



## Using Virtual Reality Techniques to Study Cognitive Processes in Car Driving Activity

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Mots-clés	Attention [5], Boundary extension [6], Car Driving [7], Eye-movements [8], virtual reality [9]
Résumé en anglais	<p>A central question in cognitive sciences is how behaviors adapted to the situations encountered are produced. This question can be addressed in different ways and often requires the researcher to choose between highly controlled and standardized laboratory situations (commonly referred to as artificial settings) and studies undertaken in natural settings which may be more realistic, but cannot be controlled as required by a rigorous scientific approach. Using car driving as an example, our study will show how virtual reality (VR) offers a compromise between these two alternatives. Indeed, VR can simulate controlled immersive environments that offer different levels of realism. Moreover, VR makes it possible to implement different devices. For instance, VR enables researchers to analyze oculomotor behavior, which is fundamental in the field of car driving and is considered an indicator of attentional deployment. The work presented in this paper is based on a car driving simulator currently under development and aimed at studying the cognitive processes involved in car driving such as attentional processes and anticipatory mechanisms.</p>
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