WatchOut: Facilitating Safe Driving Behaviors with Social Support

Background
- Bad driving behaviors are a major cause of traffic accidents, many of which result in fatalities.
- Drivers behave relatively safely when they are being monitored or feedback of their behavior is provided.

Research Objectives
Intends to encourage safe driving habits by:
- Increasing drivers’ self-awareness about their own driving habits
- Receiving supportive feedback on their driving behaviors from a loved one as an intervention method.

System Design
Developed a novel Android prototype mobile application called WatchOut to assess bad driving behaviors, increase the awareness of a driver’s own driving behaviors, and identify the influence of intimate social reinforcement.

Field Experiment
- Recruited drivers & driver’s intimate person to support the interventions
- 3 married couples, 2 parent-child couples, 1 unmarried couple, 1 sibling couple, and 1 pair of friends
- Conducted field experiment 5 days

Results
Survey results on filed experiment (N=16)

I. Social Reinforcement in Driving Behavior
1. The scored objective feedback provided by WatchOut helped to positively change driving behaviors
2. Drivers agreed that the supporters became aware of the driver’s behaviors and that in turn positively influenced their driving
3. The objective feedback from supporters helped driver drive more safely
4. Supporter agreed that they could provide the driver with more objective and effective feedback than before

II. Social Face in Driving Behavior
1. A driver’s social face is important in keeping good driving behaviors:
   Drivers hope to look good to their closest person and to be regarded as a responsible person
   * Social Face: the face is a mask that changes depending on the audience and the variety of social interactions

Future work
- New features can enhance the effectiveness of driving behavioral change
- May compare the pair group with the driver group without social reinforcement
- May investigate the outcome’s dependence on the relationship between driver-supporter including the power-relationship between the two partners
- Need to cover a longer period to examine lasting behavioral changes
- Improve privacy protection