

Exploring cultural values in drivers' behaviour

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Abstract

This paper reports on three studies which aimed to identify cultural indicators which would be applicable in designing vehicle navigation systems (VNS). Such research is important given the globalization of VNS and its potential impact on road safety. The first study required 35 participants from Malaysia, United Kingdom (UK), Japan and China to provide directions from a video and map. Local direction, relative distance, angle, road rules, locators, place name and point of interest were significantly different, with participants from the UK using more types of information. Importantly, the Japanese group preferred schematic diagrams in representing the information compared to written descriptions. Next, 246 respondents (Malaysia, UK and Japan) participated in an on-line survey focusing on peoples' perceptions about driving and navigating across culture. Evidently, driving styles and the effect of road environment were highlighted as cultural indicators. Furthermore, drivers from different cultural backgrounds differed in their perception of usefulness for a range of alternative navigation methods (e.g. sketched maps, passenger instructions and VNS). The final study considered whether the road environment affected driver's route directions. Twenty participants from the UK and Malaysia provided directions based on videos/maps for three urban environments (UK, Malaysia and Japan). Different styles were noted in providing directions and the representation of landmarks. The similarities and differences concluded from the three studies have highlighted potential cultural values in local driving styles, and road environments.

Introduction

The current globalization of vehicle navigation systems (VNS) has led to an interest to study the role of culture in drivers' behaviour. Drivers are increasingly relying on VNS to navigate in unfamiliar environments – this could potentially contribute to safety issues (Green, 2000), for example prolonged glances away from the road. Cultural issues have been address in many forms within the driving context (Moeckli & Lee, 2007, Carpenter et al., 2004, Roessger & Hofmeister, 2002, Zaidel, 1992); however Daimon et al. (2000) have found that drivers varied across national or regional borders, given the differences in the urban layout. These profound differences have affected driver's characteristic in route selection and route information used whilst navigating. Following this argument, urban road environment has been taken as a measure to ascertain behavioural adaptations in

In D. de Waard, N. Gérard, L. Onnasch, R. Wiczorek, and D. Manzey (Eds.) (2011). *Human Centred Automation* (pp. 227 - 238). Maastricht, the Netherlands: Shaker Publishing.