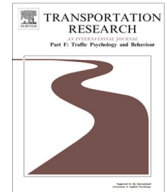




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## The role of individualism, gender and situational factors on probabilities of committing offences in a French drivers sample

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### ABSTRACT

Driving offences can be a cause of road crashes and their psychosocial determinants have been studied using different approaches. Recent studies have found that cultural values, transposed at individual level through the vertical-horizontal individualism-collectivism model, may be relevant for understanding offending behaviours in drivers and pedestrians. Within this framework, we propose to test these relationships in a sample of French drivers (N = 666). In addition, we aim to explore the role of situational factors and gender differences, as potential moderators for the effects of individualist and collectivist values on offending behaviours. In an online survey experiment, drivers had to evaluate their probabilities of committing several driving offences in three driving situations, manipulating traffic density level and the probability of being caught by the authorities. Statistical analyses showed that, compared to a control situation, probabilities of offending were lower in the heavy traffic condition and even lower in the high probability of being caught condition. Probabilities of offending were also higher for men than women and were positively predicted by vertical individualism. However, the main effects suggested that horizontal collectivism and vertical individualism predicted posit offences for men only, depending on situation for vertical individualism. These results were qualified by significant interactions between driving situation, gender and vertical individualism and between gender and horizontal collectivism. These findings are discussed in relation to gender differences in value expression. Perspectives to improve the relevance of the value framework mobilized, the importance to consider situational context to understand driving offending behaviours and safety implications are also discussed.

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## 1. Introduction

Worldwide, road traffic crashes account for about 1.25 million deaths, 20 to 50 million injuries per year and are the main cause of death for 15–29-year-olds. In most countries they represent a cost of nearly 3% of their gross domestic product. Car occupants account for 31% of road traffic deaths worldwide (World Health Organization, 2015) and 52% in France (French National Inter-Ministerial Office of Road Safety, 2016). Among the multiple factors that may be related to road crash involvement, several studies have demonstrated the role of aberrant driving behaviours (Iversen & Rundmo, 2004; Parker, Reason,

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Manstead, & Stradling, 1995; Rothengatter, 1997; Sümer, 2003). Despite the lack of consensus as to their importance among other causes of road fatalities (Barraclough, af Wählberg, Freeman, Watson, & Watson, 2016), the role of offending driving behaviours may be questioned as a potential factor related to road fatalities.

Studies based on the Theory of Planned Behaviour (TPB; Ajzen, 1991) have shown that intentions to commit driving offences and self-reported driving offences, such as speeding and drink-driving, can be predicted by classic components of the TPB (attitudes, perceived behavioural control, subjective norms and behavioural intentions). Extended versions of the TBP have also highlighted the role of injunctive, descriptive, personal and moral norms in predicting such behaviours (e.g., Cestac, Paran, & Delhomme, 2011; Cestac, Paran, & Delhomme, 2014; Cooke, Dahdah, Norman, & French, 2016; Elliott, Armitage, & Baughan, 2003; Parker, Manstead, & Stradling, 1995). Also, research on the psychosocial determinants of aberrant driving behaviours have investigated the influence of sex roles, gender stereotypes (Degraeve, Granié, Pravossoudovitch, & Lo Monaco, 2015; Granié, 2009; Pravossoudovitch, Martha, Cury, & Granié, 2015; Sullman, Paxion, & Stephens, 2017; Özkan & Lajunen, 2005) and that of such personality traits as aggressive behaviours (Lajunen, Parker, & Stradling, 1998), sensation seeking (Iversen & Rundmo, 2004; Ulleberg & Rundmo, 2003), empathy and conformity (Nordfjærn & Şimşekoğlu, 2014). More recently, Nordfjærn and colleagues have questioned the role of cultural factors in determining risky behaviours for both pedestrians (Nordfjærn & Zavareh, 2016; Nordfjærn & Şimşekoğlu, 2013) and drivers (Nordfjærn & Şimşekoğlu, 2014) in Middle East. They have proposed to operationalize culture at individual level through horizontal and vertical individualism and collectivism (HVIC, Singelis, Triandis, Bhawuk, & Gelfand, 1995).

In line with this proposition, we offer to examine the effects of HVIC dimensions on driving offences, in a culturally different context than those previously studied. We also propose to take into account participants' gender and important situational factors on the road – enforcement and the presence of other road users – as potential moderators of these effects.

### 1.1. Vertical and horizontal individualism and collectivism

Individuals oriented toward vertical individualism (VI) tend to perceive themselves as unique, independent and distinct from others. They seek to improve their own status via competition, power and achievement (Shavitt, Torelli, & Riemer, 2010). Conversely, if individuals oriented toward horizontal individualism (HI) tend to also define and perceive themselves as unique, they consider themselves equal to others (Feather, 1994; Nelson & Shavitt, 2002). They focus on being successfully self-reliant without focusing on competition (Triandis & Gelfand, 1998). Vertical collectivist (VC), on the other hand, tend to define and perceive themselves more in relation to others, seek to enhance ingroup cohesion and status and to focus on complying with authorities and traditions (Shavitt et al., 2010). Finally, individuals oriented toward horizontal collectivism (HC) also tend to define and perceive themselves more in relation to others but with a focus on sociability and within an egalitarian framework (Erez & Earley, 1987; Shavitt et al., 2010).

The HVIC approach has proposed to refine broader traditional individualism and collectivism constructs, considering that hierarchy and competition values proceed differently for each of them (Shavitt, Lalwani, Zhang, & Torelli, 2006; Shavitt, Zhang, Torelli, & Lalwani, 2006; Shavitt et al., 2010). It differs from the previous and renowned Hofstede model of cultural values (Hofstede, 1980; Hofstede, 1983) in which individualism and collectivism were the opposites poles of a same dimension and hierarchy values were considered through a distinct dimension (corresponding to “power distance”). Indeed, distinguishing the vertical-horizontal dimension allows us to more precisely assess implications of individualism and collectivism in a broad field of studies such as personal values, processes linked to power, identities, gender differences, self-presentation tendencies and perceptions of the social environment (Shavitt & Cho, 2016; Shavitt, Lalwani, et al., 2006; Shavitt et al., 2010). Although the HVIC approach is taking root into a classic intercultural frame and may be relevant for cultural level comparison, the importance placed on these values and their effects can be also compared at individual level (Matsumoto et al., 1999; Singelis et al., 1995; Triandis, 1995; Triandis, Bontempo, Leung, & Hui, 1990). Matsumoto et al. (1999) also refer to these two levels as the “ecological culture” and the “psychological culture”.

For instance, Nordfjærn and Şimşekoğlu (2014) have studied the relationships between HVIC and self-reported driving behaviours among a sample of urban Turkish drivers. They found that violations were positively predicted by VI and negatively by VC. The authors explained the positive effects of VI on violations by individuals' tendency to comply more with personal rather than collective expectations and to exhibit less collaborative behaviours with other road users. Conversely, the negative effects of VC on violations was explained by a greater tendency to comply with authorities and laws, to exhibit more collaborative behaviours with other drivers and by making more compromises between personal and collective expectations (Nordfjærn & Zavareh, 2016; Nordfjærn & Şimşekoğlu, 2013; Nordfjærn & Şimşekoğlu, 2014).

This study (Nordfjærn & Şimşekoğlu, 2014) was conducted on a sample of urban Turkish drivers and, to the best of our knowledge, no similar study on drivers has been conducted in other countries. As suggested by the authors themselves (p. 62), it seems important to examine whether equivalent results can be observed in different cultural contexts. Indeed, although the HVIC model allows us to measure differences in the importance accorded to some values, it does not take into account the means by which people will display these values, which may differ across cultural contexts. Therefore, in the present study, we propose to examine the effects of HVIC dimensions on offending driving behaviours among a sample of French drivers. Also, we propose that relevant ways of achieving values associated with HVIC's dimensions could differ according to gender. Finally, we also propose to explore how these effects may be moderated by situational factors regarding driving context.

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