Texting whilst driving:
Drivers subjective awareness of the risks of sending and receiving text messages whilst driving
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RAC survey found 45% of drivers admit texting whilst driving (2008)

Why young drivers?

- Mobile phone use is common
- Generally higher accident rates
- Lack of understanding of social attitudes to TWD
Why Study Texting Whilst Driving?

Legality of texting whilst driving (TWD) is unclear
Providing phone is in a cradle it is not explicitly illegal to touch keypad and compose message:

“You MUST NOT use a hand-held mobile phone, or similar device, when driving”

Regulations 104 & 110; Highway Code

However!

Drivers have a responsibility to be in control of their vehicle at all times:

“You MUST exercise proper control of your vehicle at all times.”

Regulation 10, Highway Code
An example of an expert at TWD

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Why Simulation?

- Safe
- Controlled
- Repeatable
- Analysis
- Previous studies

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17 drivers between the ages of 17 and 24

Participants completed three drives:

- Familiarisation drive
- Control Drive
- Texting Drive
  - Reaction time tasks – tone and red bar stimulus
  - Sending messages
  - Reading messages

Range of data collected:

- Attitudinal information
- Sim data (see Reed & Robbins, 2009)
Texting Tasks

Used own phone; usual techniques

Composed messages prompted by verbal instruction e.g.:

“Happy birthday. Have fun at the party”

Read messages contained memorable information e.g.:

“Edward has forgotten his BOWTIE for the wedding”

Control text messages

Participants timed completing comparable messages
Trial Design

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The Test Route

Motorway section 1

Loop section (curve following)

Car following

Motorway section 2

Reaction time stimulus

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Questions were presented in five sections:

• How young drivers tend to use their mobile phones
• Beliefs regarding the legality of texting whilst driving
• How risky they believe texting whilst driving is
• How they believe texting whilst driving affects their performance
• Differences in performance when sending or receiving a text message
What did we find?

What are the typical patterns of mobile phone use?

The majority of participants are likely to:
  • Leave their phones switched on
  • Not in silent mode
  • Not use their phones ‘hands-free’

Texting was very popular amongst our participants
  • 11 out of 17 drivers text “21 to 30” times a week

These patterns of use suggests young drivers expose themselves to the risks of texting whilst driving
What did we find?

**Perceptions of the legality of TWD**

Is it currently legal [or should it be legal] to use your phone whilst driving to…

•…send a text message if it is in a **cradle**?
•…read a text message if it is in a **cradle**?
•…send a text message if you are using it **handheld**?
•…read a text message if you are using it **handheld**?

Understanding of the law as it stands:

•Vast majority **believe it is illegal** to text whilst driving in all circumstances (regardless of cradle).

Opinions on how the law should be:

•Majority **believe it should be illegal** to text whilst driving in all circumstances (7 felt reading a text was acceptable)
What did we find?

Relative risks of the TWD

The risk ratings of writing or reading a text message were almost identical at 79.0% and 78.9% respectively.

Which is in contrast with the sizable proportion who felt reading a message should be legal.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Driving Behaviour</th>
<th>Rating of risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>When a driver has been drinking (regardless of amount)</td>
<td>92.9</td>
</tr>
<tr>
<td>2</td>
<td>When a driver is racing others</td>
<td>87.4</td>
</tr>
<tr>
<td>3</td>
<td>When a driver is tired</td>
<td>86.2</td>
</tr>
<tr>
<td>4</td>
<td>Other drivers on the road are acting unsafely</td>
<td>81.6</td>
</tr>
<tr>
<td>5</td>
<td>When a driver is talking on their mobile phone (handheld)</td>
<td>79.1</td>
</tr>
<tr>
<td>6</td>
<td>When a driver is writing a text message</td>
<td>79.0</td>
</tr>
<tr>
<td>7</td>
<td>When a driver is reading a text message</td>
<td>78.9</td>
</tr>
<tr>
<td>8</td>
<td>When a driver is angry enough to have road rage</td>
<td>77.2</td>
</tr>
<tr>
<td>9</td>
<td>When a driver is speeding</td>
<td>71.8</td>
</tr>
<tr>
<td>10</td>
<td>When a driver is in a hurry</td>
<td>71.4</td>
</tr>
<tr>
<td>11</td>
<td>When a driver is selecting music while driving</td>
<td>67.7</td>
</tr>
<tr>
<td>12</td>
<td>When a driver is inexperienced</td>
<td>65.4</td>
</tr>
<tr>
<td>13</td>
<td>When a driver is talking on their mobile phone (handsfree)</td>
<td>61.6</td>
</tr>
<tr>
<td>14</td>
<td>When passengers are in the car</td>
<td>49.2</td>
</tr>
</tbody>
</table>
Subjective impressions of performance impairment

Participants rated their performance as significantly worse in the texting drive for:
• Maintenance of lane position and speed in the curve following section. (t(16) = -2.72; p 0.01).
• Responding to the ‘tone’ RT task (t(16) = -3.24; p 0.01).
• Responding to the ‘red bar’ RT task (t(16) = -3.41; p <0.01).
• Overall performance (t(16) = -4.06; p <0.01).

They did not feel it affected their ability to maintain a constant distance to the vehicle in front (t(16) = -0.029; p =0.86).
What did we find?

*Differences in performance when sending or receiving a text message*

Participants were asked for their impressions of the relative difficulty of sending or receiving a text message across a range of driving behaviours.

- Sending a text message requires more concentration.
- Sending a text message makes it more difficult to keep in lane.
What did we find?

<table>
<thead>
<tr>
<th>Speed</th>
<th>Distance to vehicle in front</th>
<th>Hazard awareness</th>
<th>Overall performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sending</td>
<td>Sending</td>
<td>Sending</td>
<td>Sending</td>
</tr>
<tr>
<td>Receiving</td>
<td>Receiving</td>
<td>Receiving</td>
<td>Receiving</td>
</tr>
<tr>
<td>Slower</td>
<td>More distance</td>
<td>Lowest</td>
<td>Lowest</td>
</tr>
<tr>
<td>No change</td>
<td>No change</td>
<td>Lower</td>
<td>Lower</td>
</tr>
</tbody>
</table>

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Change of habits:
• Young drivers text frequently and leave phones on: may be exposing themselves to the temptation of interacting with the mobile phones whilst driving.

\(\text{Y( ALL vers should be encouraged to switch their phones off when driving to remove a source of potential distraction.} \)

Clarify the legal position?
• Ambiguity regarding the legality of TWD may lead to confusion.
• Most agreed TWD should be illegal – though dangers of reading messages may be underestimated

Legal position should be more explicit
What does that mean?

The risks of TWD:
• Drink driving, racing other drivers and tiredness were rated as substantially more dangerous than texting whilst driving
• Young drivers may not be aware of how risky both sending and receiving messages are

A public awareness campaign could help to educate young drivers as to the dangers of TWD.

Perceptions of driving performance:
• Participants had insight into the impairment caused by text messaging
• They also recognised that writing/sending a message was more of a distraction than reading an incoming message

Translating this awareness of impairment into a willingness to change attitudes and behaviour is vital

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