

# What does current research tell us about *why* drivers engage with technological distractions: A Review

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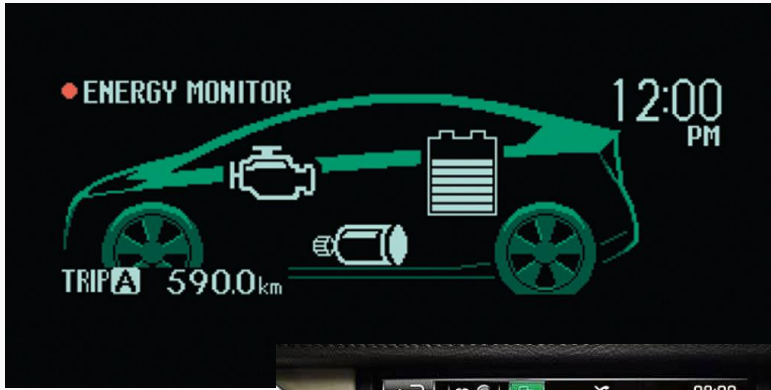
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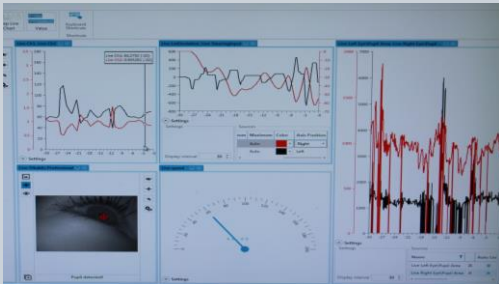

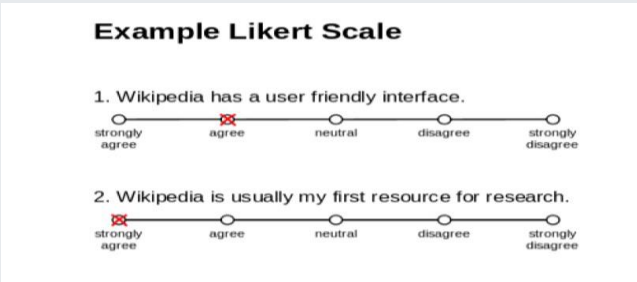



JAGUAR

# Driving & Technological development



# Current driver distraction research

	Quantitative	Qualitative
Objective	 <p>Reading a text took the drivers eyes away from the road for 4 seconds</p>	 <p><i>"Yes, I read text messages on my phone while driving"</i></p>
Subjective	 <p>On a scale of 1-10, the driver rated reading a text while driving to be a 7 in terms of its distractive effects</p>	 <p><i>"I only read a text while driving if my phone is placed in the phone holder, it is switched on to loud mode and I am driving on a quiet road because it grabs my attention"</i></p>

# Aim

What does current research tell us about *why* drivers engage with technological distractions?

- Literature Review:
  - Methodologies
  - Types of technologies
  - Key Findings
  - Recommendations

# Method

## Document Analysis

### ■ Inclusion criteria:

- ✓ Peer reviewed articles published in last 10 years
- ✓ Methods that obtain the drivers subjective perspective
- ✓ Distraction references technology as a **competitive** source of attention, detracting from the **safe** monitoring of the driving task (Lee et al, 2008)

# Method

## Procedure:

- ‘Web of science’ (Timulak, 2009)
- Snowballing method  
(Greenhalgh & Peacock, 2005; Wohlin, 2014).
- Point of saturation



# Results

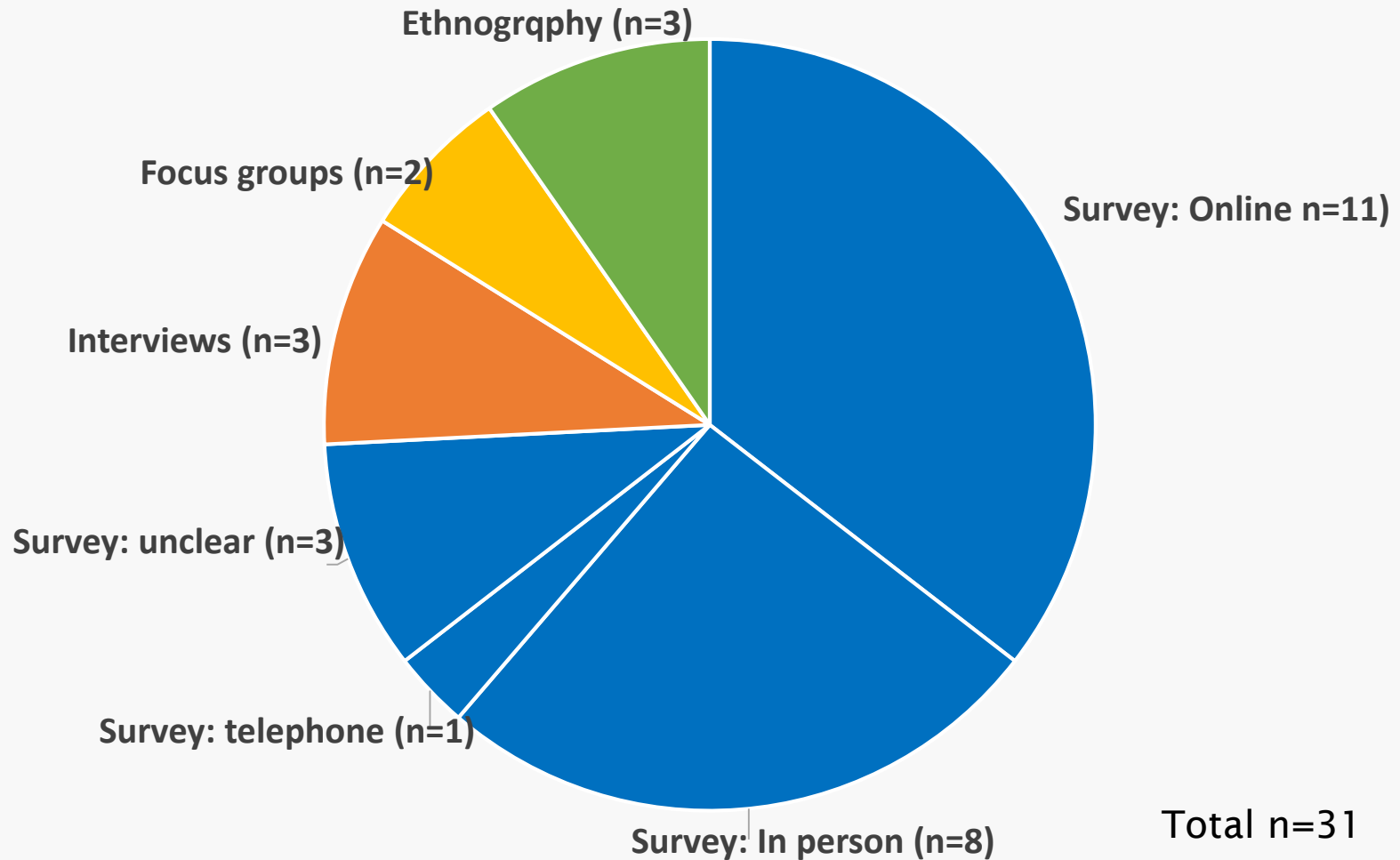
- 31 articles met the inclusion criteria
- 14,304 participants
- 8 countries

## Appendix

⊕ Table 6. Articles meeting inclusion criteria and included in the review.

Reference	Author(s)	Year	Methodology	Participants (N)	Country	Technology type
[41]	Atchley, Hadlock, & Lane	2012	Survey (in-person)	160	America (Kansas)	Mobile phone (General)
[42]	Atchley, Atwood, & Boulton	2011	Survey (online)	401	America	Mobile phone (Texting)
[27]	Axon, Speake, & Crawford	2012	Survey (in-person)	46	UK	Navigation system
[43]	Donmez, Boyle, Lee, <i>et al</i>	2006	Focus Group	N/A	America (Iowa and Seattle)	Range of technology and non-technology distractions
	Eshjörnsson					

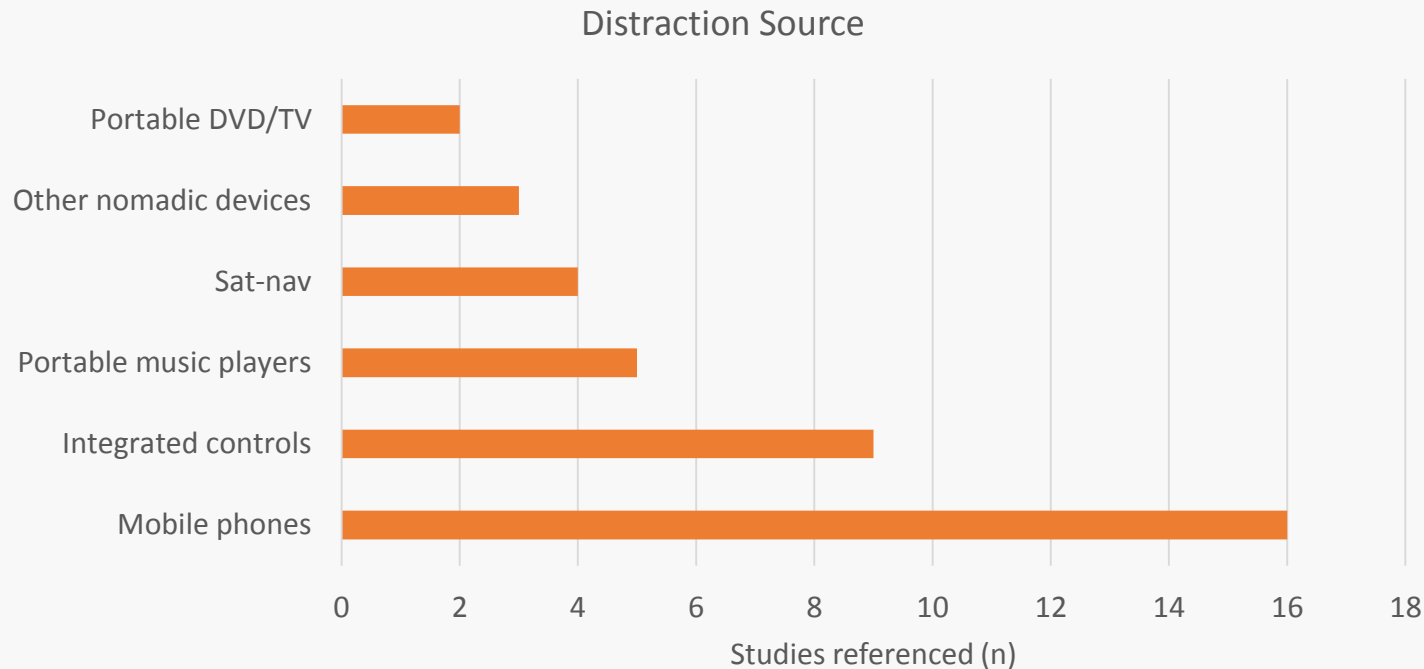
# Results: Methodologies



Total n=31



# Results: Technology type



## Mobile phones disproportionately focused on.

- Caird et al (2008): High importance of phone use in distraction research has lowered the threshold for acceptance for publication.

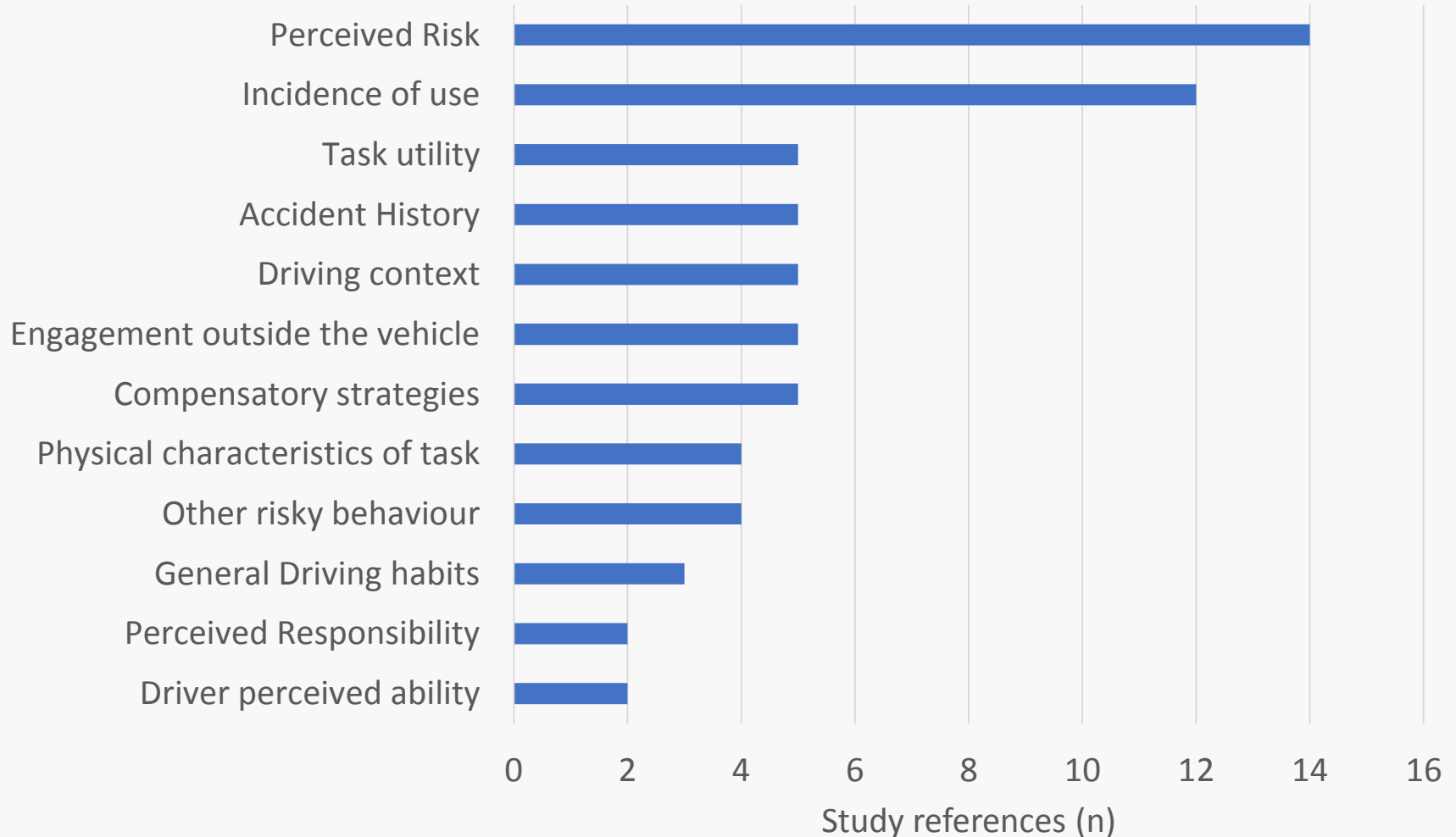
OR

Disproportionate focus in research suggests it to be more important?

- 440 accidents caused by mobile phones  
2,930 accidents caused by other in-vehicle distractions (UK. DfT, 2015)

# Results: Key Variables/Themes

Thematic analysis of the variables and themes that the subjective studies observed was conducted



# Results: Age effects



20 out of the 31 studies looked into age effects on technology use by drivers.

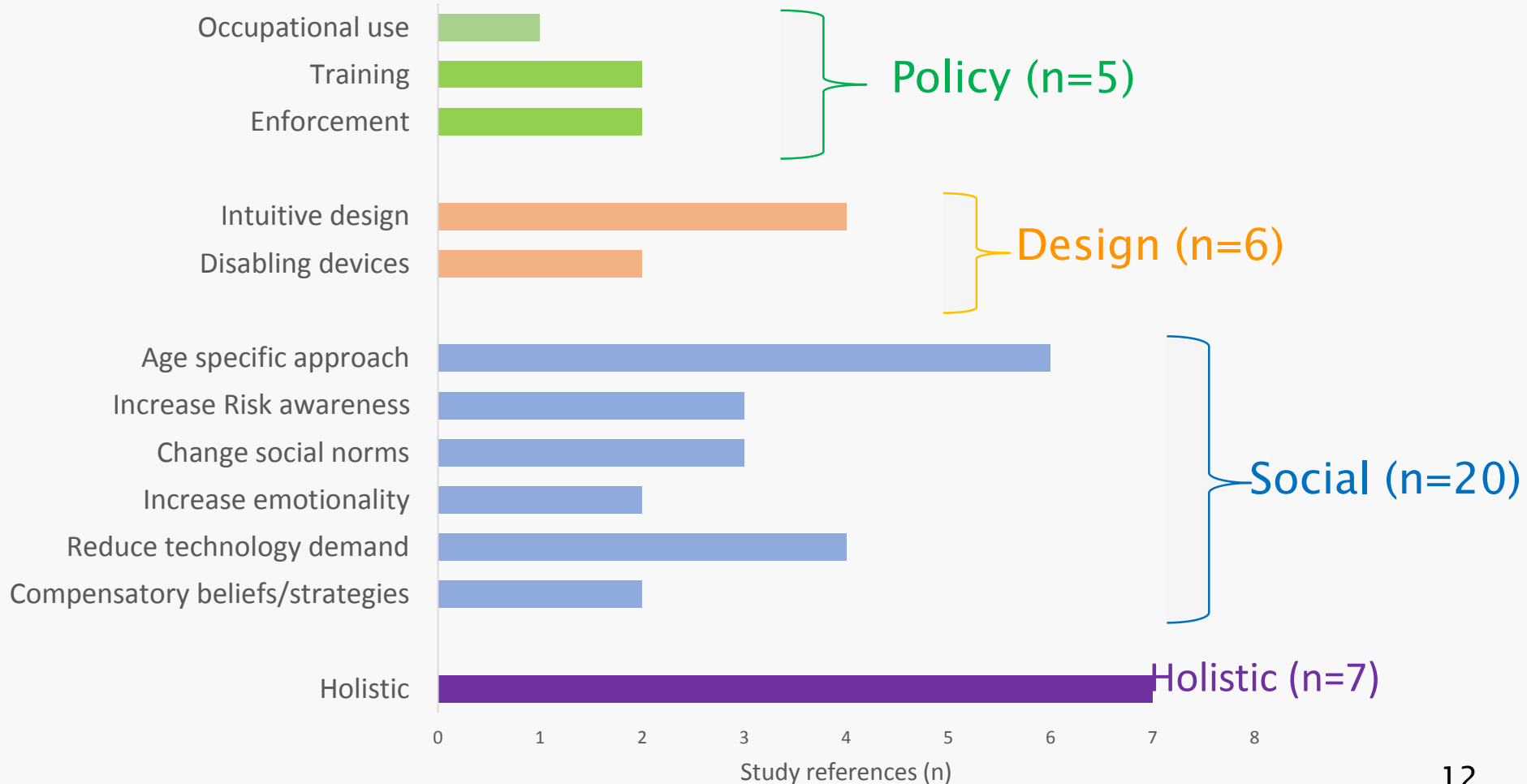
- 15 specifically set out to investigate age
  - 4 compared age groups
  - 1 focused on older drivers only
  - 10 focused on young drivers only
- 5 looked at age as a secondary variable  
...but with mixed findings.

## Limitations:

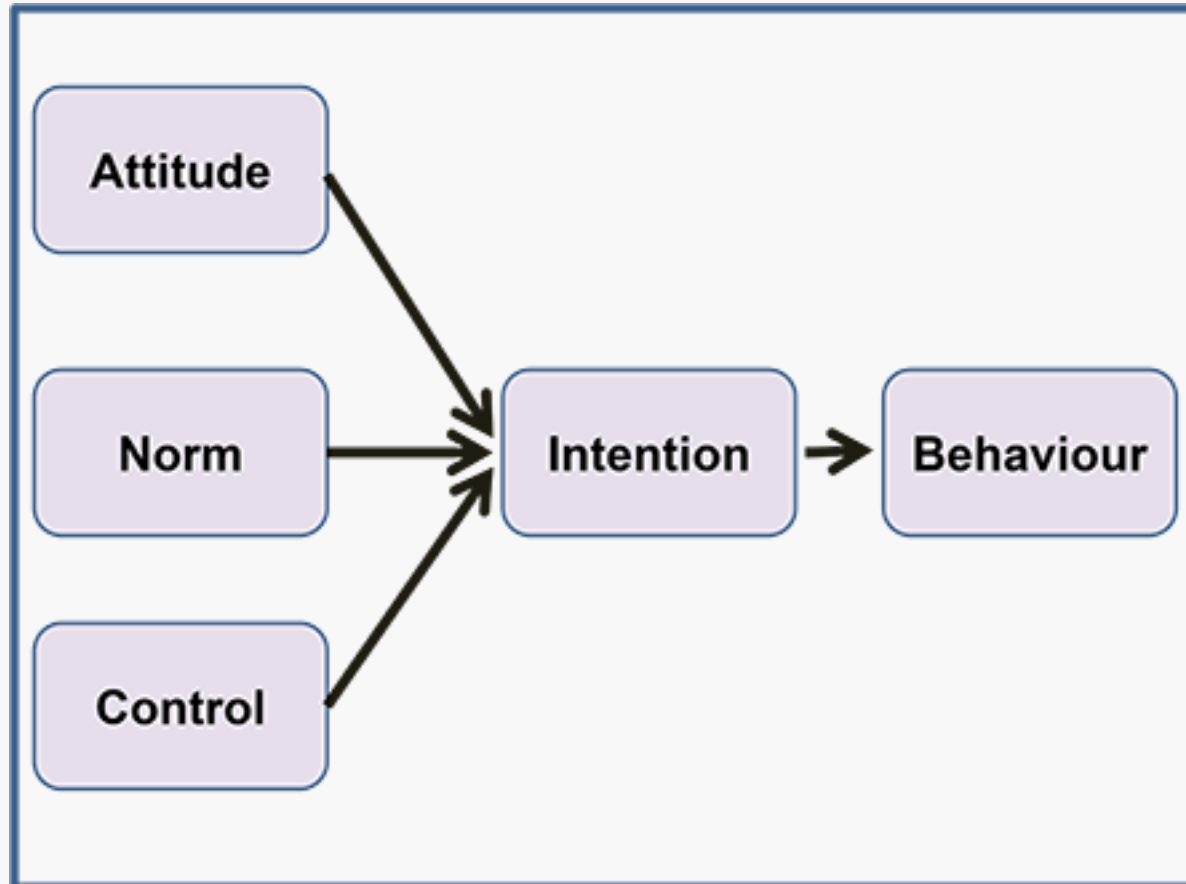
- Sampling bias
  - Older samples required participants to be present
  - Young samples employed online survey's
- Variable age categories

# Results: Recommendations

Future recommendations could be split into 4 main themes:



- Theory of Planned Behaviour (Ajzen, 1991)



# Conclusions

Current research tells us the following about *why* driver engage with technological distractions:

- Limited *qualitative/subjective* research
- Disproportionate focus on mobile phones
- Methodological bias across ages
- Inconsistent age classifications
- Future recommendations suggest social change

# Thank you for listening

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