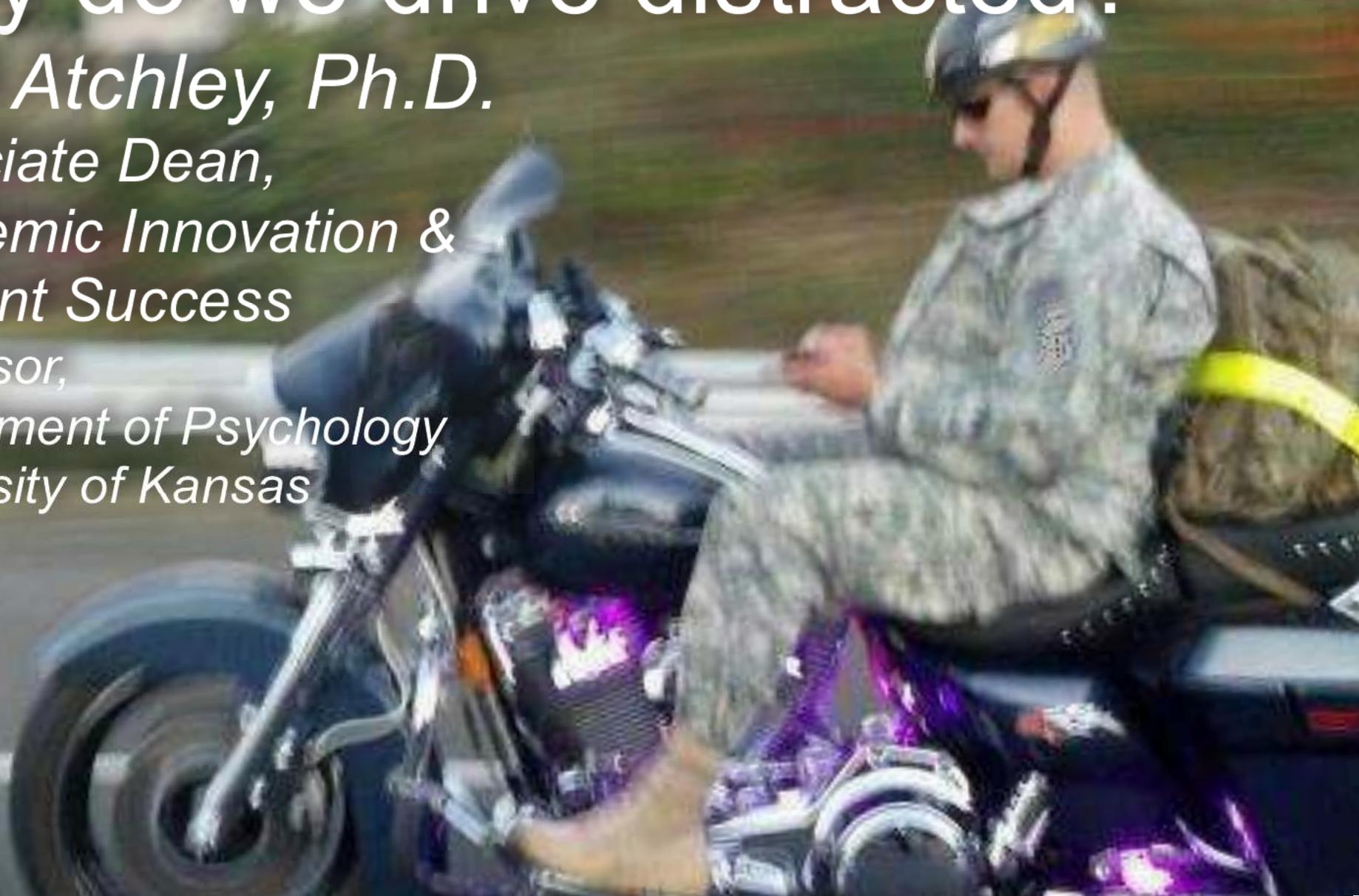


Still Fooling Ourselves: Why do we drive distracted?

Paul Atchley, Ph.D.

*Associate Dean,
Academic Innovation &
Student Success*

*Professor,
Department of Psychology
University of Kansas*

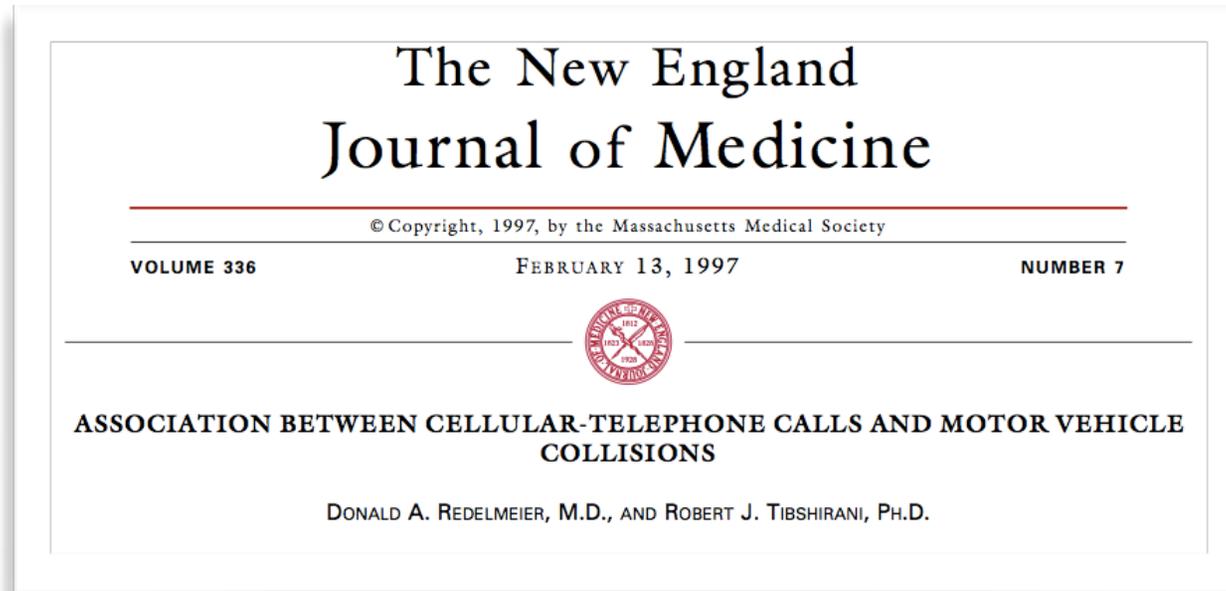


Distraction is killing us

This is not a new research problem

Brown, I. D., Tickner, A. H., & Simmonds, D. C. (1969). **Interference between concurrent tasks of driving and telephoning.** *Journal of Applied Psychology*, 53(5), 419-424.

Crashes with phone records show increased in risk



Role of mobile phones in motor vehicle crashes resulting in hospital attendance: a case-crossover study

Suzanne P McEvoy, Mark R Stevenson, Anne T McCartt, Mark Woodward, Claire Haworth, Peter Palamara, Rina Cercarelli

Drivers on cell phones drive worse than drunk drivers

A Comparison of the Cell Phone Driver and the Drunk Driver

David L. Strayer, Frank A. Drews, and Dennis J. Crouch, University of Utah, Salt Lake City, Utah

Strayer, et al., 2006

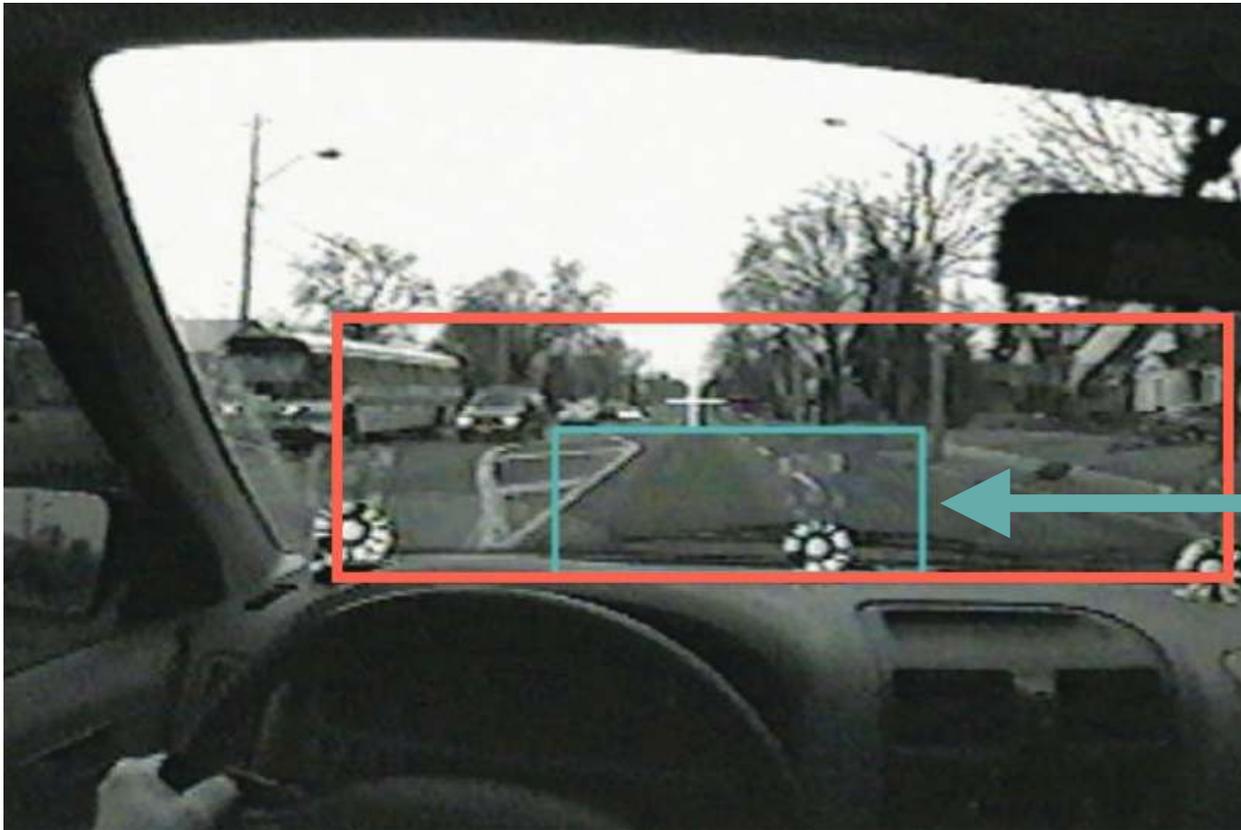
Conversation restricts visual processing - attention

SPECIAL SECTION

Conversation Limits the Functional Field of View

Paul Atchley and Jeff Dressel, University of Kansas, Lawrence, Kansas

Conversation restricts visual processing - eye movements



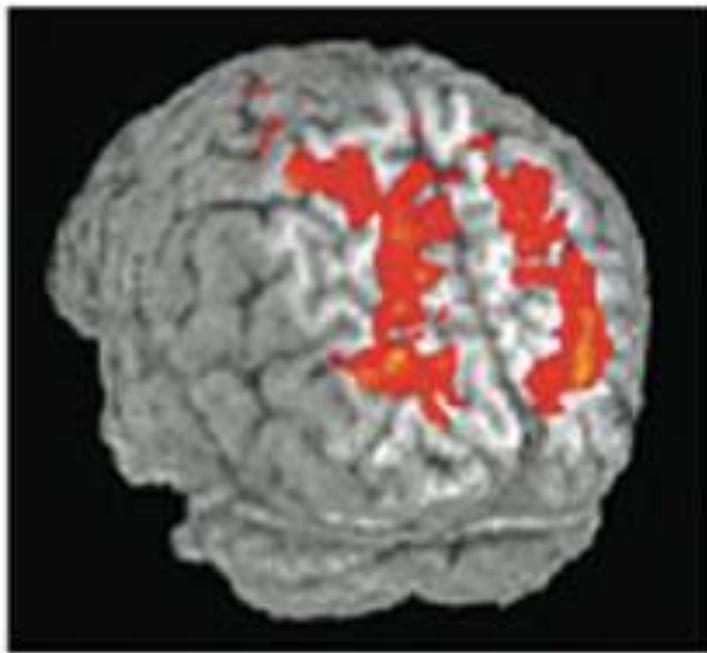
Eye movements

← attending

← on cell

Transport Canada

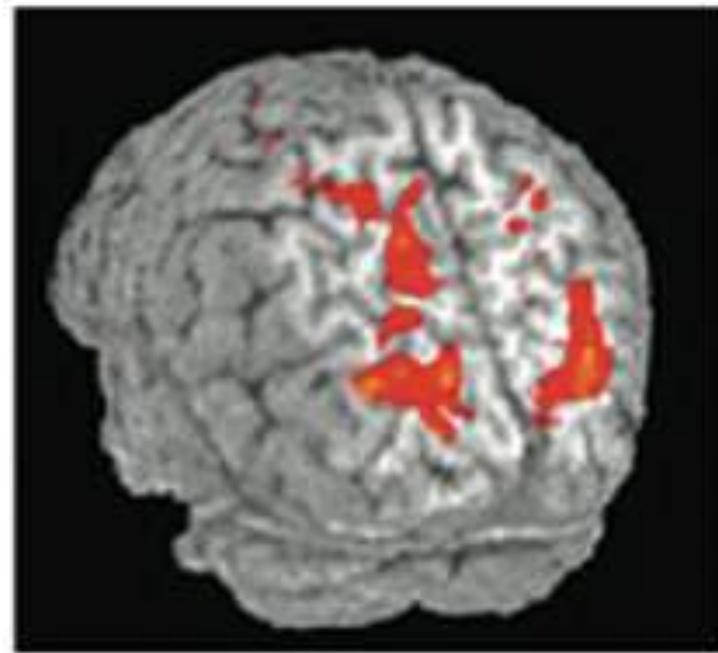
Conversation impairs visual processing - fMRI



L

Driving alone

R



L

Driving with
sentence listening

R

Just et al., 2008

The case against

Since 1969, there have been

342* studies examining

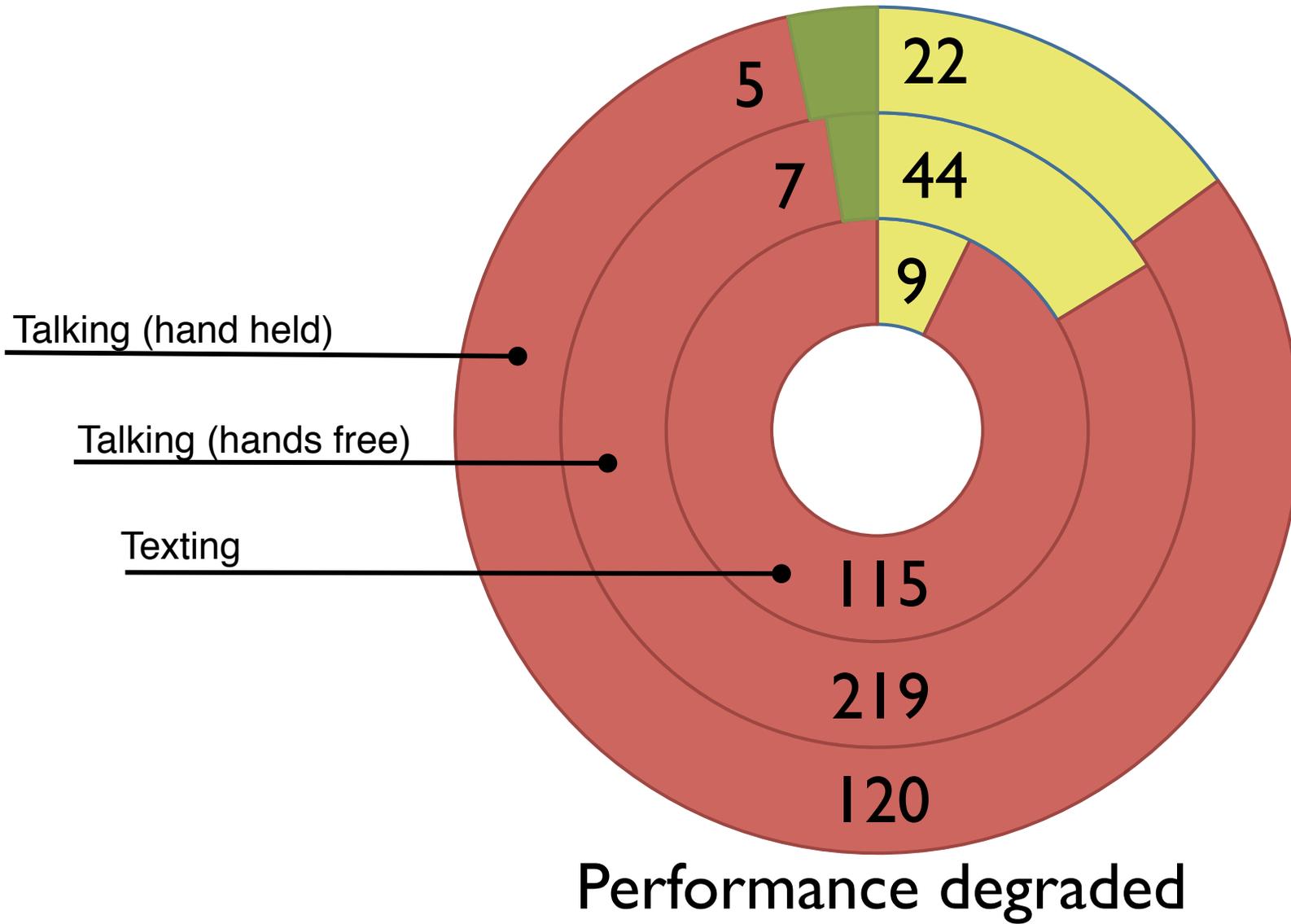
1608 measures

with **19370** subjects

on the effects of distraction on
driving performance

Performance improved

No effect



The bottom-line

The National Safety Council
estimates that
one-quarter of crashes
in the U.S.
are attributable to cell phones

It will get worse

~~It will get worse~~
Worse is here. Now.

Crashes and fatalities are up

NHTSA Reports Uptick in Traffic Accident Deaths

SEPTEMBER 12, 2016 By: [Whitney Taylor](#) | [CAR ACCIDENTS](#)

Traffic fatalities in 2015 were at the highest level since 2008, according to new data from the National Highway Traffic Safety Administration. The increase can be attributed at least in part to more miles on the road during that year, which could be due to a combination of an improved economy, higher employment rates and lower gas prices. However, statistics also show that failure to wear a seatbelt, driving under the influence and [distracted driving](#) also played a role.



Going in the wrong direction



The image is a screenshot of the National Safety Council (NSC) website. At the top left is the NSC logo, a green cross inside a white circle with the text 'NATIONAL SAFETY COUNCIL'. To the right of the logo is a navigation bar with the text 'Our Mission is Safety:' followed by icons and links for 'At Work', 'At Home', 'On the Road', and 'Events'. Below this is a secondary navigation bar with links for 'Learn', 'Join', 'Measure', 'Act', 'Connect', and 'MyNSC'. The 'Learn' link is highlighted with a white speech bubble. Below the navigation bars is a breadcrumb trail: 'NSC / Learn / NSC Priorities / 2016 Fatality Estimates'. The main headline of the article is '2016 Motor Vehicle Deaths Estimated to be Highest in Nine Years' in a large, bold, green font.

Our Mission is Safety:  At Work  At Home  On the Road | Events

Learn Join Measure Act Connect MyNSC

NSC / Learn / NSC Priorities / 2016 Fatality Estimates

2016 Motor Vehicle Deaths Estimated to be Highest in Nine Years

We fool ourselves

How do we fool ourselves?

We think we understand risk

Crashes Claim Teen Lives



Eight dead and 960 taken to emergency room

USA - In another day of tragedy, eight young Americans between the ages of 16 and 19 were killed in motor vehicles. Another 960 were taken to emergency rooms with injuries ranging from life-threatening to less severe. The Center for Disease Control reported that though this demographic only accounts for 14% of the U.S. population, they account for about 30% of the cost of crashes.

Crashes Claim Teen Lives



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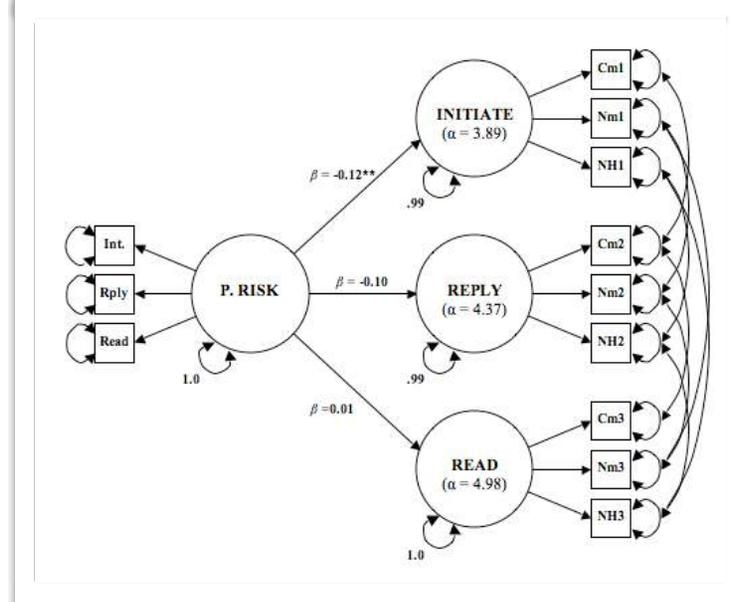
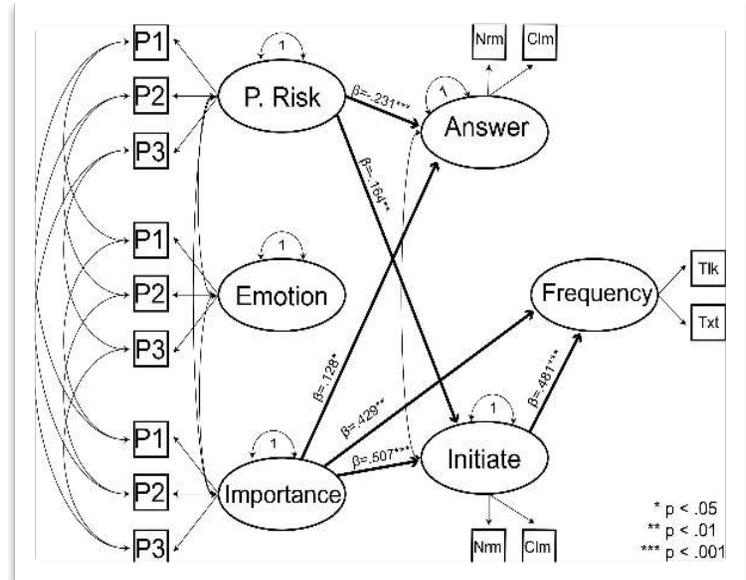


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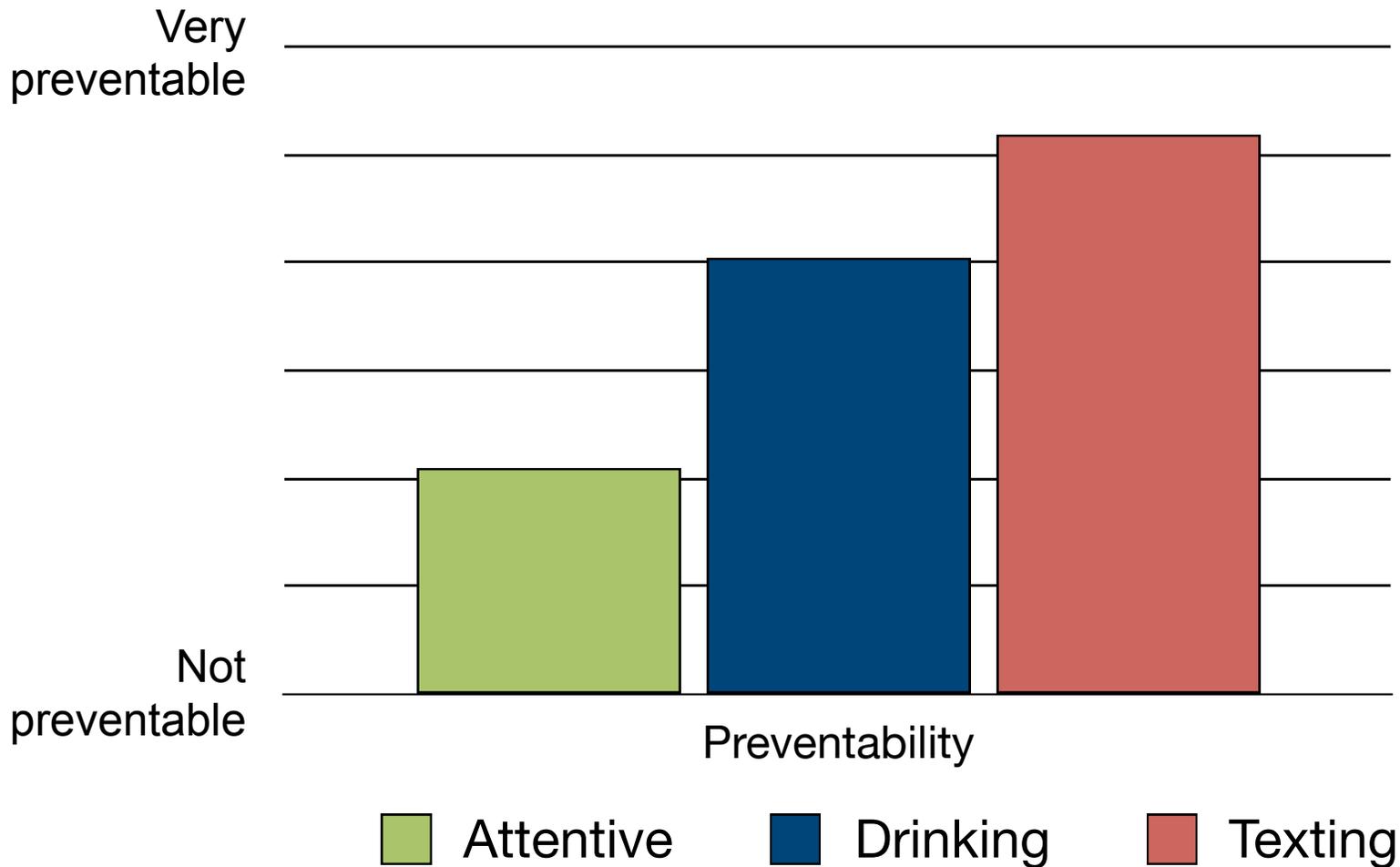
Knowing risk does not change behavior

- Drivers rate distracted driving as very risky
- They do it anyway
- Importance of the call/text outweighs risk



Nelson, Atchley & Little, 2009
Atchley, Atwood & Boulton, 2011

How preventable was the crash?



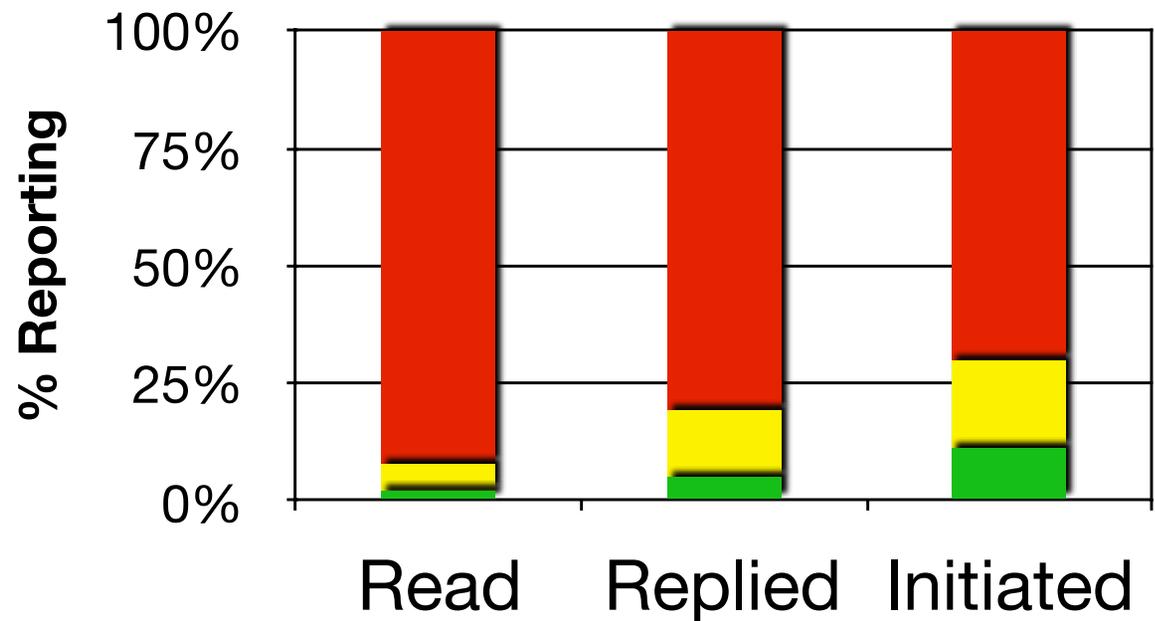
Atchley, Hadlock & Lane, 2012

“Everybody is doing it”



Reports about
15 texts while
driving per
week

■ No ■ Only while stopped ■ Yes



Activity

Atchley, Atwood & Boulton, 2011

How do we fool ourselves?

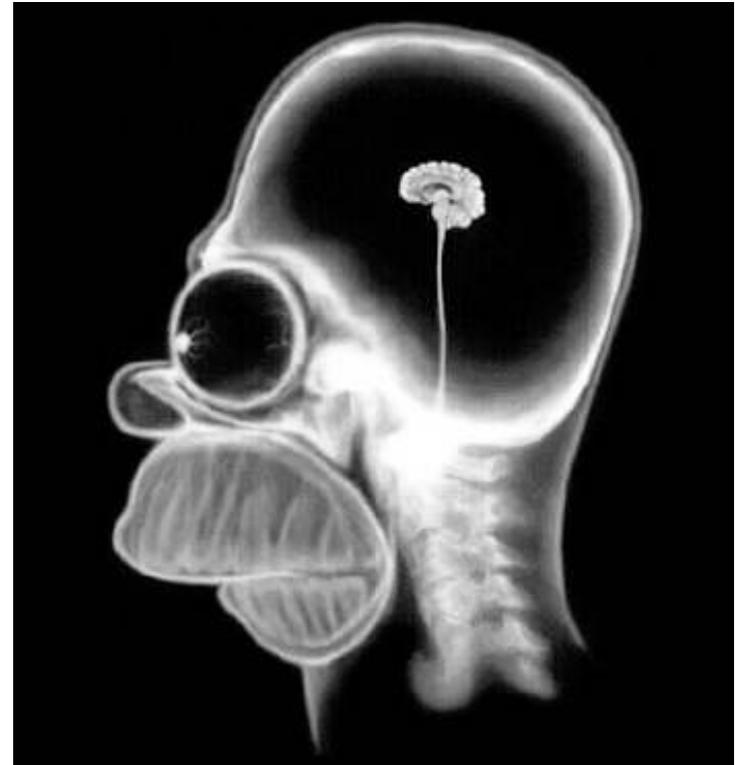
We think we see more than we do

Our view:
A complex computer



Reality:

A limited processor





















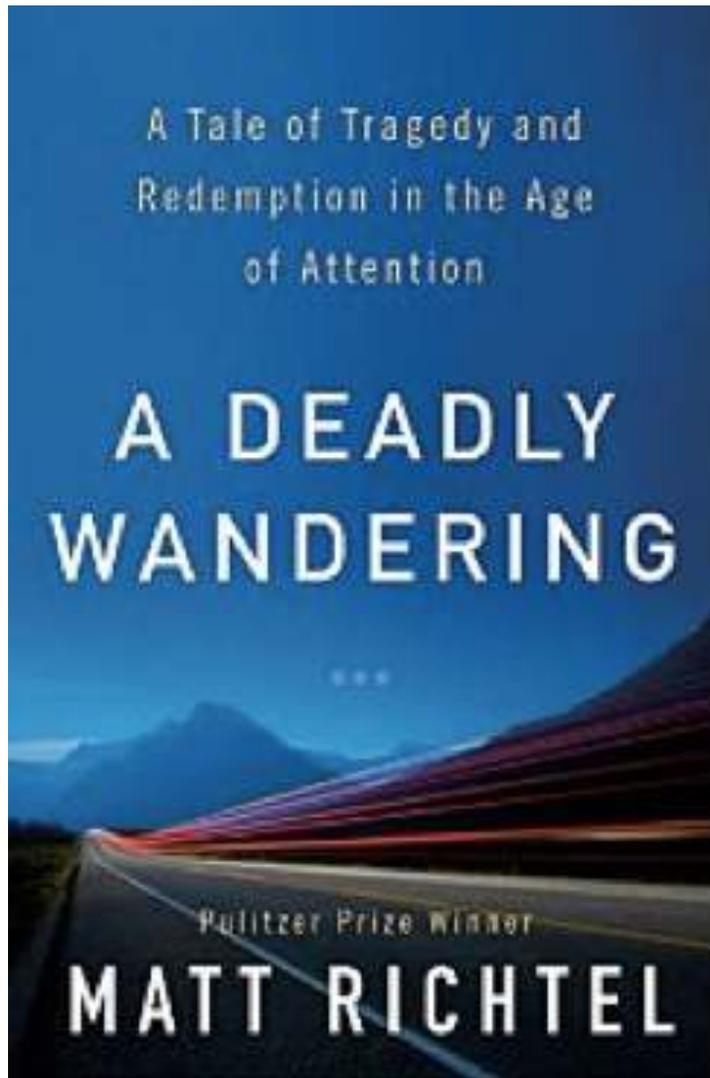
Lack of driver attention is the most common crash cause

Multitasking is a myth

Summary

- People are dying from inattention
- The problem will get worse
- Our brain fools us
- Safety requires education, rules, enforcement and leadership

Thank you for your attention!



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