



## COVER SHEET

---

This is the author-version of article published as:

**Lewis, Ioni M and Tay, Richard and Watson, Barry (2003) The Relationship between the Third-Person Effect and the Acceptance of Fear-Based Road Safety Advertisements. In *Proceedings Australian and New Zealand Marketing Academy*, Adelaide, Australia.**

Accessed from <http://eprints.qut.edu.au>

Copyright 2003 Australian and New Zealand Marketing Academy

# **The Relationship between the Third-Person Effect and the Acceptance of Fear-Based Road Safety Advertisements**

**Ms Ioni Lewis, PhD Scholar**

**Dr Richard Tay, Associate Professor**

**Mr Barry Watson, Lecturer**

**Centre for Accident Research and Road Safety, Queensland University of Technology  
(CARRS-Q)**

Keywords: Road safety advertising; fear appeals; third-person effect; drink driving; speeding

## **Abstract**

Threat-based messages that appeal to the emotion of fear have been widely used in the social marketing of public health including road safety, AIDS/HIV awareness, and anti-smoking. However, despite their popularity and over five decades of research into the fear-persuasion relationship, an unequivocal answer regarding their effectiveness remains unachieved. More contemporary fear appeal research has begun exploring the extent other variables moderate this relationship. In this study, a phenomenon from the communication literature, known as the third-person effect (TPE), was examined to explore its association with the extent individuals reported intentions to adopt the recommendations (i.e., message acceptance) of two fear-based road safety advertisements. In contrast to the classic TPE hypothesis, this study found that individuals acknowledged more personal persuasiveness relative to other drivers in general. Moreover, reverse third-person differential perception scores were significantly associated with increased message acceptance. Additionally, two hierarchical regressions revealed that third-person differential perception scores contributed to the prediction of message acceptance for both the speeding and drink driving advertisement beyond the contribution of other variables previously established by the fear appeal literature as relating to message acceptance. This finding should be of particular significance for social marketers given that reverse third-person perceptions may act to predispose an individual to adopting the recommendations of a health message.

## **Introduction**

The use of threat-based health messages or “fear appeals” as they have become more commonly known, has become commonplace in the social marketing of such issues as road safety, AIDS/HIV awareness, and anti-smoking (Tay & Watson 2002). However, despite their popularity, an unequivocal answer regarding their effectiveness remains unachieved despite over five decades of research into the fear-persuasion relationship (LaTour & Rotfeld 1997). Given the ultimate goal of such messages is not to scare individuals but to increase their engagement in self-protective behaviour (Bennett 1996), understanding factors that influence whether individuals adopt the recommendations of such threat-based messages is of evident importance.

Interestingly, a study from the communication literature by Duck, Terry, and Hogg (1995) identifies the third-person effect (TPE) as such a factor. The classic TPE maintains that individuals exposed to a potentially persuasive communication will perceive the communication

as exerting a stronger impact on and being of greater relevance to others (third persons) than themselves (Davison 1983). Substantial empirical support has established the classic TPE as a robust phenomenon generalisable across diverse media messages and research methodologies (Perloff 1993). However, intriguingly, Duck et al. found that the more individuals reported threat-based AIDS/HIV advertisements as desirable to be influenced by and of high quality, the more their third-person perceptions reversed. In other words, the characteristics of desirability and advertisement quality moderated the direction of third-person perceptions such that individuals perceived themselves as relatively more vulnerable to being persuaded by desirable and high quality advertisements than other people. Duck et al.'s finding has significant implications for social marketing because, presumably, an individual's message acceptance would increase for advertisements that they are most willing to admit personal persuasibility (Duck et al. 1995). In other words, reverse third-person perceptions may act to predispose individuals to being persuaded (Duck et al. 1995). However, in the absence of any measure of attitudinal and/or behaviour change (i.e., message acceptance), it cannot be concluded from Duck et al.'s study whether such perceptions did in fact predispose individuals to adopting the recommended attitudinal and behavioural changes. Given that Duck et al.'s study represents the only study that has explored the TPE in the context of threat-based health messages, more research is necessary to establish whether such reversals operate within threat-based advertising of other health issues and also whether such perceptions influence message acceptance.

Thus, this study's three aims are to extend upon the earlier study by Duck et al. (1995). First, the study aims to establish whether classic third-person perceptions, reversed third-person perceptions, or no self-other difference in perceived influence operate within the context of threat-based road safety advertising. Despite what would seem the identification of an important factor influencing the effectiveness of threat appeals, research examining the relationship between the TPE and threat-based advertising for *any* health issue has remained fallow since Duck et al.'s study. This study represents the first to explore the operation of the TPE in the context of threat-based road safety advertising.

Second, and perhaps more significantly, if such perceptions were found to operate within threat-based road safety advertisements, this study also aims to determine the relationship between such perceptions and individuals' reported future driving intentions. It is hypothesised that reverse third-person perceptions will act to predispose an individual to being persuaded and thus will be associated with increasing message acceptance. Conversely, classic third-person perceptions, where individuals perceive a persuasive communication as greater influence on others than self, should be associated with message rejection.

Third, the study aims to establish whether third-person perceptions contribute to the prediction of message acceptance beyond the contribution made by those fear appeal variables, previously established in the literature as relating to message acceptance of fear appeals. These are response efficacy, message self-efficacy, fear, and personal relevance.

## **Method**

A total of 152 respondents participated in the study. Approximately half the sample comprised of Queensland University of Technology students who participated for course credit (i.e., 49%), whilst the remaining 51% of participants were volunteers who were recruited by the researchers from both on and off campus. The sample was comprised mostly of females (67%) and the age distribution was as follows: under 20 years (21.7%), 20-29 (28.9%), 30-39 (20.4%), 40-49 (13.2%), 50-59 (10.5%), and 60 years and over (5.3%).

Two 60-second threat-based road safety television advertisements, one focusing on drink driving (“Joey”) and the other on speeding (“Tracey”), were selected. These advertisements were developed by the Victorian Transport Accident Commission (TAC) and as they had not been aired in Queensland, the effects of cumulative viewing exposure were limited.

A survey questionnaire was designed. For this paper, the relevant major constructs are, message acceptance, message rejection, and the TPE measure. With the exception of the TPE measure (i.e., third-person differential perception score), all items and composite measures were scored on 7-point Likert scales.

Message acceptance and rejection were both measured by behavioural intentions. This should be borne in mind when interpreting the results of the current study. Specifically, message acceptance was measured by items that examined participants’ intentions to both better monitor their future speeding and drink driving behaviour as well as adopting strategies to avoid speeding and drink driving. A Cronbach Alpha value of .91 was obtained for the items measuring message acceptance for the speeding advertisement and .92 for the items measuring message acceptance for the drink driving advertisement. Message rejection was measured by the extent individuals intended to avoid exposure to the advertisements. Cronbach Alphas indicated moderately high internal reliability with a value of .78 obtained for both advertisements.

The TPE, as a judgment contrast of perceived influence on self versus perceived influence on others was calculated from subtracting “Perceived influence on yourself” from “Perceived influence on other drivers in general”. Since both of these ratings were measured on a 7-point scale ranging from *Not influenced at all* [1] to *Extremely influenced* [7], the third-person differential perception score created, could range from –6 to 6 with positive scores denoting greater perceived influence on others than self (i.e., a typical TPE) and negative scores denoting greater perceived influence on self than others (i.e., a reverse TPE). This procedure is consistent with existing research (e.g., Borzekowski et al. 1999; Brosius & Engel 1996; Duck & Mullin 1995; Gunther & Mundy 1993). Additionally, it should be borne in mind when interpreting the results that negative correlations indicate an association with reverse third-person perceptions (i.e., more perceived influence on self than others) and positive correlations indicate an association with classic third-person perceptions (i.e., more perceived influence on others than self).

Testing was conducted in groups and all participants viewed each advertisement once only. To control for any possible order effect, the order of the two advertisements was counterbalanced between experimental sessions such that half of the experimental groups saw the speeding advertisement first and half saw the drink driving advertisement first.

## Results

The mean third-person differential perception score for both the speeding advertisement ( $M = -0.69$ ,  $SD = 1.54$ ) and the drink driving advertisement ( $M = -0.36$ ,  $SD = 1.88$ ) was negative. This finding indicates that on average, participants reported greater perceived influence on themselves than others for both advertisements. Two one-sample, two-tailed t tests confirmed that the mean third-person perception score for both advertisements significantly differed from zero with,  $t = -5.54$ ,  $p < .001$  for the speeding advertisement and  $t = -2.33$ ,  $p = .021$  for the drink driving advertisement.

Pearson’s product moment correlation coefficients between third-person differential perception scores and message acceptance and rejection were computed for each advertisement. Significant negative correlations were found between third-person differential perception scores

and message acceptance for both the speeding advertisement,  $r = -.45, p < .001$ , and the drink driving advertisement,  $r = -.44, p < .001$ . In other words, as third-person differential perception scores decreased, becoming more negative and thus indicating third-person reversals, message acceptance increased.

However, whilst there was a positive relationship between third-person differential perception scores and message rejection for both the speeding ( $r = .03$ ) and drink driving advertisement ( $r = .14$ ) neither of these relationships was large or significant. However, it should be noted that in the case of the drink driving advertisement, the results almost reached significance with  $p = .08$ .

To examine the final aim, two hierarchical regressions were performed with message acceptance as the dependent variable and fear, message self-efficacy, response efficacy, and personal relevance as the independent variables entered as block 1. To determine the contribution of third-person perceptions over and above those variables entered in the previous step, third-person differential perception scores were entered as block 2. This was repeated for both the speeding and drink driving advertisement.

For the speeding advertisement, the overall model accounted for a significant 56.2% (54.7% adjusted) of the variance in message acceptance for the speeding advertisement. When third-person differential perception scores were entered as block 2, they accounted for a further significant 5.9% of the variance in message acceptance over and above the linear combination of the four variables entered in block 1.

With all five independent variables in the model, third-person differential perception score was the second strongest predictor of message acceptance ( $\beta = -.27, p < .001$ ) with message self-efficacy as the strongest predictor ( $\beta = .50, p < .001$ ). The remaining independent variables in order of relative importance were perceived fear ( $\beta = .16, p = .009$ ), and personal relevance ( $\beta = .16, p = .006$ ).

For the drink driving advertisement, the overall model accounted for a significant 48.6% (46.8% adjusted) of the variance in message acceptance for the drink driving advertisement. When third-person differential perception scores were entered at block 2, they accounted for a further significant 3.5% of the variance in message acceptance over and above the linear combination of the four variables entered in block 1.

With all five independent variables entered at block 2, third-person differential perception scores again emerged as a significant predictor of message acceptance. In order of relative importance, the significant predictors of message acceptance for the drink driving advertisement were message self-efficacy ( $\beta = .48, p < .001$ ), perceived fear ( $\beta = .30, p < .001$ ), and third-person differential perception scores ( $\beta = -.22, p = .002$ ). Hence, in both models, the third-person differential perception score significantly added to the variance explained in message acceptance over and above the other constructs.

## Discussion

The first aim of the study was to determine whether threat-based road safety advertisements were associated with classic third-person perceptions, reverse third-person perceptions, or no self-other difference. The results suggest that most individuals perceived themselves as more vulnerable to being persuaded by threat-based road safety advertisements than other drivers in general.

It should be noted that unlike Duck et al. (1995) who found that reverse third-person perceptions only occurred if the message was considered to be desirable and high quality, the

results of the current study revealed a *general tendency* for individuals to perceive greater influence on self relative to others. One explanation for this result is that road safety advertisements may represent a particularly strong form of positive content, perhaps stronger than AIDS health and safety advertising. It may be possible that the strong positive content leads to a general reversed TPE. This suggestion does not seem unreasonable given participants views of the AIDS advertisements may be influenced by the negative stereotypes that surround the issue of AIDS.

The study's second aim proposed that, to the extent reversed third-person perceptions increased an individual's admission of personal vulnerability to influence, such vulnerability to influence should be positively associated with greater attitudinal or behaviour change (i.e., message acceptance). It follows that if reversed third-person perceptions were associated with message acceptance then classic third-person perceptions, where individuals perceive a persuasive communication as greater influence on others than self, should be associated with message rejection.

As hypothesised, message acceptance was negatively correlated with third-person differential perception scores. This finding supports the view of Duck et al. (1995) that reversed third-person perceptions predispose individuals to being more likely to accept the recommendations of a message. However, contrary to the hypothesis that message rejection would be positively correlated to third-person differential perception scores, whilst there was a positive relationship between third-person differential perception scores and message rejection for both the speeding and drink driving advertisement, neither of these relationships were significant.

Two possible explanations are offered for the failure to find a significant relationship between third-person perceptions and message rejection. First, message rejection may not have been operationalised well. This problem is not unique to this study but reflects a limitation in most fear appeal studies due to message rejection being relatively ignored compared with message acceptance (Champness 2001; Witte 1992). Consequently, limited empirical testing of message rejection measures has been conducted. Second, it is also possible that the participant sample simply may have comprised more individuals who were prepared to accept the message's recommendations.

The third aim of the study examined whether third-person differential perception scores contributed to the explanation of message acceptance over and above those fear appeal constructs already established in the literature as influencing message acceptance.

In both models (i.e., message acceptance for the speeding and drinking driving advertisement) the third-person differential perception score significantly added to the variance explained in message acceptance over and above the other fear appeal constructs examined by this study. While the increase in variance explained by third-person differential perception scores in each model was relatively modest, it is interesting that it was larger than that associated with some of the other variables that have received considerable attention in fear appeal research such as response efficacy and personal relevance.

### **Implications**

Both theoretical and practical implications have emerged from the findings of the current study. This study by incorporating the TPE from the communication literature into the fear appeal literature has extended upon both models attempting to predict the TPE in communication

literature as well as contemporary understanding of factors influencing message acceptance in the fear appeal literature.

In terms of practical implications, this study identifies the TPE as an important consideration for the design and evaluation of future road safety advertisements. For instance, an important objective for campaign designers may be to design advertisements that contain the characteristics that foster third-person reversals in the greatest number of individuals. Additionally, in terms of evaluating campaigns, measuring respondents' perceptions of self-other influence may provide a more complete understanding of the relevance of advertisements for particular target audiences. For instance, an individual may reject a message not because it is entirely irrelevant to them but perhaps because they have perceived it as more relevant for others. It would be informative to know who these "others" constitute and whether they are being persuaded.

### **Future Research Directions**

This study has identified some important future research directions. For instance, this study suggests that in order to gain a more complete understanding of factors influencing the effectiveness of threat-based health messages, future fear appeal research should integrate research from various theoretical domains. Additionally, this study highlights the need to further understanding of the reversed third-person effect and more specifically, conditions that foster such reversals. Overall, reverse third-person perceptions have been reported inconsistently in previous research suggesting that such reversals are less robust than classic third-person perceptions. Indeed, whilst Duck et al. (1995) found reverse third-person perceptions for threat-based AIDS/HIV advertisements resulted only when moderated by characteristics of the advertisements and individual perceivers, the current study found a general tendency for third-person reversals for threat-based road safety advertising. When considered together, the results of this study and Duck et al.'s study suggest that third-person reversals may not be generalisable for threat-based advertising of different health issues. Thus, an important direction for future research is to establish the operation of third-person perceptions for the social marketing of other health issues (e.g., anti-smoking). Finally, given that the exploratory nature of this study and the use of correlational data, future research should aim to determine the causal relationships between third-person perceptions and message acceptance/rejection. This would establish whether such perceptions do in fact precede and influence message acceptance/rejection or whether they are a 'by-product' of accepting or rejecting a threat-based message.

### **Conclusion**

The key finding that has emerged from the study is that individuals' acceptance of threat-based road safety advertisements is associated with perceived self-other differences in persuasibility (i.e., the TPE). Specifically, as third-person perceptions become more reversed and individuals perceive more influence on self relative to others, message acceptance increases. Understanding the factors that influence the persuasiveness of such advertisements is an important step in establishing whether drivers adopt safer driving practices.

## References

- Bennett R (1996) Effects of horrific fear appeal on public attitudes towards AIDS. *International Journal of Advertising*, 15(3), 183-203.
- Borzekowski D L et al. (1999) The perceived influence of cigarette advertisements and smoking susceptibility among seventh graders. *Journal of Health Communication*, 4(2), 105-118.
- Brosius H & Engel D (1996) The causes of the third-person effects: Unrealistic optimism, impersonal impact, or generalized negative attitudes towards media influence? *International Journal of Public Opinion Research*, 8(2), 142-162.
- Champness P (2001) *The effectiveness of road safety threat appeals: What is the appeal in fear appeals?* Unpublished honours thesis, Queensland University of Technology.
- Davison W P (1983) The third-person effect in communication. *Public Opinion Quarterly*, 47, 1-15.
- Duck J M & Mullin B (1995) The perceived impact of the mass media: Reconsidering the third person effect. *European Journal of Social Psychology*, 25, 77-93.
- Duck J M et al. (1995) The perceived influence of AIDS advertising: Third-person effects in the context of positive media content. *Basic and Applied Social Psychology*, 17(3), 305-325.
- Gunther A C & Mundy P (1993) Biased optimism and the third-person effect. *Journalism Quarterly*, 70(1), 55-67.
- LaTour M S & Rotfeld H J (1997) There are threats and (maybe) fear-caused arousal: Theory and confusions of appeals to fear and fear arousal itself. *Journal of Advertising*, 26(3), 45-59.
- Perloff R M (1993) Third-person effect research 1983-1992: A review and synthesis. *International Journal of Public Opinion Research*, 5(2), 167-184.
- Witte K (1992) Putting the fear back into fear appeals: Reconciling the literature. *Communication Monographs*, 59(4), 329-349.
- Tay R (1999) The effectiveness of the anti-drink driving advertising campaign in New Zealand. *Road and Transport Research*, 8(4), 3-15.
- Tay R & Watson B (2002) Changing drivers' intentions and behaviours using fear-based driver fatigue advertisements. *Health Marketing Quarterly*, 19(4), 55-68.