Identifying the determinants of concealed and obvious texting while driving: Are they distinct behaviours?

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Overview

• Rationale
• Aim/s
• Design
• Results
• Conclusions
• Future research

Note:
CT = Concealed texting
OT = Obvious texting
Rationale

• **Approx. 68% of drivers admit to sending text messages** (NRMA, Campbell, 2012)

• Text messaging while driving involves higher levels of
  a) cognitive distraction
  b) physical distraction
  c) visual distraction

• Young drivers more likely to text and, when they do, spend 400% more time looking away from the road when texting than when not.
  (Hosking et al., 2006; WHO, 2011)

Rationale cont...

• **Laws banning texting are difficult to enforce as it is hard to catch a texter:**
  - tinted windows;
  - sporadic engagement;
  - can pause if being observed;
  - difficult to detect at night

  - emerging evidence that drivers may be deliberately concealing their texting to avoid being fined
  (Farris, 2011; Gilbert et al., 2010; Highway Loss Data Institute, 2011)

  *attention further diverted from road
  * possible crash risk
Rationale cont...

- Limited, if any, research on CT and OT as distinct behaviours
- Need to develop other countermeasures, such as advertising to support enforcement efforts

Aims

- Specific aim: To explore whether concealed texting (CT) and obvious texting (OT) may be distinct behaviours with different underlying motivations.
- Broad aim: Determine whether provides initial evidence that advertising countermeasures may require different focal points.
Study design: The Theory of Planned Behavior

Main hypotheses

1. For the standard TPB constructs of attitude, subjective norm, and PBC:
   
a) They will together predict participants’ CT and OT intentions while driving in the next week

   b) They will be different for CT and OT on
      - Their individual contributions; and
      - Their means
Main hypotheses cont...

2. For the **additional constructs** of moral norm, mobile phone involvement, and anticipated regret:
   a) They will **together improve the prediction** of intention to both conceal and obvious text over and above the standard TPB constructs
   b) There will be **significant differences between the means** for CT and OT for each of these constructs
   c) The **additional constructs may vary** in their ability to predict CT and OT intentions (exploratory)

Participants (*N*=171)

- Aged 17 to 25 years (*mode* = 18);
- *F*=126, *M*=37, unreported = 8;
- 1st yr psychology students = 110, Other participants = 61;
- Average driving time per week=6.9h;
- Owned a mobile phone;
- Had a driver’s licence; and
- Resided in QLD
Focus groups (n = 12)

How would you define CT and OT?

Questionnaire (n = 171)

How well do the standard and extended TPB variables predict CT and OT intentions while driving in the next week?

Questionnaire

- Based on standard TPB self-report format and included standard and extended TPB constructs as independent variables
- Intentions to OT and CT were dependent variables.
- Mobile phone involvement was measured using the Mobile Phone Involvement Questionnaire (Walsh et al., 2010)
- Most items were measured on likert scales
- Also assessed demographic data
Variable | Sample question
---|---
Attitude | ‘For me, texting in a concealed manner while driving in the next week would be (1) Harmful – (7) Harmless’
Subjective Norm | ‘People important to me would want me to text in a concealed manner while driving in the next week’
Perceived Behavioural Control | ‘I am confident that I could text in a concealed manner while driving in the next week’
Moral Norm | ‘It would be against my principles to text in a concealed manner while driving in the next week’
Mobile Phone Involvement | ‘I often think about my mobile phone when I am not using it’
Anticipated Regret | ‘If I text in a concealed manner in the next week I would feel regret’

**Results: Definitions**

**Concealed texting:** “making a conscious effort to hide the fact that you are texting while driving (e.g., by hiding your phone below the window or steering wheel). In doing so, it is not obvious to people outside your vehicle that you are texting”.

**Obvious texting:** “not making a conscious effort to hide the fact that you are texting while driving. In doing so, it may be obvious to people outside your vehicle that you are texting”
## Results: Descriptives

<table>
<thead>
<tr>
<th></th>
<th>Participants who reported sending a text message while driving at least 1 – 2 times per week</th>
<th>Participants who reported reading a text message while driving at least 1 – 2 times per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>In a concealed manner</td>
<td>50.9%</td>
<td>60.8%</td>
</tr>
<tr>
<td>In an obvious manner</td>
<td>24.0%</td>
<td>31.6%</td>
</tr>
</tbody>
</table>

## Results: Difference between means for CT and OT

<table>
<thead>
<tr>
<th>Construct</th>
<th>Significant?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>✔</td>
</tr>
<tr>
<td>Subjective norm</td>
<td>✔</td>
</tr>
<tr>
<td>PBC</td>
<td>✔</td>
</tr>
<tr>
<td>Moral norm*</td>
<td>✔</td>
</tr>
<tr>
<td>Anticipated regret*</td>
<td>✔</td>
</tr>
<tr>
<td>Intention</td>
<td>✔</td>
</tr>
</tbody>
</table>

*Mean higher for OT
Results: Regression analyses

<table>
<thead>
<tr>
<th></th>
<th>CT</th>
<th>OT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>β = .30***</td>
<td>β = .26***</td>
</tr>
<tr>
<td>Subjective norm</td>
<td>β = .10*</td>
<td>β = .13*</td>
</tr>
<tr>
<td>PBC</td>
<td>β = .36***</td>
<td>β = .28***</td>
</tr>
<tr>
<td>Moral norm</td>
<td>β = -.27***</td>
<td>β = -.41***</td>
</tr>
<tr>
<td>Mobile phone involvement</td>
<td>β = .18***</td>
<td>β = .06</td>
</tr>
<tr>
<td>Anticipated regret</td>
<td>X β = .10</td>
<td></td>
</tr>
</tbody>
</table>

R² = .69
ΔR² = .06

Results: Regression analyses cont...

All main hypotheses supported, that is:

- Standard constructs
  - together predicted both CT and OT
  - amount of variance explained different for each for CT and OT

- Additional constructs
  - accounted for further variance for CT and OT
  - different predictors emerged for CT and OT in final model (i.e., mobile phone involvement and moral norm for CT; Moral norm only for OT).
Conclusions

• CT and OT may be distinct behaviours with different underlying motivations.
• May provide focal points for advertising countermeasures; for example focus on:
  - challenging positive attitude;
  - the ease with which they drivers believe they can do it;
  - highlighting the disapproving influence of important referents;
  - moral norm for OT by emphasising the illegal nature; and
  - mobile phone involvement for CT by challenging the constant need to stay connected

Future research?

• Given the greater reported prevalence, higher means, and possible higher crash risk, a future focus on CT may be worthwhile

• Mobile phone involvement for CT:
  - perceived benefits (i.e., staying connected) outweigh perceived risks (i.e., police apprehension as phone is concealed)?

• Anticipated regret for neither CT nor OT:
  - could the idea of not returning a text have more regret associated with it than returning the text (i.e., idea of anticipated 'inaction regret')?
Questions?

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