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# Does getting away with it count? An application of stafford and warr's reconceptualised model of deterrence to drink driving



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#### ABSTRACT

Drink drivers continue to be disproportionately represented in road mortalities and morbidities. Given these costs, countermeasures that effectively reduce the behaviour (and its consequences) are imperative. Research has produced inconsistent findings regarding the deterrent effects of some countermeasures on drink driving behaviour, namely legal sanctions, suggesting other factors may be more influential. This study aimed to determine which deterrence measures based on Classical Deterrence Theory and Stafford and Warr's (1993) reconceptualised model of deterrence influence the propensity to drink and drive over the legal blood alcohol content limit of 0.05. In total, 1257 Australian drivers aged from 16 to 85 years completed a questionnaire assessing their self-reported drink driving behaviour and perceptions of legal sanctions. Consistent with previous research, past experiences of direct punishment avoidance was the most significant predictor of drink driving. Additionally, perceptions of personal certainty of apprehension were a significant (albeit weak) negative predictor of drink driving. Counterintuitively, experiences of indirect punishment were predictive of self-reported drink driving. Similarly, penalty severity produced mixed results as those who considered a penalty would be severe were less likely to drink and drive. However those that considered the penalty would cause a considerable impact on their lives, were more likely to drink and drive. Taken together, these findings suggest that while the threat of apprehension and punishment may influence self-reported drink driving behaviours, committing and offence while avoiding detection is a significant influence upon ongoing offending. This paper will further elaborate on the findings in regards to developing salient and effective deterrents that produce a lasting effect.

#### 1. Introduction

Drink driving remains a significant contributor to road crash fatalities and injuries in Australia due in part to the high rate of alcohol consumption and alcohol-related problems (Australian Bureau of Statistics, 2014; Davey and Freeman, 2011; Jiang et al., 2015; Tere and Brown, 2014). More specifically, drink driving is estimated to contribute to 30% of road crash fatalities and 9% of injuries (Tere and Brown, 2014) and is usually related to a blood alcohol content (BAC) beyond 0.05 (Single and Rohl, 1997). While males have traditionally been disproportionately represented in alcohol-related crashes (Leal et al., 2008), as are younger drivers (Leal et al., 2008; Mackenzie et al., 2015), more recent research suggests that females are not immune to the problem (Watling and Armstrong, 2015). The seriousness of the issue is reflected in the range of deterrent-based countermeasures implemented to reduce the problem, such as: random breath tests (RBTs); traditional legal sanctions (e.g. fines, loss of licence, gaol); mass media campaigns; and education programs (Freeman and Watson, 2009).

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While the introduction and wide spread application of RBT has proven extremely successful in reducing the alcohol-related road toll by approximately 5309 over the past 27 years (Jiang et al., 2013), engagement in the aberrant behaviour continues to contribute to the road toll. Most of the countermeasures developed to address drink driving are based on Classical Deterrence Theory (reviewed below).

#### 1.1. Classical deterrence theory

Classical Deterrence Theory (classical deterrence), developed in the 18th Century by Jeremy Bentham and Cesare Beccaria, proposes that the likelihood of offending reduces with increased perceptions of the certainty of getting caught (certainty), the severity of the punishment (severity), and timeliness of punishment (swiftness) (Akers and Sellers, 2009; Edwards et al., 2003; Davey and Freeman, 2011; Freeman and Watson, 2009; Homel, 1988; Taxman and Piquero, 1998). This is classified as *general* deterrence which endeavours to deter society as a whole and is largely dependent on how well sanctions are publicised

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and the efficacy of law enforcement agencies to promote highly visible apprehension techniques (Elvik and Christiansen, 2007; Fildes and Lee, 1993; Taxman and Piquero, 1998). In contrast, *specific* deterrence refers to the experience of getting caught and punished for an offence and thereafter being deterred from re-offending (Homel, 1988). Although a substantial amount of research has examined the effectiveness of deterrent based measures at an aggregate level (e.g., RBT and speed cameras), perception-based research in road safety has been scant and mixed. This is in contrast to the broader criminological-based deterrence research that has illuminated a range of instrumental and normative factors that can influence offending behaviours (see Piquero et al., 2015 for a comprehensive review). The current paper's authors have proposed that in regards to theoretical developments, road safety research is significantly lagging behind criminological research within the deterrence domain (Freeman et al., 2015).

The certainty of apprehension has historically been considered the most powerful of the three deterrent constructs (Homel, 1988; Nagin and Pogarsky, 2001; Piquero and Paternoster, 1998) and has thus received the most focus. For example, Freeman and Watson (2006) found that perceived certainty of apprehension was a significant negative predictor amongst a sample of recidivist drink driving offenders, and the same authors (2009) reported a similar finding amongst a sample of 780 Queensland motorists which included first time and recidivist drink driving offenders. However contrasting evidence exists, as Baum (1999) found that perceived certainty was not a significant deterrent among a sample of 420 Queensland offenders when studying the effects of RBT. Similarly, Homel's (1988) seminal earlier work also failed to find a clear significant relationship with drink driving behavior.

Similarly mixed result have been found for the deterrent effects of severe punishment for drink driving. Although Australia attaches heavy penalties to drink driving offences (i.e. licence disqualifications, monetary fines as well as possible gaol sentences for severe and recidivist offences), perceptual research has found little relationship between perceived severity and self-reported offending behaviours (Homel, 1988; Piquero and Pogarsky, 2002; Weatherburn and Moffatt, 2011: Yu, 2000). For example, Homel (1988) found that drink driving behavior in a group of 185 New South Wales motorists was not reduced despite a perceived increase in drink driving penalties over a period of three months. Similarly, Weatherburn and Moffatt (2011) failed to find a significant effect between increasing fines and a reduction in selfreported drink driving behavior. One theory for these findings is that appraisals of perceptual severity may differ between individuals (Grasmick and Bryjack, 1980) and/or a significant bivariate relationship may exist between perceived certainty and severity, and thus, severe sanctions are only relevant if the likelihood of apprehension is high (Grasmick and Bryjak, 1980; Weatherburn and Moffatt, 2011). Otherwise it is just a theoretical threat.

Swiftness of punishment remains the least investigated construct out of the three deterrent principles which is thought to be a result of penalties rarely being administered in a timely manner, especially where courts are involved (Babor et al., 2003; Davey and Freeman, 2011; Nagin and Pogarsky, 2001). This may be considered a significant oversight given that models of learning and experimental psychology suggest that the timing between stimulus and response is crucial for learning new behaviours (Nagin and Pogarsky, 2001). One of the few studies by "Yu and Wilford (1995)" found that 13,053 convicted driving offenders were likely to re-offend if a penalty was not administered within six months after the offence. Within the drug driving domain, an Australian study demonstrated that 516 Queensland motorists perceived drug driving sanctions to be severe and certain but not swift (Davey et al., 2008), although 29.7% reported intending to drug drive in the future. Taken together, the perceived swiftness of penalties has been generally overlooked (Freeman et al., 2015), although it is noted that research has focused on the positive impact of changes to administrative suspension laws (McArthur and Kraus, 1999; Voas et al., 2000). However, deterrence research has not been limited to legal sanctions but has also examined the impact of other non-legal factors.

#### 1.2. Stafford and Warr's (1993) reconceptualisation of deterrence theory

Over the past three decades, significant theoretical development has resulted in recognition that both legal and non-legal sanctions can influence offending behaviour (Homel, 1988). Of relevance to the current study, Stafford and Warr's (1993) reconceptualised model of deterrence was arguably the most prominent advancement of deterrence based research. This is evidenced by the quantity of studies that have applied the theory to different areas within the road safety domain, especially in relation to drink driving and drug driving (Freeman and Watson, 2006; Piquero and Paternoster, 1998). The theory encompasses four core deterrent mechanisms which involve experiences of direct (e.g., personal) and indirect (e.g., observation of others) punishment as well as direct and indirect punishment avoidance. These experiences are thought to influence both rule compliance and the effectiveness of legal sanctions to shape behaviours (Stafford and Warr, 1993). However, and similar to above, research has produced contradictory results when applied to drink driving.

#### 1.2.1. Direct and indirect experiences of punishment avoidance

Of the four constructs, punishment avoidance has shown to be the most influential factor in predicting a propensity to re-offend (Freeman and Watson, 2006; Paternoster and Piquero, 1995; Piquero and Paternoster, 1998; Piquero and Pogarsky, 2002; Watson, 2004). That is, those who commit an offence and avoid detection are most likely to engage in the same behaviour again. Research has also shown an inverse association between punishment avoidance and perceived certainty of apprehension, as avoiding detection naturally reduces perceptual certainty of apprehension (Piquero and Pogarsky, 2002; Stafford and Warr, 1993). In support, Freeman and Watson (2006) studied a group of 166 convicted recidivist offenders and found that past direct punishment avoidance had the stronger relationship on selfreported past drink driving behaviour as well as increasing the intentions to re-offend in the future, despite the group being severely sanctioned. In fact, this construct was a better predictor of offending behaviour than indirect punishment, indirect punishment avoidance and perceptions of certainty, severity and swiftness of sanctions. Similarly, Piquero and Paternoster (1998) found that direct punishment avoidance had the strongest relationship with positively influencing offending behaviour among a sample of 1686 general motorists. Furthermore, Watling, Palk, Davey and Freeman (2011) also found that direct and indirect punishment avoidance were good predictors of the intention to re-offend among a sample of recidivist drug drivers.

#### 1.2.2. Direct and indirect experiences of punishment

Consistent with deterrence theory, direct and indirect punishment are thought to act as a deterrent. However, these constructs have received limited empirical support as research has in fact demonstrated a positive association between experiences of punishment and re-offending behaviour (Paternoster and Piquero, 1995; Sitren and Applegate, 2006; Watson, 2004). For example, Piquero and Paternoster (1998) found that those who were pulled over at a roadside checkpoint for drink driving were significantly more likely to re-offend. Similarly, Watson (2004) found that unlicensed drivers who had a prior conviction for unlicensed driving were more likely to engage in the same behaviour. Similarly, research has failed to find expected clear links between increasing penalty sanctions and reductions in offending rates (Watson et al., 2015), including meta-analytic studies (Elvik, 2016; Elvik and Christensen, 2007). However, it is noteworthy that such research has failed to examine whether penalty increases are mirrored in perceptual severity evaluations.

With regards to indirect punishment, Piquero and Paternoster (1998) also found that this positively increased projections to drink and drive, however the relationship was not found to be as strong as the

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