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Why drivers use cell phones and support legislation to restrict this practice

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ABSTRACT

The use of cell phones while driving is ubiquitous, particularly in countries where the practice is legal. However, surveys indicate that most drivers favor legislation to limit the use of mobile devices during the operation of a vehicle. A study was conducted to understand this inconsistency between what drivers do and what they advocate for others. Participants completed a survey about their driving attitudes, abilities, and behaviors. Following previous research, drivers reported using cell phones for benefits such as getting work done. The hypocrisy of using cell phones while advocating restrictions appears to stem from differences in the perceived safety risks of self vs. others' use of cell phones. Many if not most drivers believe they can drive safely while using mobile devices. However, they lack confidence in others' ability to drive safely while distracted and believe that others' use of cell phones is dangerous. The threat to public safety of others' usage of mobile devices was one of the strongest independent predictors of support for legislation to restrict cell phone use.

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1. Introduction

Cell phone use while driving is ubiquitous. The National Highway Traffic Safety Administration (2011) estimates that at any point during the day, 9% of drivers are using cell phones in the United States. Even in countries such as Australia and the United Kingdom where there are strong regulations in place, 1–2% of drivers have been observed using hand-held mobile phones (Glendon and Sutton, 2005; McEvoy et al., 2005; World Health Organization, 2011). This is a major public safety issue because of the number of crashes that are attributable to distracted driving (e.g., National Safety Council White Paper, 2010) and the substantial body of empirical evidence showing the impairments from talking on a cell phone. Studies of the processes underlying these driving deficits indicate that conversation disrupts scanning and change detection in complex visual scenes (McCarley et al., 2004), delays the reaction time to imperative events (Caird et al., 2008; Horrey and Wickens, 2006; Strayer and Johnston, 2001; Strayer et al., 2003), and may cause a form of inattention blindness whereby observers often fail to notice information that falls directly in their line of gaze (Strayer and Drews, 2007). In fact, epidemiological studies have reported that the crash risk may rise to the level associated with the legal limit of alcohol (Redelmeier and Tibshirani, 1997; McEvoy et al., 2005; for a contrasting view, see Klauer et al., 2014; Dingus et al., 2006).

The ubiquity of cell phone use is surprising because drivers are often cognizant of the risks of this behavior. A AAA Foundation for Traffic Safety (2013) study conducted in the United States revealed that the majority of respondents believe that driving while using a cell phone is a very serious (57.7%) or serious (30.9%) threat to their personal safety. Moreover, an average of 70% of respondents strongly or somewhat strongly support laws restricting hand-held cell phone use by drivers and approximately 45% strongly or somewhat strongly support a total ban on cell phone use while driving. Although the exact proportion of drivers in the United States who use mobile devices while supporting laws restricting their use is unclear, these data seem to suggest that many people engage in the very behavior they would outlaw or restrict.

Research on hypocrisy has shown that it is common for people to "say one thing and do another", and advocate pro-social behaviors that they do not themselves perform regularly (e.g., Barden et al., 2005; Batson et al., 1997; Valdesolo and DeSteno, 2008). The

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purpose of our study was to explain the hypocrisy of drivers using cell phones while supporting legislation to restrict the practice by others. To explain the inconsistency, the study sought a broad understanding of the various contributors to cell phone use and support for legislation in a country where strong and widespread restrictions on cellular communication while driving have not been imposed.

1.1. The perceived benefits and risks of cell phone usage while driving

Research indicates that drivers use cell phones to stay in touch with others (e.g., Walsh and White, 2006), receive information (e.g., White et al., 2010), and perform work duties outside of the office (e.g., Eost and Flyte, 1998). Drivers commonly feel social pressure to respond to calls (Waddell and Weiner, 2014). However, they refrain from using their phones because of the perceived dangers as well as the potential fines from being caught in regions where usage is restricted (e.g., Gauld et al., 2014). Another important predictor of cell phone usage is perceived norms (Atchley et al., 2012; Nemme and White, 2010; Walsh et al., 2008) which are strongly associated with the expected costs of using a cell phone while driving.

In general, drivers appear to use cell phones because the perceived benefits outweigh the costs (Walsh and White, 2006). Although drivers seem to be aware of the dangers of cellular communication during the operation of a vehicle, they tend to believe that the likelihood of an accident is lower for self than for others (White et al., 2004). This is consistent with studies of self-assessment which have found that people often exaggerate the favorableness of their abilities, skills, and traits (e.g., Alicke and Govorun, 2005; Dunning et al., 2004; for limitations, see Moore, 2007) and research on public safety showing that motorists commonly overestimate their driving skills and abilities (Horrey et al., 2015; Horswill et al., 2004; Sundström, 2008). We believe that in the United States, a large proportion of drivers are overconfident about their ability to drive safely while distracted which may increase their willingness to use mobile devices behind the wheel.

Few studies have examined the factors contributing to support for regulation of the use of cellular devices while driving. White et al. (2007) suggest that legislative support may be heavily influenced by the perceived dangers of others' usage of mobile phones. In a reanalysis of their earlier work (White et al., 2004), they found that amongst drivers who reported using a mobile phone, "regulatory preferences were more influenced by perceived risks to others. . . than the self. . . .this finding suggests their calls for regulation are primarily based on concerns about other people's behavior rather than their own" (White et al., 2007, p. 743).

1.2. A study of driving attitudes, behaviors, and abilities

A survey was conducted to estimate the proportion of drivers who use cell phones while supporting legislation to restrict the practice, and to understand this inconsistency between what drivers do and what they advocate. As reflected by our review, there have been numerous well conducted studies of the perceived benefits and risks of cellular communication while driving. However, to our knowledge, there have been no comprehensive examinations of the motivations underlying the advocacy of regulation. Moreover, no studies have examined the driving attitudes, beliefs, and abilities contributing to legislative support and cell phone usage together in a single study to account for drivers' hypocrisy.

Participants in our study reported the risks and benefits of their cell phone use and others' cell phone use while driving. They also assessed their abilities and other drivers' abilities to drive safely while distracted. Finally, they completed the Operation Span task which has been used previously to measure multitasking ability (Sanbonmatsu et al., 2013). Following previous research (e.g., Eost and Flyte, 1998; White et al., 2010), participants were expected to report specific benefits from talking on a cell phone such as getting work done and connecting with friends that predict self-reported cell phone usage while driving. In contrast, we anticipated they would report benefitting little from other drivers' usage of cell phones. We also expected that drivers would generally be aware of the dangers of talking on a cell phone and that their risk assessments would be negatively correlated with self-reported cellular communication behind the wheel. However, it was predicted that participants would see others' usage of cell phones as a much greater threat to public safety than their own (White et al., 2004). Severe concerns about the safeness of other's use of mobile devices were expected to be a major contributor to support for legislation (White et al., 2007) and the inconsistency between what drivers do and the policies they advocate.

Finally, the study examined the important relations between perceived and actual multi-tasking ability, and self-reported cell phone use and support for regulation. A simple but elegant measure of working memory is the Operation Span (OSPAN) task developed by Engle (2002). In the OSPAN task, people simultaneously attempt to perform two independent tasks that compete for limited capacity attention (Watson and Strayer, 2010). Thus, the OSPAN task has been used in prior research to measure multitasking ability (Sanbonmatsu et al., 2013). Following this previous work and prior demonstrations of the tenuous relation between self-assessments and performance (for a review, see Dunning et al., 2004), we expected little correspondence between participants' subjective beliefs about their ability to drive safely while distracted and their ability to multitask as measured by the OSPAN task. We further anticipated that perceived ability rather than actual ability would be more predictive of the perceived risks and self-reported use of cell phones, and support for legislative restrictions.

2. Methodology

2.1. Participants

The study was conducted in the United States in the state of Utah where texting on a cell phone while driving is illegal but talking on a cell phone is permitted. Two hundred and forty-nine University of Utah undergraduates (141 female and 108 male) participated in the study for extra course credit. The undergraduates ranged in age from 18 to 44, with an average age of 22. Inclusion in the study was limited to students who owned a cell phone and reported driving at least occasionally (i.e., who did not respond "0" when asked "how many minutes per day do you spend driving?"), and who met the performance criteria on the OSPAN task.

2.2. Procedure

The students participated individually in a laboratory. They began the "study of driving and driving attitudes" by answering questions on a computer about their cell phone use while driving and their ability to drive safely while distracted. This was followed by questions about their support for legislation restricting cell phone use and their general attitudes toward cell phone use while driving. Participants were then asked about the benefits and costs of cell phone use, and the costs of driving while intoxicated. The specific measures are described in detail below. The questions were presented in the same order for all participants. The OSPAN task was administered last in order to reduce any possible effects of fatigue on questionnaire responding.