

How to deal in the future with accident cause number one: Inattention

**Human history is a race between
education and catastrophe.**

H. G. Wells



Carney et al., (March 2015) analyzed 1,691 crashes with DriveCam
University of Iowa, AAAFoundation.org

**58% of young drivers involved
in crashes were inattentive !**



www.youtube.com/watch?v=SDWmwxQ_NnY&feature=youtu.be

Front ▲ FWD -0.25 ▲ LAT -0.66 Time +0.50 Rear

Carney et al., (March 2015)

The main distractors are:

1. Interaction with passengers: 15 %
2. Using a cell-phone: 12 %
3. Looking at something in the vehicle: 10%
4. Looking at something outside vehicle: 9%
5. Singing/dancing to music: 8%
6. Grooming: 6%
7. Reaching for an object: 6 % - etc.

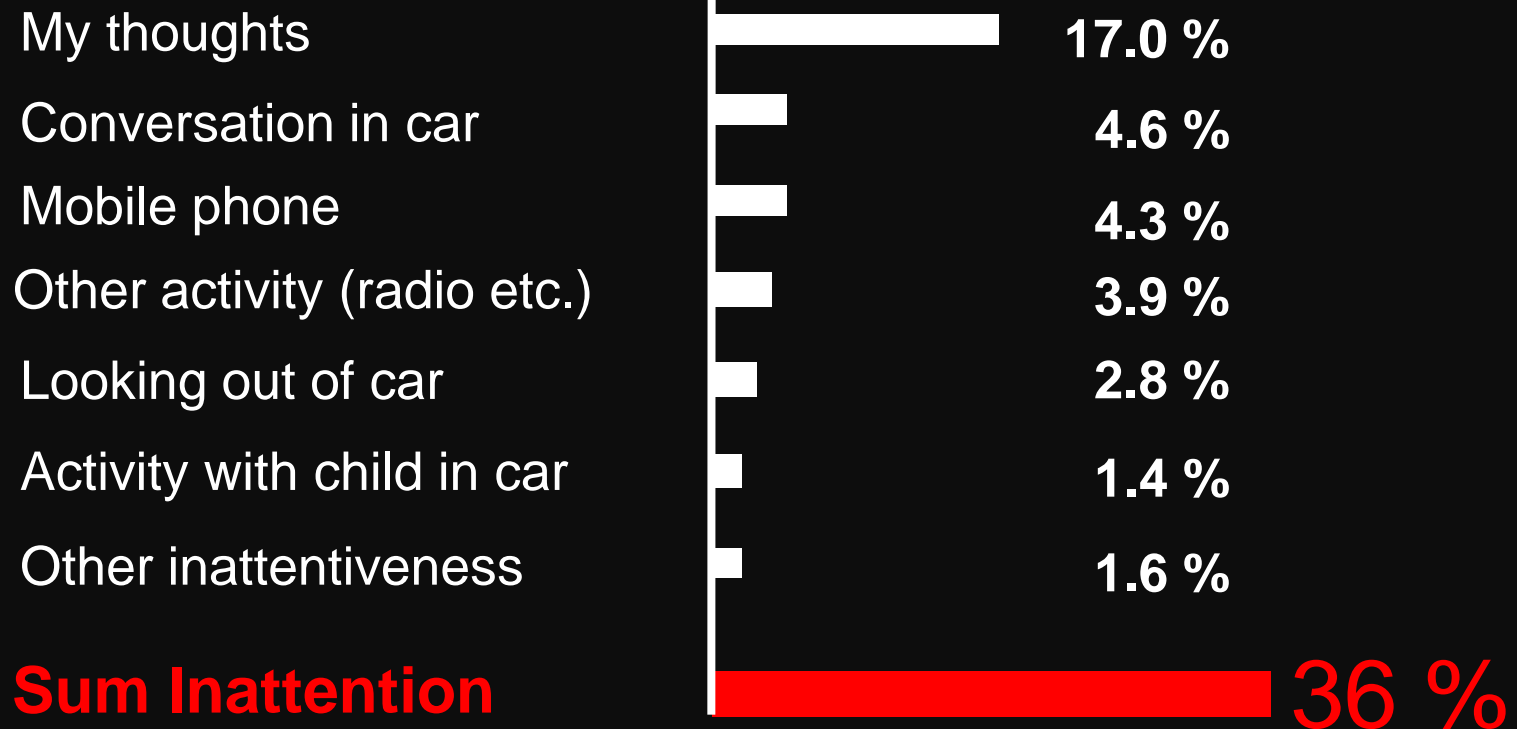
England 1995: Self assigned contributory factors in percent in male car driver accidents:

Cause of accident number one:

24% Inattention

Maycock, 1995 & 2002: TRL Report 169 & 527

Inattention



Austria: Main causes of accidents

Source: Bartl & Hager, 2006, www.alles-fuehrerschein.at (n=852 accident interviews)

AUSTRIA: Inattention / distraction – main cause of all accidents with personal injury:



www.statistik.at (recorded by police)

The SafetyNet Accident Causation Database

contains 1005 accidents from 6 countries:
Germany, Italy, The Netherlands, Finland, Sweden and the UK

**In 32% of these accidents
drivers/riders or pedestrians
were inattentive**

Talbot, R. & Fagerlind, H., 2009

Novice drivers' „Silent Killers“:

- Accident caused by distraction: 6.1 %
(1/3 of all guilty accidents)
- Near-accident by distraction: 19.4 %
- Falling asleep behind wheel: 5%

Source: 2,130 Novice drivers interviews in traffic-psychological group discussions (2nd phase in Austria) 9 months after licensing in average.
Bartl, 2015 www.alles-fuehrerschein.at

Novice drivers' main distractions behind the wheel:

- | | |
|--------------------------------|--------|
| 1. Cell phone (calls and sms): | 35.2 % |
| 2. Lost in thoughts: | 15.7 % |
| 3. Passengers: | 15.4 % |
| 4. Music: | 10.8% |
| 5. Looking somewhere: | 10.0 % |
| 6. Navigation: | 4.3% |
| 7. Eating / drinking: | 2.6 % |
| 8. Other: | 6.7 % |

Source: 2,130 Novice drivers interviews in traffic-psychological group discussions (2nd phase in Austria) 9 months after licensing in average.
Bartl, 2015 www.alles-fuehrerschein.at

Mental overload: In-vehicle voice based interactive technologies cause significant distraction while driving.

1. Strayer et al., 2014, University of Utah, funded by the AAA Foundation for traffic Safety
2. Paridon et al., 2015, ZVS 61

**Learning to drive safely means
understanding how our brain
works!**

To cope with inattention in the future:

1. Standardised template in EU to record causes of accidents
2. Distracting task (standardised!) in driving test – driving education
3. Learning to drive means learning to understand and accept the following 4 phenomena of our brain:
 - Inattentional blindness
 - Change blindness
 - Declarative memory versus procedural memory
 - Executive brain functions

Goal: Detecting “distracting traps” in traffic



Takete

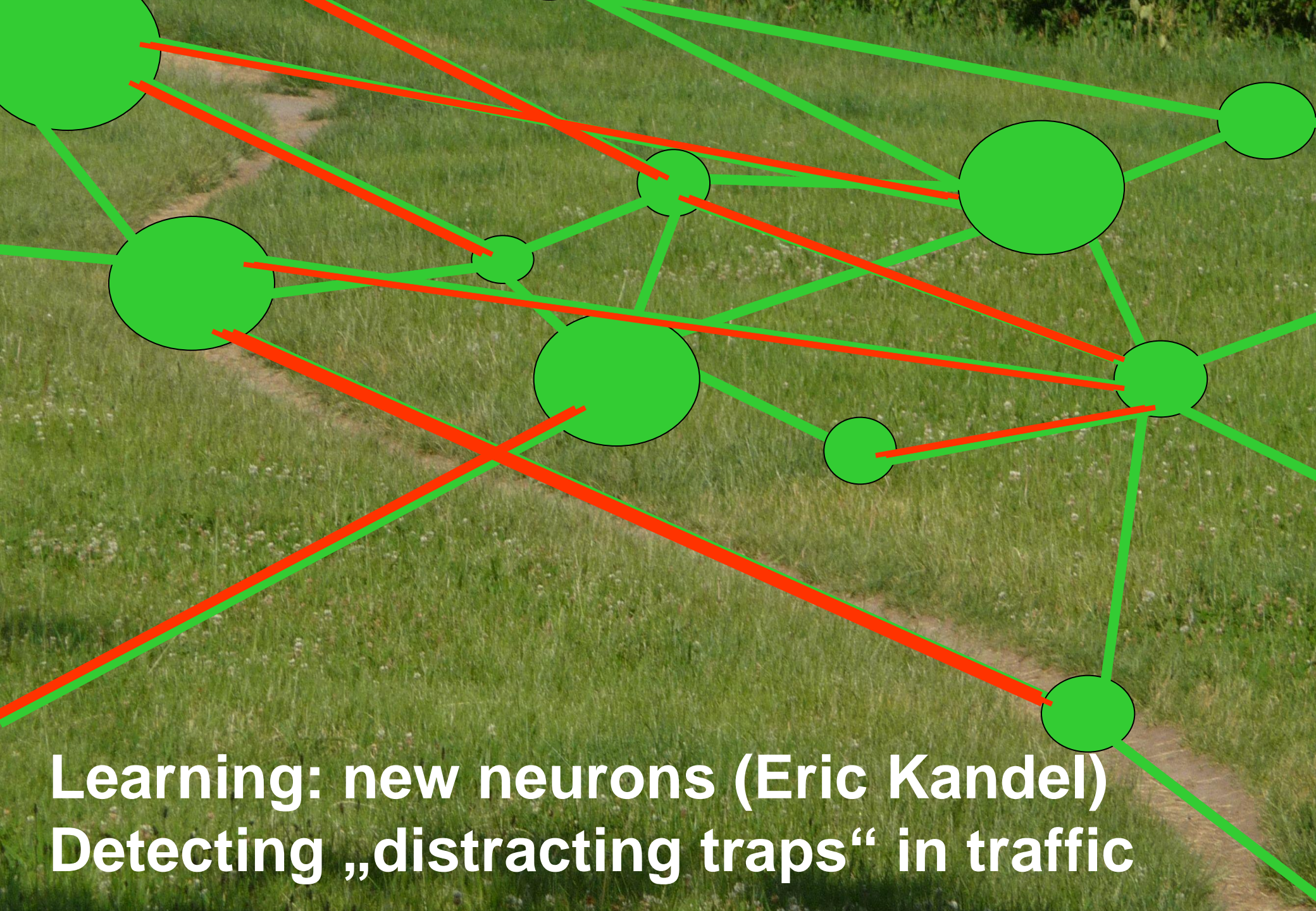
Malumba



By Koehler



A
bird
is in the
the bush



**Learning: new neurons (Eric Kandel)
Detecting „distracting traps“ in traffic**