

On a scale of 1 to 5, how distracting is talking to your car?

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Past human factors/ergonomics studies have shown that some in-vehicle technologies intended to help with driving tasks are actually competing for drivers' attention and undermining driving safety. Human factors/ergonomics studies over the past 10-plus years have examined a variety of distractors. The December 2015 special section of *Human Factors: The Journal of the Human Factors and Ergonomics Society* leads off with research proposing a method for assessing cognitive distraction while driving and elicits pro and con responses from experts in the field.

In the lead paper, 'Assessing Cognitive Distraction in the Automobile,' David Strayer and colleagues conducted a series of experiments aimed at determining the relationship between cognitive distraction of various kinds and on-road crash risk. Distracting tasks included listening to the radio, talking on both handheld and hands-free phones, and interacting with voice-to-text e-mail.

Their results from baseline, driving simulator, and on-road conditions using a number of measurement techniques led to the development of a 5-point scale of minimum to maximum distraction. Listening to the radio fell at the low end of the scale, and voice-to-text e-mail interaction neared the top of the scale. This systematic framework has the potential to inform design and future policies to address driving risk associated with cognitive distraction.

The five commentaries support but also challenge some of the findings and methods in the Strayer et al. paper. The scientific exchange

represented in this special section presents rich opportunities for follow-up research to substantiate and extend the Strayer *et al.* framework.

- 'On the Effects of Listening and Talking to Humans and Devices on Driving' by Jeff K. Caird, University of Calgary
- 'Cognitive Workload ? Crash Risk: Rejoinder to Study by Strayer *et al.* (2015),' by David Shinar, Ben-Gurion University of the Negev
- 'Cognitive Distraction in the Wild: Next Steps—Addressing a Not-So-Humdrum Conundrum,' by Donald L. Fisher, University of Massachusetts, Amherst
- 'Driver Compensations: Impairment or Improvement?' by Richard A. Young, Wayne State University
- 'Judging Thieves of Attention,' by P. A. Hancock and B. D. Sawyer, University of Central Florida

Special Section Coeditor John D. Lee noted, "Cognitive distraction represents a growing safety issue, especially with the increasing computerization of cars. There are so many information systems and devices that can distract drivers and jeopardize [driving](#) safety. This collection of papers highlights the challenges of creating a valid test procedure."

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