Hoon driving: predicting involvement from social learning and deterrence perspectives

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Abstract: Hooning, or the use of vehicles in an antisocial, 'loutish' and dangerous manner constitutes the phenomenon of hooning, a risky behaviour which has received recent attention in regards to road safety. This study used a web-based survey of over 700 predominantly young, university students to detail the extent of involvement in hooning, and the relative ability of Social Learning and Deterrence theories to account for the behaviour. While both Deterrence (DT) and Social Learning Theory (SLT) were significant predictors of hooning individually, SLT predicted the behaviour over and above DT. Significant components of DT included Perceived Severity of Punishment and Punishment Avoidance, while the strongest SLT predictors were Attitudes to the behaviour and Rewards gained from taking part in the behaviour. These results highlight the particular social nature of hooning behaviour, where groups of mainly young drivers gather with a focal point of the vehicles. The key element that enforcement has in deterring becoming involved is also noted. Future possible directions in intervention development are presented based on these findings.

Introduction

Hooning, or the use of vehicles in an antisocial, 'loutish' and dangerous manner constitutes the phenomenon of hooning, a risky behaviour which has received recent attention in regards to road safety (Folkman, 2005; Jarred, 2002). Particular concern has been highlighted by extensive media attention across newspapers and television within Australia (eg: 'Hoons need for speed and danger', 2006; Ferguson, 2006; 'Hoons go for a joyride', 2006). Research providing evidence towards characterising those that take part in the behaviour and relevant contributors is however sparse. The current paper seeks to add to this limited body of knowledge.

Defining Hooning Activities

Hooning is a general term used to characterise a number of mostly illegal driving acts, including street racing, time trials, excessive speeding, burnouts, cruising, drifting and rolling road blocks. Table 1 below provides further definition of these terms as sourced from relevant Queensland legislation (Jarred, 2002) and research by the Queensland Police Service (Folkman, 2005).

Table 1. *List of activities that may constitute hooning*

Activity	Definition
Illegal street racing	A competitive speed challenge between two or more vehicles.
Time or speed trials	An attempt to break any vehicle speed record designed to test the skill of the driver or vehicle.
Speeding	Travelling at speeds over the limit.
Burnouts (incl donuts)	Sustained loss of traction due to excessive acceleration which may produce smoke and excessive noise (donuts are essentially burnouts committed in such a way that the vehicle slides in a circular pattern).
Cruising or lapping	Slowly driving a vehicle around a predetermined route usually with the stereo system at a high volume.
Rolling road blocks	A large number of vehicles travelling slowly as a convoy on major highways to block other vehicles and to facilitate street racing.
Drifting	Approaching a corner at a relatively low speed and rapidly accelerating around the corner causing the rear of vehicle to slide out and the tyres to slip and screech.

Source: Folkman (2005) and Jarred (2002)

Factors Related to Hooning

Elements of hooning behaviour and those drivers involved are intrinsically linked to road safety. Young, male drivers are particularly noted as being the most predominantly involved demographic, with the behaviour being linked with deliberate risk taking, driving at night and early mornings and carrying of multiple peer passengers. All of these factors are established as increasing crash risk. Further details of the characteristics of hooning and its potential link with road crashes can be found in Armstrong and Steinhardt (2006) and Gee Kee, Palk and Steinhardt (2007) and Folkman (2005).

Theoretical Underpinnings of Hooning Behaviour

A number of theories can be potentially applied to the prediction of hoon driving. Such theories could potentially include sensation seeking, which has been linked with speeding and racing behaviours (Jonah; Arnett et al, 1997); strain theory (Agnew, 1985), suggesting that taking part in hooning allows the achievement of goals and status not normally accessible to the driver, and problem-behaviour theory (Jessor & Jessor, 1977); positing that hooning is simply a part of a set of deviant behaviours that the person is involved in. While these and several other social theories can contribute to this area, two theories will be considered in the

current paper as to their relation to hooning - extended deterrence theory (Stafford & Warr, 1993) and social learning theory (SLT; Akers, 1977).

Deterrence theory

The underlying principle of deterrence theory is the perceived threat of punishment to discourage individuals from illegal acts (Homel, 1988). Within classical deterrence theory, the likelihood of an individual performing a criminal act will diminish if the punishment is perceived as certain, swift and severe. This is accomplished through two main processes: specific deterrence acting through direct exposure to sanctions, and general deterrence acting by providing awareness of existing sanctions to deter the general community from conducting an illegal act (Homel, 1988).

Classical deterrence theory has been criticised by Stafford and Warr (1993) for firstly not taking into account punishment avoidance. This is demonstrated when individuals may come to believe they are immune to apprehension by avoiding punishment (Stafford & Warr, 1993). Secondly, they argue that vicarious experience of punishment, such as knowing of a friend's account of being caught, will alter future behavioural choices. These criticisms have led to the development of a revised deterrence theory including these aspects

Social Learning Theory

Deterrence theory has however been criticised for focusing on the fear of punishment and ignores other important factors such as peer approval, learned behaviours, rewards and moral obligations (Akers, 1990; Watson, 2004; Zaal, 1994). Akers' (1977; 1990) social learning theory utilises the central principles of deterrence theory (defined as social reinforcement) and introduces other social learning traits into the model. These four elements are differential association (learnt behaviour from interactions with social groups a person identifies with), definitions (a combination of attitudes, beliefs and orientations), imitation (learnt behaviour from modelling by significant others) and differential reinforcement (the relative weighting of rewards and punishments considered to arise from taking part in a behaviour). Overall, the model denotes a combination of empirical social learning techniques.

Applicability of SLT and Deterrence Theory to Road Safety

Deterrence theory has been shown to be useful in predicting road safety related behaviours such as drink driving (Freeman & Watson, 2006; Piquero & Paternoster, 1998) and unlicensed driving (Watson, 2004). Likewise, SLT has been successfully used in investigations of unlicensed drivers (Watson, 2004) and also in the prediction of drug driving (Armstrong, Wills & Watson, 2005). Particularly worth note is that SLT was a significant predictor over and above the prediction of deterrence in both of these research projects.

The present study

No previous research has examined the relationship of hooning and the previously discussed theories. It can be argued that deterrence principles are most commonly used to guide current anti-hooning efforts, with punishments set in place for hooning offences in all Australian states and territories. Armstrong and Steinhardt (2005) have noted declines in vehicle confiscations from first time offences to second time offences of hooning with an even more significant decline for third time offences, providing possible support for the efficacy of deterrence. This study will empirically test the applicability of expanded deterrence theory to hooning.

Hyp 1: The constructs of expanded deterrence theory will significantly predict willingness to take part in hooning behaviour.

It appears that social learning theory is also potentially relevant to explain hooning behaviour. Differential association is possible to arise among groups of individuals within the 'car enthusiast' culture, facilitating the transference of attitudes and vicarious learning. Moreover, hooning is likely to be conducted in groups that may facilitate imitation and differential reinforcement. These characteristics of car culture, social networks and congregated meeting places have been linked to hooning as reported by Folkman (2005). Thus, this study will investigate the applicability of Akers (1977) social learning theory to hooning.

Hyp 2: The constructs of social learning theory will significantly predict willingness to take part hooning behaviour.

As in previous research, social learning theory has been found to predict additional variance in driving behaviours over and above deterrence theory due to the former theory's broader base. Hence, the present study aims to compare the relative utility of expanded deterrence theory and Akers' social learning theory in explaining hooning driving behaviour.

H3: Akers' (1977) social learning theory will account for additional variance in willingness to take part in hooning behaviour over and above expanded deterrence theory.

Method

Participants

A total of 717 voluntary participants were recruited with the majority assumed to include university students, although participants external to QUT were thought to be recruited via referrals from students. The study included 307 (42.8%) male and 406 (56.6%)

female participants who had ever driven a motor vehicle regardless of whether a current licence was held. Over 75% of participants were between the ages of 16 and 24 years, with the remaining participants being 25 years and over. The majority of participants had a highest education level of either a bachelor degree or higher (38%) or a year 12 certificate (42%). However, it was likely that many of the year 12 responses were undergraduate university students. Almost all of the participants held a provisional (41%) or open licence (53%), with only a few holding no licence or a learners permit. A total of 215 (30%) participants had been caught for a speeding offence in the last three years although very few (less than 3%) had been caught for either drink, drug or unlicensed driving.

Measures

'Hooning' was defined to participants as "*irresponsible and dangerous activities in a public place undertaken in a motor vehicle or motorcycle such as burnouts, donuts, drifting, cruising or racing*". Definitions of these specific acts as presented in Table 1 at the introduction of this paper were provided as part of the survey.

Table 2 below lists the various components of deterrence theory and social learning theory utilised in the current study.

Table 2. *Components of Deterrence Theory and SLT Tested*

Deterrence theory	Social learning theory
Perceived risk of apprehension	Differential association
Perceived certainty of punishment	Attitudes
Perceived severity of punishment	Rewards
Swiftness of punishment	Punishments
Knowledge of punishment	Imitation
Exposure to punishment	
Punishment avoidance	
Vicarious punishment	
Vicarious punishment avoidance	

The dependent variable measuring willingness to hoon in the future was created from the question '*In the future, how willing would you be to engage in hooning behaviours?*' This was answered on a 1-7 Likert scale, 1= very willing to 7= very unwilling with those who answered 1 to 3 considered 'willing' and those who answered 5 to 7 considered 'unwilling' to hoon in the future. Those who answered 4 (neutral) were excluded as they were classed as neither willing nor unwilling.

Materials and procedure

The questionnaire was available entirely online for a total of four weeks with a direct email sent to participants containing an invitation to participate and a direct web link to the online questionnaire.

Results

Prediction of Willingness to Hoon by Deterrence Theory

When considered individually, deterrence theory was shown to be a significant predictor of willingness to hoon, $\chi^2(9, 567) = 177.62$, $p<.001$ and accounted for 43% of the total variance in willingness. The individual variables of Perceived Severity of Punishment, Punishment Avoidance and Knowledge of Punishment were significant predictors. The full results of the analysis are presented in Table 3 below.

Table 3. *Prediction of Willingness to Hoon by Deterrence Theory*

	Willingness to Hoon	
Deterrence Theory Variable	β	Wald
Perceived severity of punishment	.52	26.93**
Punishment avoidance	-.05	26.66**
Knowledge of punishment	.68	5.74*
Vicarious punishment	-.10	1.73
Exposure to punishment	-.36	1.58
Perceived certainty of punishment	-.12	.78
Vicarious punishment avoidance	.01	.70
Perceived risk of apprehension	.01	.01
Swiftness of punishment	.004	.00

*p<.05, **p<.01

Prediction of Willingness to Hoon by Social Learning Theory

The five social learning variables significantly predicted intentions to hoon, $\chi^2(5, 579) = 306.62$, p<.001 accounting for 66% of the total variance in willingness. The individual variables of attitudes and rewards were significant predictors of future hooning. The full results of the analysis are presented in Table 4 below.

Table 4. *Prediction of Willingness to Hoon by Social Learning Theory*

	Willingness to Hoon	
Deterrence Theory Variable	β	Wald
Attitudes	1.44	33.05**
Rewards	.95	22.78**
Differential association	.42	4.67*
Punishments	-.19	.64
Imitation	-.001	.02

*p<.05, **p<.01

Prediction of Willingness to Hoon by the Combination of Deterrence and Social Learning Theories

Further analyses determined the combined contribution of deterrence and social learning models' to the prediction of future hooning (Table 5). The combined model explained 71% of the variance in future hooning, $\chi^2(14, 664) = 328.97$, $p<.001$. The individual variables of attitudes towards hooning (Wald=13.9, p<.01) and rewards for hooning (Wald= 16.03, p<.01) were significant predictors.

Table 5. *Prediction of Willingness to Hoon by the Combination of Deterrence and Social Learning Theories*

	Willingness to Hoon	
Variable	β	Wald
Deterrence Theory		
Perceived severity of punishment	.31	5.04
Punishment avoidance	-.02	2.32
Knowledge of punishment	.57	2.30
Vicarious punishment	-.06	.47
Exposure to punishment	-.57	1.90
Perceived certainty of punishment	.03	.05
Vicarious punishment avoidance	-.003	.09
Perceived risk of apprehension	-.08	.19
Swiftness of punishment	-.02	.01
Social Learning Theory		
Attitudes	1.12	13.90**
Rewards	.88	16.03**
Differential association	.46	4.54*
Punishments	-.33	1.28
Imitation	.03	3.97*

*$p<.05$, **$p<.01$

Hierarchical regressions investigating the combined model revealed important facts. In predicting future hooning behaviour, deterrence variables and social learning variables accounted for 37% of overlapping variance. However, each accounted for a significant proportion of unique variance over and above the other model. After accounting for deterrence variables, the social learning model accounted for 29% of the unique variance, $\chi^2(5, 567) = 151.35$, $p<.001$. After accounting for social learning variables, the deterrence model explained 6% of the unique variance, $\chi^2(9, 567) = 21.98$, $p<.01$.

Discussion

The present study aimed to investigate and compare the applicability of both Stafford and Warr's (1993) reconceptualised deterrence theory and Akers' (1977) social learning theory to hooning behaviour.

Expanded deterrence theory

Perceived severity of punishment and punishment avoidance were significant individual predictors. Higher levels of punishment avoidance increased the likelihood of future hooning. This may be because those who have successfully avoided punishment several times may come to think that they are immune to apprehension, decreasing their perceived risk or threat of punishment. The non-significance of direct punishment or vicarious punishment to the prediction of hooning is consistent with the findings of Piquero and Pogarsky (2002). The authors suggest a self-serving bias where, even though individuals may have received direct punishment or indirect punishment for hooning in the past, they may consider themselves better than average at avoiding punishment. After being apprehended once in the past, the odds of getting caught a second time are perceived as quite low, as explained by the 'gamblers fallacy' (Piquero & Pogarsky, 2002). Therefore, those who have experienced any form of punishment may still be willing to hoon.

In essence, current anti-hoon legislation may need to be enforced at higher levels in order to achieve higher perceptions of punishment. Simply broadcasting anti-hoon legislation is not sufficient to deter hooning as individuals still do not believe they will be caught. Higher instances of direct punishment (more than once) may be achieved through higher police presence in problem areas. However, it is noted that not all instances of hooning are likely to be apprehended and punishment avoidance will continue.

Contrary to expectations of deterrence theory (Homel, 1988; Stafford & Warr, 1993), higher perceived severity of punishments for hooning was associated with an increased intention to hoon in the future. This may be due to different individual perceptions across the sample where those who are willing to hoon may think that the penalties are too severe while those who are unwilling to hoon may think that the penalties are too lenient. Thus, in terms of anti-hoon legislation, increasing the severity of punishment may have little effect in deterring hooning.

Akers' Social Learning Theory

The significance of social learning theory suggests that association with others who endorse hooning is a powerful predictor of hooning. This is in line with previous research that advocates that risky behaviours are more likely to be conducted in the presence of peer passengers (Simons-Morton, Lerner & Singer, 2005). According to the present findings, those who have friends, family and acquaintances who participate in hooning activities are more likely to hoon themselves.

Attitudes and rewards were relevant predictors of intentions. Positive attitudes towards hooning such as believing that 'everyone does it once in awhile' and 'hooning is generally okay' were associated with increased intentions to hoon. This supports the findings of Watson (2004) who reported that attitudes towards unlicensed driving significantly predicted the intention to drive unlicensed in the future. Further, attitudinal dimensions towards traffic safety were found to correlate highly with future risky driving behaviour in a previous study by Iversen (2004).

Concerning road safety, campaigns aimed at reducing the positive attitudes held towards hooning could decrease hooning. For example, highlighting the personal responsibility and potential social ostracism from causing injury or death may be effective in decreasing hooning by minimising positive attitudes.

Perceived rewards for hooning such as praise from family and friends, receiving thrills, feeling like a good driver and generally feeling good increased the probability of hooning in future, a finding supported by prior research on speeding (Fleiter, 2004). The finding that punishments did not reinforce hooning decisions supports the notion that rewards are a stronger predictor than punishments (Skinner, 1948). Also, perceived punishments may not decrease the likelihood of hooning because some individuals may not consider the disapproval of family or friends as applicable to them. Thus, the importance of punishments as a predictor of hooning may be dependent upon individual perceptions of both legal and social negative consequences. For current road safety strategies, decreasing the perceived rewards for hooning may prove quite difficult, as they are inherent to individuals. Although, praise from family and friends may decrease if negative attitudes towards hooning are more prevalent.

Combined model

The two theoretical constructs combined offered a stronger prediction than they did alone, although much of the variance was shared between the two. Both theories accounted for unique variance, although social learning was the greater of the two. With the inclusion of deterrence and social learning variables together in the model, significance levels highlighted that attitudes and rewards were the only reliably associated predictors.

It seems that learning via social networks is more strongly associated with hooning than the simple threat of punishment. As a result, anti-hoon strategies should concentrate on the social aspect of hooning and how hooning attitudes and behaviours are transferred and reinforced among social groups - typically males aged 17-25 years. This is particularly notable in relation to the recent introduction of peer passenger restrictions in Queensland (Queensland Transport, 2005), which should be assessed for its potential contribution to reducing hooning.

Limitations

A number of limitations were evident in the current study. First, the construct of hooning was difficult to define and measure. Hooning incorporates a number of activities and may be interpreted differently on the basis of past experience as to what constitutes normal driving as opposed to hooning.

The sample also consisted mainly of university students. This may have biased results considering that blue-collar workers, rather than students, are typically implicated in hooning. Furthermore, 75% of the sample consisted of 16 to 24 year olds, with an under-representation of other age groups. Thus, the nature of the sample limits the ability to generalise these results to other populations.

Conclusion

Despite limitations, the present study is the first to empirically investigate the construct of hooning using a substantial sample size. Further investigation is needed to confirm the predictive utility of social learning and deterrence as this study has done. The threat of punishment is successful in deterring a significant proportion of the population from hooning. However, offenders who repeatedly conduct hooning activities and avoid punishment may think that they are immune to apprehension. This highlights the importance of increased police presence. Moreover, hooning is sustained by social learning, typically by positive attitudes and perceived rewards gained. Thus, strategies to impinge negative attitudes and consequences towards hooning other than legal sanctions may prove effective. Overall, this study contributes significantly to the sparse amount of hooning literature and provides direction for future experimental research.

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References

Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology*, *30*, 47-88.

Akers, R.L. (1977). *Deviant Behaviour: A social learning approach (2nd ed.).* Belmont, California: Wadsworth Publishing Company.

Armstrong, K. & Steinhardt, D. (2006). Understanding street racing and hoon culture: An exploratory investigation of perceptions and experiences. *Journal of the Australasian College of Road Safety, 17*: 38-44.

Armstrong, K., Wills, A. & Watson, B. (2005) *Psychosocial influences on drug driving in young Australian drivers*. Paper presented at the 2005 Australasian Road Safety Research, Policing, Education Conference, Wellington.

Arnett, J. J., Offer, D., & Fine, M. A. (1997). Reckless driving in adolescence: 'state' and 'trait' factors. *Accident Analysis and Prevention*, *29*, 57-63.

Ferguson, L. (2006, September 29). Camps to avoid hoons. *The Southland Times,* p22.

Fleiter, J. (2004). *The role of legal, social, and personal factor in speeding behaviour: A comparison of deterrence theory and social learning theory*. Queensland University of Technology, Brisbane.

Folkman, L. (2005). *Queensland's anti-hoon legislation and policing methods to prevent hooning behaviour*. Queensland Police Service (State Traffic Support Branch).

Freeman, J., & Watson, B. (2006). An application of Stafford and Warr's reconceptualisation of deterrence to a group of recidivist drink drivers. *Accident Analysis and Prevention, 38*, 462-471.

Education Conference, Wellington, New Zealand.Homel, R. (1988). *Policing and punishing the drinking driver: A study of general and specific deterrence.* New York: Springer-Verlag Publishing.

'Hoons' go on joyride. (2006, September 16). *Geelong Advertiser.*

'Hoons' need for speed and danger. (2006, October 10). *The Gold Coast Bulletin.*

Iverson, H. (2004). Risk-taking attitudes and risky driving behaviour. *Transportation Research Part F*, *7*, 135-150.

Jessor, R. (1987). Problem-behavior theory, psychosocial development, and adolescent problem drinking. *British Journal of Addition, 82*, 331-342.

Jarred, W. (2002). *Police powers and responsibilities and another act amendment bill 2002: Confronting bad and nuisance road behaviour*. Queensland Parliamentary Library.

Jonah, B.A. (1997). Sensation seeking and risky driving: A review and synthesis of the literature. *Accident Analysis and Prevention*, *29*, 651-665.

Piquero, A., & Paternoster, R. (1998). An application of Stafford and Warr's reconceptualization of deterrence to drinking and driving. *Journal of Research in Crime and Delinquency, 35*, 3-39.

Piquero, A., & Pogarsky, G. (2002). Beyond Stafford and Warr's reconceptualization of deterrence: Personal and vicarious experiences, impulsivity, and offending behavior. *Journal of Research in Crime and Delinquency, 39,* 153-186.

Queensland Transport. (2005b). *Queensland youth on the road and in control: A discussion of ways to improve young driver safety*. Queensland Government.

Simons-Morton, B., Lerner, N., & Singer, J. (2005). The observed effects of teenage passengers on the risky driving behavior of teenage drivers. Accident Analysis & Prevention, *37*, 973-982.

Skinner**,** B. F. (1948). 'Superstition' in the pigeon. *Journal of Experimental Psychology, 38,* 168-172.

Stafford, M.C., & Warr, M. (1993). A reconceptualisation of general and specific deterrence. *Journal of Research in Crime and Delinquency, 30,* 123-125.

Watson, B.C. (2004). *The psychosocial characteristics and on-road behaviour of unlicensed drivers*. Queensland University of Technology, Brisbane. [Doctoral Dissertation]

Zaal, D. (1994). *Traffic law enforcement: A review of the literature, Report 53.* Canberra: Federal Office of Road Safety.