

**Good and Bad Driving  
Practices:  
Are They Clustered or  
Independent?**

***Harold W. Faw***  
***Trinity Western University***

# Research Questions

- Do safe or unsafe driving practices occur in isolation, or are there **clusters** of driving behaviors characteristic of each driver?
- Are there links between the **perceived importance** of specific driving behaviors and adoption of a particular **driving style**?
- Do drivers' self-described behaviors match those that can be **observed directly**?

# Methods Used

- Survey One: 12 positive driving behaviors plus the **CAR Scale** (Driving Styles)  
[N = 219]
- Survey Two: 14 behaviors (mix of positive and negative behaviors)  
[N = 166]
- Direct Observation: signal use and lane-keeping during a turn  
[N = 755]

# Survey One:

## Mean Importance Ratings (1-5)

- Buckling up 4.80
- Signal turn 4.51
- School slow 4.48
- Wait gap 4.46
- Headlights 4.44
- No tailgate 4.44
- Signal lane 4.43
- Keep in lane 4.37
- Check mirror 4.35
- No phone 4.29
- Stop, turn 3.93
- Pass, shift 3.77
- “I do it”: 67-98%
- Correlation: .09-.52

# Survey One: Rotated Factor Loadings

- Wait gap .78
- No tailgate .72
- Signal lane .66
- Signal turn .56
- Keep in lane .56
- Pass, shift .54
- Check mirror .42
- **Courtesy [36%]**
- No phone .71
- Stop, turn .68
- Headlights .63
- School slow .56
- Buckle up .53
- **Rules [9%]**

# Survey One: Behaviors & Three Styles

<u>STYLE</u>	<u>MEAN / RANGE</u>
• Competing	• - .02     - .29 / +.12
• Anticipating	• +.32     +.21 / +.38
• Reacting	• - .21     - .30 / -.08

# Survey Two: Mean Responses & Habits

- Wave of thanks 6.54 / 7 3.58 / 4
- Shift lane for merge 6.48 3.29
- Pause for others 6.17 2.86
- Defer at 4-way 5.89 2.92
- Signal turns 5.51 3.86\*
- Slow for schools 5.28 3.30
- Stop before turn 4.77 3.08

# Survey Two: Responses & Habits (cont'd)

• Turn on headlights	4.76	3.17
• Pass & move back	4.57	2.86
• Drift during turns	2.96	1.99
• Talk or text on cell	2.10	1.65
• Force an entry	1.90	1.98
• Cut into traffic	1.85	1.25
• Tailgate others	1.77	1.39



# Survey Two: Rotated Response Factors

- 1. Keeping the rules
- 2. Facilitating flow
- 3. Driving carelessly
- 4. Considering others

# Survey Two: Disappointing Results

- **Correlations** among self-described habits (expected to correlate substantially) were **ALL less than +.30**
- Of these low correlations, only 12 of 91 were statistically significant ( $p < .01$ )

# Survey Two: Summarized Comments

- **Annoying Behaviors:**
  - Inconsiderate or unsafe actions
- **Appreciated Behaviors:**
  - Communicating & showing consideration
- **Good Drivers:**
  - Focused on the task & considerate of others

# Observational Data: Turns and Lanes

	USED PROPER SIGNAL	DID NOT USE PROPER SIGNAL	TOTALS
KEPT CORRECT LANE	415	62	477 (63.2%)
STRAYED INTO WRONG LANE	211	67	278 (36.8%)
TOTALS	626 (82.9%)	129 (17.1%)	755 (100%)

# Observational Data: Turns and Lanes

## Results Summary

- Signal Use = 83%
- Lane kept = 63%
- Lane/signal = 66%
- Lane/-signal = 48%

## Conclusion

- These 2 behaviors are significantly linked
- Chi Square = 15.29
- (df = 1,  $p < .01$ )

# Summarized Findings

- Based on self-report, *evidence for clustering is weak*
  - Importance rating cluster, but habits don't
- Based on direct observation, *clear evidence of clustering for one pair*
  - Signal use and lane keeping ARE linked
- Clustering among other pairs has not yet been observed

# Limitations of the study

- Findings are primarily based on **self-report**, which may not be accurate
- Survey data are based on **sample** which is age and gender biased and thus may not be representative
- Observational data are good, but deal with only a **single pair of behaviors**

# For Future Work

- Observe **additional pairs of behaviors** to explore possible links
- Consider the potential **indirect benefits** of changing one action on linked behaviors
- Watch for **broader impact** of interventions



# THANK YOU!

- Comments and Questions are welcome