

Does More Attention Improve Lane-Keeping Performance?

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The effect of cognitive load on lane-keeping is inconsistent and unclear. The lateral prioritization hypothesis proposes that drivers prioritize lane-keeping when cognitively distracted; In contrast, the automatic steering hypothesis suggests that cognitively distracted drivers devote less attention to the automatic behaviors of steering control. Drivers were asked to prioritize lane-keeping, car following or the secondary task in a driving simulator. Drivers in lane-keeping prioritization condition produced smaller lane deviation and quicker steering response time to lateral wind gusts compared to drive-only condition. Data suggests that more attention to lane-keeping improves rather than impairs performance.