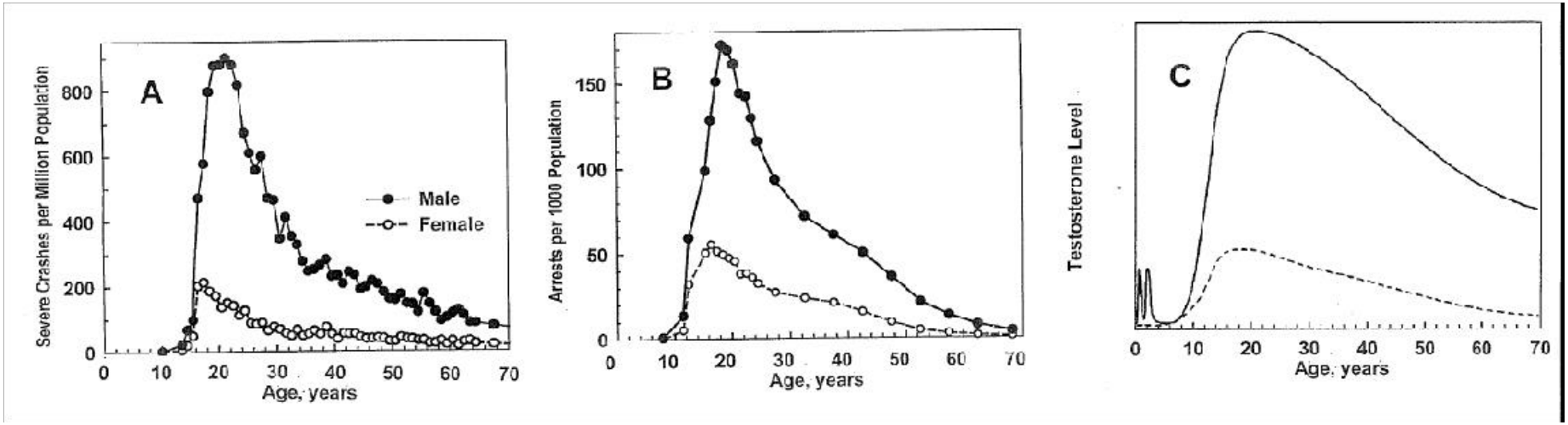
- Leonard Evans (1991, page 41):
- *”The over-involvement of young, and male, road users is one of the largest and most consistently observed phenomena in traffic throughout the world. It is so robust that it is almost like a law of nature.”*
- It cannot purely be a matter of lack of training or inadequate skill as a driver
- It applies to all groups of road users – few would suggest that the over-involvement of teenagers as pedestrians suggests that they cannot walk and should be trained in how to do it







A biological basis for high risk?



Concluding remarks

- The high accident rate of young drivers has been a problem in all highly motorised countries for at least 40 years
- Several attempts have been made to solve this problem, in particular by means of driver training, but so far with rather limited success
- Driver licence restrictions and graduated driver licences have produced minor improvements, but far from large enough to eliminate the excessive risk
- There is a gender difference in the over-involvement of young drivers in accidents

Further concluding remarks

- Research suggests that the high involvement of young drivers in accidents may in part have a biological basis (high testosterone levels; higher cognitive functions of the brain not fully developed until the age of about 25)
- Lack of driving skill is clearly a factor, but its effects are mostly eliminated within a few months – the higher level of risk lasts for several years
- Training is a double-edged sword: it is necessary, but it may give drivers an excessive confidence in their driving skills
- See also my paper in Accident Analysis and Prevention

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Why some road safety problems are more difficult to solve than others

Rune Elvik*

Institute of Transport Economics, Gaustadalléen 21, NO-0349 Oslo, Norway

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ABSTRACT

Some road safety problems have persisted for a long time in nearly all motorised countries, suggesting that they are not easily solved. This paper documents the persistence over time of five such problems: the high risk of accidents involving young drivers; the high risk of injury run by unprotected road users; risks attributable to incompatibility between different types of vehicles and groups of road users; differences in risk between different types of traffic environment and speeding. A taxonomy of road safety problems is developed in order to identify characteristics of problems that can make them difficult to solve. It is argued that if a problem is not perceived as a problem, is attributable to a misguided confidence in road user rationality, involves social dilemmas, or is closely related to the physics of impacts then it is likely to be difficult to solve. Problems to which biological factors contribute are also likely to be difficult to solve. The characteristics that can make a problem difficult to solve are to some extent present for all the five problems shown to be persistent in this paper.