Naturalist Survey of Driving Distractions in England

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This Talk

1. Previous findings
2. Method
3. Results
4. Conclusions

Previous Research

- **Naturalistic observations:**
  - **In vehicle (video or observer)**
  - **Road side observation (video/photo/observer)**

In Vehicle

- **Hanowski and colleagues (Virginia Tech)**
- **Stutts and colleagues (North Carolina)**

Roadside Observation

- None measuring all secondary tasks
- Several mobile phones
  - US Students – 11.1% (Cramer et al., 2007)
  - NZ – 3.9% (Townsend, 2006)
  - London – 1.9% (Knowles et al., 2008)
  - Australia – 1.5% (Horberry et al., 2001)

Roadside Observation – Mobile Phones

Time of day

- No pattern (Horberry et al., 2001)
- Evenings more (Taylor et al., 2007)
- Mornings more (Taylor et al., 2007)

Gender

- Males (Horberry et al., 2001; Knowles et al., 2008; Taylor et al., 2007)
- Female students (Cramer et al., 2007)
- No difference (Taylor et al., 2007; Townsend, 2006)

Age

- Younger drivers (Horberry et al., 2001; Knowles et al., 2008; Taylor et al., 2007)

Primary Questions

1. What proportion of drivers engage in distracting behaviours?
2. What are the most common types of distracting behaviours?
3. Are there differences by time, place and driver demographics?

Method

Measures

- **Background variables**
  - **Age (< 30, 30-50, >50), gender, time and area**
- **Distracted or not**
- **Type of distraction**

Distractions

- Mobile phone use
- Eating/Drinking
- Smoking
- Talking to passengers
- Adjusting controls
- Other

Procedure

- Six cities in the South of England
- A road was randomly selected (30mph)
- Students trained in what constitutes each type of distraction
- Stood on side of road with a clipboard & form
- Observed drivers coming towards them on same side of road
- Ticked appropriate boxes when car went past

Procedure

- Two consecutive Tuesdays
- Three different time periods (10-11am, 2-3pm, & 5-6pm)
- Moving traffic
- Inter-observer reliability tested
- Six locations


United Kingdom
International boundary
National capital
Railroad
Road
0 50 100 Kilometers
0 50 100 Miles
SHETLAND ISLANDS
Mainland
Lerwick
Norwegian Sea
North Sea
NORTH ATLANTIC OCEAN
ORKNEY ISLANDS
Mainland
Kirkwall
Thurso
Stornoway
Lewis with Harris
North Uist
South Uist
Skye
HEBRIDES
Inverness
Loch Ness
Aberdeen
Fort William
Scotland
Dundee
Perth
Saint Andrews
Kirkcaldy
Edinburgh
Glasgow
Tweed
Mull
Islay
Arran
Ayr
Stranraer
NORTH ATLANTIC OCEAN
North Channel
Londonderry
Northern Ireland
Belfast
Isle of Man (U.K.)
Douglas
Barrow-in-Furness
Carlisle
Newcastle upon Tyne
Sunderland
Middlesbrough
Scarborough
North Sea
Sligo
Westport
Dundalk
Irish Sea
Blackpool
Preston
Leeds
Bradford
York
Kingston upon Hull
Grimsby
Liverpool
Manchester
Sheffield
Holyhead
Anglesey
Chester
Stoke-on-Trent
Derby
Nottingham
King's Lynn
Norwich
Galway
Dublin
IRELAND
Shannon
Shrewsbury
England
Wolverhampton
Leicester
Peterborough
Limerick
Tralee
Waterford
Wexford
Aberystwyth
Wales
Severn
Birmingham
Coventry
Cambridge
Ipswich
Hereford
Stratford-upon-Avon
Northampton
Cork
Saint George's Channel
Fishguard
Oxford
Swansea
Newport
Cardiff
Thames
London
Bristol
Bristol Channel
Bath
Reading
Canterbury
Dover
Calais
Strait of Dover
Southampton
Brighton
Hastings
Exeter
Bournemouth
Portsmouth
Weymouth
Plymouth
Torbay
Penzance
English Channel
ISLES OF SCILLY
Alderney (U.K.)
FRANCE

Sample

Total	**7168**
Gender (male)	**56.8%**
Age	**< 30 (20.7%)**
	30-50 (56.5%)
	>50 (22.8%)
Distracted	**14.4%**

Inter-Observer

- 1 hour trial
- Number of vehicles almost 100% (two missed by one observer)
- Gender good (only 3 discrepancies)
- More variance in age (range +/- 10%)
- Distractions (range 10-15/90)

What were drivers doing?

Driving	85.6%
Passenger	7.4%
Smoking	2.2%
Mobile phone	2.2%
Adjusting controls	1.1%
Eating/Drinking	1.1%
Other	0.9%

Gender

- **14.4% Males distracted**
- **14.4% Females distracted**
- **No differences in distraction type**

Age

- Age was significant (<30 more) $p < .001$
- More adjusting controls (<30 & 30-50) $p < .05$
- Talking to passenger (<30) $p < .001$
- Mobile phone (<30) $p = .015$

Time of Day

- **Distracted (10-11am) $p < .05$**
- **Talking to passenger (10-11am) $p < .05$**

Town/City

- Bedford, Southend and Luton higher ($p < .001$)
- Mobile phone use ($p < .01$)
- Eating/Drinking ($p < .01$)
- Smoking ($p < .001$)
- Talking to passenger ($p < .001$)
- Adjusting controls ($p < .001$)
- Other ($p < .001$)

Comparisons

- Proportion of drivers using a mobile 2.2% vs. 1.9% (Knowles et al., 2008)
- No gender (Taylor et al., 2007; Townsend, 2006)
- Younger drivers – mobile (Horberry et al., 2001; Knowles, et al., 2008; Taylor et al., 2007)
- 14.4% engaged in distracting behaviour (cf Stutts et al., 2005 – 14.5%)
- Talking to passenger most common (talking very common – Stutts et al., 2005)

Conclusions

- **Many of the findings support previous research**
- **Few issues**
- **Useful supplement to other data collection methods**