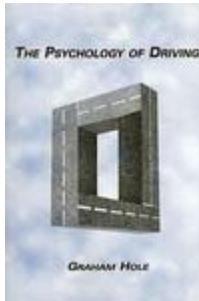


PsycCRITIQUES

June 13, 2007, Vol. 52, No. 24, Article 3



The Impact of Mobile Phones and Other In-Car Technology on Driving

A Review of

The Psychology of Driving

by Graham Hole

Mahwah, NJ: Erlbaum, 2007. 230 pp. ISBN 978-0-8058-5978-2. \$24.50, paperback

doi: 10.1037/a0007691

Reviewed by

Thomas D. Parsons

Driving entails a routinized set of behaviors and activities that includes judging distances, managing multiple stimuli simultaneously, maintaining attention for long periods, reacting quickly in emergencies, and correctly interpreting traffic signs and signals. Road accidents are the major cause of death and injury among young people in the developing world.

In *The Psychology of Driving*, Graham Hole discusses various aspects of driving: visual perception issues, cell phone distractions, fatigue, drugs, and the effects of aging. Hole's aim is to communicate his perspective on the impact of mobile phones and other in-car technology on driving performance, and he introduces general readers to the everyday experience of driving. Instead of providing an exhaustive documentation of research findings, Hole describes basic aspects of driving. The overall presentation of the material is at a level that is easily accessible to undergraduate students unfamiliar with the problems raised. Specifically, for persons with a general interest in psychology and driving, the discussions are adequate in most respects.

In addition to discussions of research on the effects on driving of drugs, age, fatigue, and inexperience (the four big killers on our roads today), Hole summarizes literature on perceptual and attentional aspects of driving. He also spends a good portion of the book summarizing the literature on mobile phones and other in-car technology. Much of Hole's discussion reflects his thoughts about the effects of using a mobile phone while driving and how using a mobile phone while driving affects a driver's ability to detect hazards. Hole contends that hands-free phones are no better than hand-held phones as far as driving safety is concerned. In summary, Hole focuses on the distracting impact that using a mobile phone while driving has on a driver's attention and the way it removes the driver's attention from the outside world. When drivers use a mobile phone while driving, they have a restricted breadth of attention and have a kind of tunnel vision compared with undistracted drivers.

An unfortunate limitation of Hole's review of the literature is that much of the cited literature is out of date. In fact, only 18 percent of the publications cited in the book are from works published within the last five years. For a work purporting to cover a specialty in a social science discipline, these citations

are far too limited. In a world of rapidly developing technology, discussions of the psychology of driving require conclusions based on the current literature. For example, Hole's discussions of driving simulators would have been better if he had addressed the ways in which recent technological advances (in processor speed and computer graphics components) enable the construction of virtual-reality driving simulators that can deliver ecologically valid driving situations while obtaining objective measures of driving behavior (see, e.g., Carvalho, Pearlson, Astur, & Calhoun, 2006; de Winter, Wieringa, Kuipers, Mulder, & Mulder, 2007; Maguire, Nannery, & Spiers, 2006). Virtual reality offers (a) a potential mechanism for addressing many of the limitations seen in current driving assessment methods and (b) the potential to revolutionize current assessment standards in several ways (Rizzo & Kim, 2005). Furthermore, the use of virtual reality for the study of psychological aspects of driving performance offers a medium for delivering real-life driving scenarios that can be used to assess driving capacity in numerous distinctive ways. For example, virtual-reality scenarios are highly adaptable, and an unlimited number of interactive and modifiable driving environments may be created, thus allowing clinicians to assess the impact of cognitive impairment in real-life driving environments.

The Psychology of Driving offers a summary of the main issues involved in using a mobile phone while driving. Hole has written a clear and simple introduction to the psychology of driving that will be helpful for a general audience. However, a more current and fully developed discussion of the literature on psychology and driving would have aided the discussion. In sum, this basic introduction to the psychology of driving offers material that is at an easily accessible level for undergraduate students and those unfamiliar with the problems raised. Specifically, this book would be an appropriate introductory text for persons with a general interest in psychology and driving.

References

- Carvalho, K., Pearlson, G. D., Astur, R. S., & Calhoun, V. D. (2006). Simulated driving and brain imaging: Combining behavior, brain activity, and virtual reality. *CNS Spectrums, 11*, 52–62.
- de Winter, J. C. F., Wieringa, P. A., Kuipers, J., Mulder, J. A., & Mulder, M. (2007). Violations and errors during simulation-based driver training. *Ergonomics, 50*, 138–158.
- Maguire, E. A., Nannery, R., & Spiers, H. J. (2006). Navigation around London by a taxi driver with bilateral hippocampal lesions. *Brain, 129*, 2894–2907.
- Rizzo, A. A., & Kim, G. J. (2005). A SWOT analysis of the field of virtual reality rehabilitation and therapy. *Presence: Teleoperators & Virtual Environments, 14*, 119–146.