

The social representations of artificial intelligence in road safety

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Human error is a leading cause of road accidents, which result in approximately 1.3 million deaths annually and costing countries up to 3% of their GDP. In an effort to improve road safety, intelligent driver assistance systems that can identify hazardous behaviours and alert drivers in real-time are being developed. However, to aid the development and implementation of these systems it is essential to understand the drivers' common-sense knowledge. The social representations theory states that common sense knowledge results from social groups' efforts to make sense of everyday life events, including scientific and technological novelties and guide social behavior, and can be utilized to explore the relationship between social groups and drivers' social representations and to examining the semantic field of these representations. To achieve this objective, a questionnaire comprising seven sections was developed and distributed via direct contact to natural groups and snowball sampling to statistical groups. The questionnaire included sections on sociodemographic information, ranked association questions, the driver behavior questionnaire, a distraction engagement scale, the driver stress inventory, a driver profile scale, and the technology acceptance model. We will present and discuss preliminary results through the light of the social representations theory. Results suggest that utilizing the social representations theory can provide insights into the social construction of drivers' knowledge of new safety technology, which can be useful for improving the targeting of research, marketing, training efforts, and the development of driver assistance systems. Also, these results highlight the relevance of psychosocial factors in understanding driving behavior.