



**FACULTEIT ECONOMIE  
EN BEDRIJFSKUNDE**

**TWEEKERKENSTRAAT 2  
B-9000 GENT**  
Tel. : 32 - (0)9 – 264.34.61  
Fax. : 32 - (0)9 – 264.35.92

## **WORKING PAPER**

### **Exploring the Impact of Fear Appeals on the Prevention of Shoplifting**

**Tine De Bock\***

**Iris Vermeir<sup>†</sup>**

**Mario Pandelaere<sup>‡</sup>**

**Patrick Van Kenhove<sup>§</sup>**

January 2010

2010/639

---

\*Tine De Bock is PhD Student at Ghent University, Faculty of Economics and Business Administration, Department of Marketing, Tweekerkenstraat 2, 9000 Ghent, Belgium, Tel +32 9 2643567, E-mail: Tine.DeBock@UGent.be.

<sup>†</sup>Iris Vermeir is Assistant Professor of Marketing at University College Ghent, Department of Business Administration and Management, and at Ghent University, Faculty of Economics and Business Administration, Department of Marketing, Voskenslaan 270, 9000 Ghent, Belgium, Tel +32 9 2422650, Fax +32 9 264279, E-mail iris.vermeir@hogent.be.

<sup>‡</sup>Mario Pandelaere is Associate Professor of Marketing at Ghent University, Faculty of Economics and Business Administration, Department of Marketing, Tweekerkenstraat 2, 9000 Ghent, Belgium, Tel +32 9 2643520, E-mail: Mario.Pandelaere@UGent.be.

<sup>§</sup>Patrick Van Kenhove is Professor of Marketing at Ghent University, Faculty of Economics and Business Administration, Department of Marketing, Tweekerkenstraat 2, 9000 Ghent, Belgium, Tel +32 9 2643526, E-mail: Patrick.VanKenhove@UGent.be.

# **EXPLORING THE IMPACT OF FEAR APPEALS ON THE PREVENTION OF SHOPLIFTING**

## **ABSTRACT**

The present study investigates the effectiveness of fear appeals in preventing shoplifting among adolescents. We study the effects of type of punishment (social disapproval versus fines), probability of getting caught when shoplifting and severity of the punishment. Results show that social punishment messages should stress severe levels of social disapproval when the chance of getting caught is low. When social disapproval messages imply a high probability of apprehension, the severity of social rejection makes no difference for the shoplifting intentions. Finally, messages focusing on fines should depict large instead of small fines, irrespective of the communicated probability of getting caught.

## INTRODUCTION

Shoplifting remains one of the most common forms of deviance in our society (Krasnovsky and Lane 1998). Research shows that shoplifters come from all socio-economic and demographic groups (Alberstat 1989) making retail theft not restricted to a small criminal subculture but representative of customers overall (Dawson 1993). Previous studies support this view of the shoplifter as a general consumer rather than a distinct criminal type by estimating that one in every twelfth shopper shoplifts (Ray 1987) and that as many as 60 percent of consumers have shoplifted at least once in their lifetime (Klemke 1992).

Recent figures indicate that customer theft remains the most important factor in shrinkage in 2009 (i.e., stock loss from crime or wastage; Bamfield 2009) accounting for 42.5 percent or \$48.9 billion. This daily misconduct results in retailers facing the increasing costs of (replacing) lost merchandise on the one hand and the expensive measures associated with prevention, detection and prosecution on the other hand (French, Crask and Mader 1984; Yaniv 2009). These extra costs form a significant factor in many retail failures (Cole 1989). As stores often compensate merchandise shrinkage by way of higher prices, honest customers also share in the costs of shoplifting (Geurts, Andrus and Reinmuth 1976; Tonglet 2002). Further, retailers' efforts to curb retail theft rely heavily on methods such as cameras, security officers and mirrors, all of them being 'Big Brother' measures. Such measures often create a hostile shopping environment in which legitimate shoppers might sense a lack of trust (El-Dirghami 1974), feel inconvenient and invaded on their privacy (Griffin 1989). This might adversely affect the shopping experience (Tonglet 2000) and could be counterproductive for the retailer by lowering their patronage (Pan and Zinkhan 2006).

The prevalence and profound impact of shoplifting necessitates the investigation of appropriate means to eliminate or at least lower this common and frequently undetected crime

(Krasnovsky and Lane 1998). Nevertheless, most academic studies about retail theft focus on identifying psychological and demographic characteristics and motivations of shoplifters (Cox et al. 1993; Guffey, Harris and Laumer 1979) rather than on the effects of interventions used to reduce shoplifting (Krasnovsky and Lane 1998). This leaves a definite need for well-controlled experiments designed to evaluate the effectiveness of prevention strategies (Farrington 1999).

The aim of the present study is to investigate the effectiveness of several fear appeal communications. We conduct research among adolescents for two reasons. First, shoplifting is most prevalent in this age group (Tonglet 2000). Second, studies especially concerned with this segment are quite sparse (Krasnovsky and Lane 1998). To develop alternative fear appeals, we draw on Rogers' (1975) Protection Motivation Theory. As a result, our study not only generates a better insight into the prevention of shoplifting, but also demonstrates the value of the Protection Motivation Theory for a domain that is far removed from domains in which it is typically applied.

## CONCEPTUAL FRAMEWORK AND HYPOTHESES

### Protection Motivation Theory and Fear Appeals

In many situations, fear appeals are used to try to change intentions and alter behavior. According to the Protection Motivation Theory (Rogers 1975), an effective fear appeal communicates three pieces of information: (1) the magnitude of noxiousness of some event (i.e., severity), (2) the probability that the given event will occur if one does not perform adaptive behavior or does not alter existing behaviors (i.e., vulnerability) and (3) the availability and effectiveness of a coping response that might reduce or eliminate the noxious stimulus (i.e., response efficacy). In later developments of the Protection Motivation Theory (Maddux and Rogers 1983), the issue of self-efficacy is introduced. Self-efficacy refers to the extent to which an individual believes s/he is able to engage in the coping response. Even when

the suggested coping response is maximally efficient (i.e., it entirely eliminates the probability of the focal negative event), the given fear appeal may not result in any changes if an individual feels unable to adopt that particular response.

When an individual is exposed to a fear appeal, two major critical cognitions are triggered. The communicated probability of occurrence of the negative event raises cognitions about *perceived* vulnerability (which reflect how personally susceptible an individual feels to the communicated threat) and the communicated magnitude of noxiousness of the focal event raises cognitions about *perceived* severity (which reflect how serious the individual believes the threat would be to his or her own life). According to the Protection Motivation Theory, these cognitive processes arouse what is called 'protection motivation' (i.e., the motivation to protect oneself from harm/negative consequences of shoplifting). If this protection motivation is sufficiently high, it directs behavior and hence, leads to changed behavioral patterns.

Researchers have adopted the Protection Motivation Theory as a more general model of decision making in relationship to threats (Maddux 1993) using the theory in a wide array of fields (Herath and Rao 2009) and applying it to a number of threats, the majority being health-related (Neuwirth, Dunwoody and Griffin 2000). Some studies also apply the theory to topics beyond health promotion and disease prevention (Rogers and Prentice-Dunn 1997) including purchasing insurance (Beck 1984) and the prevention of nuclear wars (Wolf, Gregory and Stephan 1986). This prompted Floyd, Prentice-Dunn and Rogers (2000) to suggest that the protection motivation concept involves *any* threat for which there is an effective recommended response that can be carried out by the individual. So the Protection Motivation Theory and fear appeals are not restricted to physical threats but can be extended to social and psychological threats as well (Rogers and Prentice-Dunn 1997). It has been previously noted that significant contributions to society can be made by exploring the model further in various threat situations (Tanner, Hunt and Eppright 1991) including social problems (Tanner, Day and Crask 1989). As

it has been suggested that several situations exist where fear appeals may be appropriate communication strategies (Tanner et al. 1989), this study uses fear appeals in a retail context to prevent adolescents from stealing, hoping to provide some tangible methods that retailers can use to tackle the shoplifting phenomenon.

In our research, we manipulate communicated vulnerability and severity. Vulnerability (i.e., the probability of certain negative consequences of shoplifting) and severity (i.e., the magnitude of the negative consequences of shoplifting) of a fear appeal message in the context of retail theft can be manipulated in a realistic manner. For example, people can imagine themselves in a situation where they have to pay a fine of €10 or €500 when they get caught red-handed while shoplifting. By contrast, manipulating self-efficacy in a fear appeal message seems quite ‘artificial’ to us in this study. It is like saying to respondents: ‘Imagine yourself being able (not being able) to resist the shoplifting temptation’. People who are high in self-efficacy with regard to retail theft will have to imagine themselves being low in self-efficacy and vice versa. This may lead to incorrect or misleading results with regard to protection motivation. Nevertheless, research on self-efficacy yields converging evidence that it comprises an important influencing agent in motivational, cognitive and affective processes (Bandura 1992). Further, because research lists low self-esteem among adolescents as a partial cause of their aberrant consumer behavior (Babin and Griffin 1995), emotions associated with self-efficacy are likely to significantly influence their shoplifting decisions (Babin and Babin 1996). Because of this significance of the self-efficacy construct, we incorporate it as a control variable in our data analysis. Finally, we ignore response efficacy as restraining from shoplifting eliminates all possible negative consequences of shoplifting (i.e., maximal response efficacy).

**Study Design: Fines versus Social Punishment**

As already mentioned above, we develop fear appeals in which we vary information about the vulnerability and severity factor. The vulnerability factor represents the probability that a certain consequence will be imposed on the shoplifter and will be operationalized as the chance of getting apprehended while shoplifting. This factor thus indicates how vulnerable an individual is to certain consequences when s/he engages in shoplifting. In the fear appeals we use, we make a distinction between low and high levels of vulnerability, in other words, a low (9.4 percent) or a high (85.9 percent) probability to get caught when shoplifting.

The severity factor is concerned with the magnitude of noxiousness of the consequences that will be imposed on the shoplifter when caught for this misconduct. The more conventional punitive measures in our society are imprisonment for major crimes and fines for less substantial forms of deviance like shoplifting (Garvey 1998; Netter 2005). Correspondingly, in some of the fear appeals we use in this study, we introduce fines as a consequence of shoplifting. We distinguish between low (€12.5) and high (€375.5) fines for retail theft.

Different forms of rather alternative sanctions appear in the criminal justice system cutting across conventional notions of what punishment is all about (Netter 2005). More specifically, these penalties go a step beyond the relative anonymity surrounding the passive fine-paying (Netter 2005) by exposing criminals' misbehavior to others who are normally not aware of these malefactions, creating an unpleasant emotional state similar to feelings of shame (Garvey 1998), embarrassment or stigmatization. These kinds of penalties come in different forms and can be used to punish any offense, but are typically reserved for sex and moral offenses, commercial offenses and, important for this study, minor offenses such as shoplifting (Whitman 1998). As these punishments are concerned with (the intensity of) social disapproval or rejection for engaging in wrongdoing, these can be seen as social threats. It might be interesting to take these 'social penalties' into consideration as literature shows that possible

social disapproval might have an adverse effect on an individual's likelihood to shoplift (Lo 1994).

With regard to the fear appeals in this research, we thus also create messages where one is confronted with social disapproval (instead of fines) as a consequence of getting apprehended for shoplifting. More specifically, we distinguish between low (the respective store personnel will be informed about the shoplifting act) and high levels (the shoplifter's photo will be hung in every small or large shop in his/her neighborhood) of social rejection. To the best of our knowledge, academic shoplifting (prevention) literature covers no studies that compare fear appeals featuring fines to fear appeals featuring social punishments.

## Hypotheses

Several studies indicate that the shoplifting behavior of people is likely to be positively influenced by perceptions of a small chance of being caught (Babin and Griffin 1995; Tonglet 2002). Furthermore, despite some exceptions, it seems to be a rather common view among many scholars, law practitioners and existing empirical deterrence studies that the certainty of punishment is of greater importance than the severity aspect in deterring individuals from committing crimes such as shoplifting (Dahlbäck 1998; Mendes 2004; Mendes and McDonald 2001; von Hirsch et al. 1999). In addition to this, shoplifters tend to perceive fewer consequences from shoplifting than other shoppers (Ray 1987). Hence, when fear appeals imply a low level of vulnerability (i.e., a low chance of being caught for shoplifting), they should emphasize that highly severe consequences will be imposed for shoplifting. When a high vulnerability is communicated, however, severity should not matter that much anymore. In other words, when there is a high chance of being caught for shoplifting, it will not make a difference in terms of protection motivation whether low or high severe consequences are stressed within the message.



We believe this latter situation looks different for fear appeals featuring fines. The ‘problem’ with fines is that they make it look like an offender can buy his way out of punishment. For this reason, Kahan (1996) even speaks of fines as being ambiguous punishments which are expressively inadequate, meaning that they don’t say the right thing (clearly enough). They, in other words, do not condemn as punishments should do. So, fear appeals depicting fines as a consequence of shoplifting should emphasize that a large rather than a small amount of money need to be paid when one commits retail theft. When the amount of money that one needs to pay as a consequence of shoplifting is rather small, a more economic logic may come into play. More specifically, the benefits of shoplifting (e.g., the value of the stolen products) will, in the long run, outweigh the costs related to the fines one needs to pay each time s/he shoplifts. Briefly stated, we expect that fear appeals stressing severe monetary consequences of shoplifting lead to higher levels of protection motivation compared to fear appeals depicting small amounts of money, irrespective of the level of probability to get caught while shoplifting.

In summary, we put forward the following hypotheses:

- H1: The impact of severity on protection motivation depends on the level of vulnerability in case of fear appeals featuring social disapproval. More specifically, we expect that:
- H1a: When a fear appeal featuring social disapproval depicts a low chance to get caught, high (versus low) severity has a more positive influence on protection motivation.
- H1b: When a fear appeal featuring social disapproval depicts a high chance to get caught, severity does not influence protection motivation.
- H2: In case of fear appeals featuring fines, high (versus low) severity has a more positive influence on protection motivation, irrespective of the level of vulnerability.

The hypotheses postulated above indicate that we expect to find a significant three-way interaction effect between Message Type (social disapproval versus fines), Vulnerability (low versus high chance to get caught) and Severity (low versus high severe consequences of shoplifting).

## METHODOLOGY

### Sample

The majority of studies dealing with shoplifting rely mainly on official data and victimization reports including information about apprehended shoplifters. Though these data have the advantage to be easily available, they have some serious disadvantages too (Cox, Cox and Moschis 1990). First of all, only a small number of shoplifters get caught (Griffin 1984) and they are probably not representative of the whole shoplifters population (Cox et al. 1990). Further, the interrogation of apprehended shoplifters often happens under high pressure and is likely to be biased by the shoplifter's desire to save his skin (Klemke 1982). These two limitations make shoplifting one of the most underreported and misreported crimes (Farrington 1999; Hollinger and Davis 2002). Finally, studies of apprehended shoplifters typically lack a control group of comparable non-shoplifters (Cox et al. 1990). To avoid these biases and limitations, this study draws respondents from the general population of adolescents, and thus not only from those adolescents who got caught during shoplifting activities.

An anonymous, self-administered online survey was filled out by 352 Dutch speaking Belgian adolescents (226 female and 126 male) ranging in age from 12 to 18 years ( $M=15.25$ ;  $SD=1.56$ ). Respondents were randomly assigned to one of the eight conditions of our 2 (punishment/message type: fines versus social disapproval) by 2 (vulnerability: low versus high) by 2 (severity: low versus high) between-subjects design.

## Stimuli

We briefly recapitulate how we have constructed the eight different experimental stimuli. The first factor of the between-subjects design, fines versus social disapproval (i.e., message type), concerns the fact whether the fear appeal communication indicates that one has to pay a certain amount of money or that one will be confronted with a certain degree of social disapproval as a consequence of shoplifting. Consequently, four messages stress the fact that one has to pay a certain fine when caught for shoplifting, while the other four messages comprise a certain degree of social punishment as a consequence of this misconduct. With regard to the second factor of this study's design (i.e., vulnerability), each message depicts a low (9.4 percent) or a high (85.9 percent) chance of getting caught when shoplifting. In other words, the vulnerability element in each fear appeal indicates how vulnerable an individual is to the various consequences of shoplifting when one engages in this misbehavior. Finally, the severity factor of the communications deals with the magnitude of noxiousness of the fine or social punishment that will be enforced when one is apprehended for shoplifting. Within the 'fines' messages, low severity is represented by an amount of €12.5 while high severity means paying a fine of €375.5. Low severity in the 'social disapproval' communications implies that the respective store personnel will be informed about the shoplifting act. High severity implies that the shoplifter's photo will be hung in every small or large shop in his/her neighborhood.

## Measures

Respondents indicate their (dis)agreement with three statements enquiring protection motivation on a seven-point semantic differential scale. The three items are: 'This message increases/decreases my intention to steal in a store', 'This message (does not) deter(s) me from

stealing', and 'This message incites/prevents me to steal'. We average the responses to these three items to form an overall protection motivation score (Cronbach alpha=0.80).

This study takes into account several individual difference variables which may impact the persuasive mechanism of the fear appeals. First, we measure respondents' level of message involvement by means of Cox and Cox' (1991) six-item scale (Cronbach alpha=0.72). These items (e.g., 'This message is interesting') are measured on a seven-point Likert scale ranging from 'totally not agree' to 'totally agree'. Second, we assess attitude toward the message using a seven-item seven-point semantic differential scale (Cronbach alpha=0.74). Examples of the anchors are '(not) convincing', 'bad-good' and '(not) credible'.

Third, as previous studies show that individuals who report to shoplift estimate the risk of being caught for shoplifting significantly lower than individuals who do not report shoplifting (e.g., Day et al. 2000), we want to take into account people's general ideas about the chances to get caught when shoplifting (which we call 'general perceived vulnerability') as well as their perceptions about the severity of the consequences when apprehended for shoplifting (which we call 'general perceived severity'). These constructs are similar to maladaptive coping behaviors in that they might render a fear appeal ineffective (cf. Tanner et al. 1991). Inspired by the Irrational Beliefs Test (IBT; Jones 1968), the Shoplifter's Irrational Beliefs Scale (e.g., 'Even if I am prosecuted, the punishment will not be severe') (SIBS; Ray, Solomon and Mellina 1982) and Tonglet's (2002) research (e.g., 'If I shoplift, I will get caught'), we measure respondents' general perceived vulnerability with regard to shoplifting by means of four items (Cronbach alpha=0.66; e.g., 'I do not worry about shoplifting, because I will never get caught' (reverse scored)) and measure respondents' general perceived severity using three statements (Cronbach alpha=0.76; e.g., 'I am convinced that (being caught for) shoplifting has serious negative consequences'). These two constructs are both ranged on a seven-point Likert scale going from 'totally not agree' to 'totally agree'. General perceived

vulnerability and severity refer to beliefs about vulnerability and severity *before* being exposed to one of our fear appeals.

Fourth, we assess self-efficacy (i.e., individuals' capability of refraining themselves from shoplifting) by means of respondents' (dis)agreement with five items ranged on a seven-point Likert scale from 'totally not agree' to 'totally agree' (Cronbach alpha=0.74). Examples of these items are: 'Even if the chance to get caught as a consequence of shoplifting as well as the corresponding punishment would be small, I am still perfectly able to control myself to not shoplift' or 'Even if my friends would dare me to shoplift, I am still perfectly able to resist this'.

Fifth, we control for attitudes toward shoplifting and past shoplifting experience as previous research indicates that these variables play an important role in shoplifting behavior (e.g., Tonglet 2002). Inspired by the scale developed by Tonglet (2002), twelve items measured on a seven-point semantic differential scale are used to assess respondents' attitudes toward shoplifting (Cronbach alpha=0.93). The items assess how favourably or unfavourably respondents feel toward the shoplifting act (e.g., 'foolish-wise', 'bad-good', '(dis)honest', '(not) against my principles'). The attitude toward shoplifting construct also includes items assessing moral objections to shoplifting like 'I would (not) feel guilty' (cf. Cox et al. 1993). We measure past shoplifting behavior by asking respondents how many times during the last year they already took something from a store without paying for it. Results indicate that 80.1 percent has not stolen something during the last year while 15.3 percent stole once. Other respondents' answers range from two to ten times (4.6 percent of the respondents). Next to past shoplifting behavior, we also control for the number of times a respondent has already been caught while shoplifting, by whom or whatsoever. Findings show that the majority of respondents has never been caught in the past (96 percent), while 4 percent of the respondents has been apprehended once during retail theft.

Sixth, we control for peers' influence and delinquency as research indicates that delinquent peers play a central role in causing crime (e.g., Agnew 2005; Haynie 2002). Adolescents with relatively high numbers of friends that shoplift report fewer moral objections to shoplifting and more frequent shoplifting behavior (Cox et al. 1993). Correspondingly, youths' own shoplifting behavior highly correlates with that of their friends (Klemke 1982). Two questions assess peers' influence and delinquency. First, respondents have to indicate how many of their friends have already stolen something (coded 0 for 'none' (31.8 percent), 1 for 'some' (61.6 percent), 2 for 'most' (6.3 percent), and 3 for 'all' (0.3 percent)) (cf. Matthews and Agnew 2008). Second, we ask whether they did see their friends already steal, which they rate on a five-point scale ranging from 'no, never' (63.1 percent) over 'one time' (25.9 percent), 'every now and then' (9.9 percent) and 'regularly' (0.9 percent) to 'every time they are in a store' (0.3 percent).

Finally, we include gender as covariate.

## RESULTS

### Manipulation checks

Respondents are randomly assigned to one of the eight fear appeals featuring social disapproval or fines depicting low or high levels of vulnerability and severity. Before analyzing the data, we need to make sure that the respondents correctly perceive these depicted levels of vulnerability and severity. In other words, when a fear appeal depicts a low level of vulnerability (i.e., low chance to get caught), for example, does the respondent also perceive this chance or level as low? Therefore, we ask the participants to indicate their perceptions of the vulnerability and severity levels depicted in their message. Concerning the vulnerability aspect, they indicate how high they believe the depicted chance to get caught to be. With regard to the severity element of the message, respondents indicate how severe they believe the

depicted consequence of shoplifting to be. These respective scales are seven-point Likert formats ranging from 'very small' to 'very large' in case of the vulnerability manipulation check, while ranging from 'totally not severe' to 'totally severe' in case of the severity manipulation check.

We conduct two ANOVA's with Message Type (fines versus social disapproval), Vulnerability (low versus high) and Severity (low versus high) as between-subjects factors and the manipulation check questions with regard to vulnerability and severity as dependent variables, respectively. The results of these manipulation checks show a significant main effect of the vulnerability factor on the vulnerability manipulation check (Low vulnerability:  $M=2.93$ ; High vulnerability:  $M=5.96$ ;  $F(1,344)=479.49$ ,  $p<.001$ ). Furthermore, findings show a significant main effect of the severity factor on the severity manipulation check (Low severity:  $M=3.00$ ; High severity:  $M=5.96$ ;  $F(1,344)=330.68$ ,  $p<.001$ ). Importantly, we find neither a significant main effect of Vulnerability on the severity manipulation check ( $F(1,344)=0.29$ ,  $p>.05$ ), nor a significant main effect of Severity on the vulnerability manipulation check ( $F(1,344)=2.74$ ,  $p>.05$ ). Besides, results indicate no significant two-way or three-way interaction effects between Vulnerability, Severity and/or Message Type for either the vulnerability manipulation check as well as the severity manipulation check. This indicates that our manipulations of Vulnerability and Severity are not confounded with one another.

### Main results

To test our hypotheses, we conduct an ANCOVA with Message Type (fines versus social disapproval), Vulnerability (low versus high chance to get caught) and Severity (low versus high severe consequences of shoplifting) as between-subjects independent variables and Protection Motivation as the dependent variable. We include the following variables as covariates to control for their effect: message involvement, attitude toward the message,

general perceived vulnerability concerning shoplifting, general perceived severity concerning shoplifting, self-efficacy, attitude toward shoplifting, number of thefts during the last year, number of times one has already been caught for shoplifting, number of friends that have already stolen something, number of friends one has already seen shoplifting and gender. Results show that the following covariates significantly impact protection motivation: message involvement, attitude toward the message, general perceived severity concerning shoplifting, attitude toward shoplifting, number of friends that have already stolen something, and gender (coded 0 for females and 1 for males). Table 1 reports the standardized regression coefficients of the equation with these covariates as independent variables and protection motivation as the dependent variable.

(Include Table 1 here)

The ANCOVA reveals a significant main effect of Message Type ( $F(1,333)=4.34$ ,  $p<.05$ ) indicating that ‘social disapproval’ messages ( $M=5.50$ ;  $SE=0.07$ ) lead to higher protection motivation than messages featuring fines ( $M=5.27$ ;  $SE=0.08$ ). A significant main effect of Severity ( $F(1,333)=5.48$ ,  $p<.05$ ) indicates that ‘high severity’ fear appeals ( $M=5.51$ ;  $SE=0.08$ ) result in higher levels of protection motivation than ‘low severity’ fear appeals ( $M=5.26$ ;  $SE=0.08$ ). We obtain no significant main effect of Vulnerability ( $F(1,333)=1.19$ ,  $p>.05$ ). In addition, none of the two-way interactions are significant: Message Type by Vulnerability ( $F(1,333)=0.79$ ,  $p>.05$ ), Message Type by Severity ( $F(1,333)=0.26$ ,  $p>.05$ ) and Vulnerability by Severity ( $F(1,333)=0.79$ ,  $p>.05$ ).

In line with our hypotheses, the most important result is a significant three-way interaction between Message Type, Vulnerability and Severity ( $F(1,333)=4.71$ ,  $p<.05$ ). To further investigate this three-way interaction, we examine the interaction between Vulnerability



and Severity for social disapproval messages and for fines messages separately (see Figure 1). While this interaction is significant for social disapproval messages, ( $F(1,333)=4.90, p<.05$ ), it is not for fear appeals focusing on fines ( $F(1,333)=0.79, p>.05$ ).

(Include figure 1 here)

For social disapproval messages, we conduct follow-up analyses of the obtained interaction between Vulnerability and Severity. For low vulnerability, high severity messages ( $M=5.75; SE=0.15$ ) lead to higher protection motivation than low severity messages ( $M=5.22; SE=0.15; F(1,333)=5.99, p<.05$ ). For high vulnerability, however, no significant differences are obtained between low severity ( $M=5.57; SE=0.15$ ) and high severity ( $M=5.44; SE=0.14$ ) ( $F(1,333)=0.38, p>.05$ ). These findings confirm hypotheses 1a and 1b.

For messages involving fines, a significant main effect of Severity ( $F(1,333)=3.97, p<.05$ ) indicates that large fines lead to higher protection motivation ( $M=5.43; SE=0.11$ ) than low fines ( $M=5.12; SE=0.11$ ). We obtain no significant main effect of Vulnerability ( $F(1,333)=1.85, p>.05$ ). In other words, low vulnerability ( $M=5.17; SE=0.11$ ) does not lead to significantly less protection motivation than high vulnerability ( $M=5.38; SE=0.11$ ). These results confirm hypothesis two.

## DISCUSSION

Despite the wide prevalence and impact of shoplifting, its prevention remains relatively understudied in the retail, consumer behavior and marketing literature (Babin and Babin 1996; Kallis and Vanier 1985; Tonglet 2002). To fill this gap, the present study investigates the effectiveness of fear appeal communications, drawn on Rogers' (1975) Protection Motivation Theory, to prevent retail theft. An advantage of fear communications, certainly in times where

retailers suffer from economic recession, is that they are rather cost-effective ways of hampering shoplifting activities in comparison with retailers' more traditional measures of avoiding retail theft such as cameras and store security personnel.

The current study focuses on adolescents. In the past, retailers saw this group of consumers as a 'pain' rather than a 'pleasure' (Andreoli 1996). But with the growing financial power of the adolescent population, which is likely to substantially grow in the future, retailers have recently seen the advantage of focusing on adolescent shoppers (Setlow 2000). However, as adolescents are more likely to shoplift than any other age group (Tonglet 2000), focusing on this segment requires more knowledge about effective prevention strategies to mitigate this misbehavior.

The more conventional ways of punishing misbehavior like shoplifting are fines. Next to these fines, this study takes into consideration alternative ways of sanctioning (i.e., social disapproval) which exist in our society, but which are usually not often used or examined. Nevertheless, this study demonstrates that social punishments are worth to further investigate as findings show that social disapproval messages are more efficient in mitigating shoplifting intentions than the more traditional messages featuring fines. Further, the results of this study yield some suggestions for retailers who want to use fear appeals as part of their 'shoplifting prevention package' directed to adolescents. Retailers may benefit from taking into account our findings which reveal a different interplay between the vulnerability and severity factor for messages featuring social disapproval and messages featuring fines. More specifically, messages depicting social punishment as a consequence of shoplifting need to stress severe levels of social disapproval when the chance to get caught is low. When social disapproval messages imply a high probability of apprehension, the severity of social rejection makes no difference for the intention to refrain from shoplifting. Finally, for messages involving fines,

large rather than small fines should be communicated, irrespective of the chance to get caught for shoplifting.

We want to end this paper by pointing out some limitations and possible suggestions for future research. First of all, by reducing shoplifting acts among adolescents, retailers will significantly reduce the size of the problem. Nonetheless, our sample of high school students is not completely representative of other consumers or store personnel. As adult shoplifting and employee theft are other important causes in retail shrinkage, it would be interesting to investigate the prevention of shoplifting among these populations and compare the present findings with those for different population samples. After all, we cannot take for granted that one particular fear appeal is effective for a whole consumer audience.

Second, this study measures protection motivation (i.e., one's intention to protect him/herself from negative consequences by not shoplifting). On the one hand, using these intentions rather than actual shoplifting behavior might be beneficial because most consumers who shoplift are never caught while the researcher avoids the sensitivity involved with directly interrogating consumers about their shoplifting act (Babin and Babin 1996). On the other hand, it is suggested that persuasive messages used in experimental manipulations may be effective in strengthening the intention to change behavior, but might be less efficient in producing actual behavioral change (e.g., Wurtele and Maddux 1987). Future research could give a decisive answer about this issue by targeting shoplifting behavior itself using, for example, longitudinal studies where one compares shoplifting incidence in a retail store before and after a particular campaign.

Third, as the effectiveness of shoplifting prevention strategies might depend on the dominant reasons for this misbehavior (cf. Fullerton and Punj 2004), it might be interesting for future research to incorporate consumers' reasons to engage in shoplifting and, in this way, learn more about the conditions for efficiency of various prevention strategies. As effective

crime prevention is dependent on understanding why people offend (Gill 1994), different fear appeals could especially be efficient for groups of shoplifters having different reasons for this misbehavior.

Finally, it would be worthwhile to compare a fear appeal strategy with other possible valuable approaches of deterring people to shoplift. Adolescent shoplifters, for example, are typically morally ambivalent about shoplifting. Therefore, Cox et al. (1993) suggest that retailers might consider placing less emphasis in their campaigns on shoplifting's illegality. Rather, they could show how shoplifting harms individuals with whom adolescents can identify. As delinquents tend to avoid targets with a 'human face' (Matza 1964), this might be an interesting strategy to investigate and compare with the fear appeals used in this study.

## REFERENCES

- Agnew, Robert (2005), "Juvenile Delinquency: Causes and Control," Los Angeles: Roxbury.
- Alberstat, Mark (1989), "Trying to Stop a Pocketful of Trouble," *Commercial News*, 68, 12-16.
- Andreoli, Teresa (1996), "Message to Retail Industry: Teens Should be Seen and Heard," *Discount Store News*, 35 (5), 30-32.
- Babin, Barry J. and Laurie A. Babin (1996), "Effects of Moral Cognitions and Consumer Emotions on Shoplifting Intentions," *Psychology & Marketing*, 13 (8), 785-802.
- Babin, Barry and Mitch Griffin (1995), "A Closer Look at the Influence of Age on Consumer Ethics," in *Advances of Consumer Research*, Kardes F. and Sujan M., eds. Provo, UT: Association for Consumer Research, 668-673.
- Bamfield, Joshua (2009), "The Global Retail Theft Barometer 2009", Nottingham, UK: Centre for Retail Research.
- Bandura, Albert (1992), "Exercise of Personal Agency through the Self-Efficacy Mechanism," in *Self-Efficacy: Thought Control of Action*, Schwarzer R., ed. Washington, DC: Hemisphere, 3-38.
- Beck, Kenneth H. (1984), "The Effect of Risk Probability, Outcome Severity, Efficacy of Protection and Access to Protection on Decision Making: A Further Test of Protection Motivation Theory," *Social Behavior and Personality*, 12 (2), 121-125.
- Cole, Catherine A. (1989), "Deterrence and Consumer Fraud," *Journal of Retailing*, 65 (1), 107-120.
- Cox, Dena and Anthony D. Cox (1991), "Communicating the Consequences of Early Detection: The Role of Evidence and Framing," *Journal of Marketing*, 65 (July), 91-103.

- Cox, Anthony D., Dena Cox, Ronald D. Anderson and George P. Moschis (1993), "Social Influences on Adolescent Shoplifting: Theory, Evidence, and Implications for the Retail Industry," *Journal of Retailing*, 69 (2), 234-246.
- Cox, Dena, Anthony D. Cox and George P. Moschis (1990), "When Consumer Behavior Goes Bad: An Investigation of Adolescent Shoplifting," *Journal of Consumer Research*, 17 (2), 149-159.
- Dählback, Olof (1998), "Analyzing the Relationships between Individual Criminal Behavior and the Severity and Probability of Punishment," *Quality & Quantity*, 32 (3), 257-273.
- Dawson, Scott (1993), "Consumer Responses to Electronic Article Surveillance Alarms," *Journal of Retailing*, 69 (3), 353-362.
- Day, Liza, John Maltby, David Gilles and Vicki Wingrove (2000), "Psychological Predictors of Self-Reported Shoplifting," *Psychological Crime and Law*, 6 (1), 71-79.
- El-Dirghami, Amin (1974), "Shoplifting among Students," *Journal of Retailing*, 50 (3), 33-42.
- Farrington, David P. (1999), "Measuring, Explaining and Preventing Shoplifting: A Review of British Research," *Security Journal*, 12 (1), 9-27.
- Floyd, Donna L., Steven Prentice-Dunn and Ronald W. Rogers (2000), "A Meta-Analysis of Research on Protection Motivation Theory," *Journal of Applied Social Psychology*, 30 (2), 407-429.
- French, Warren A., Melvin R. Crask and Fred H. Mader (1984), "Research Note: Retailers Assessment of the Shoplifting Problem," *Journal of Retailing*, 60 (4), 108-115.
- Fullerton, Ronald A. and Girish Punj (2004), "Repercussions of Promoting an Ideology of Consumption: Consumer Misbehavior," *Journal of Business Research*, 57 (11), 1239-1249.
- Garvey, Stephen P. (1998), "Can Shaming Punishments Educate?," *University of Chicago Law*, 65 (3), 733-794.

- Geurts, Michael D., Roman R. Andrus and James Reinmuth (1976), "Researching Shoplifting and Other Deviant Customer Behavior using the Randomized Response Research Design," *Journal of Retailing*, 51 (4), 43-48.
- Gill, Martin (1994), "Crime at Work: Studies in Security and Crime Prevention," Leicester: Perpetuity Press.
- Griffin, Roger (1984), "Walking Off with Billions," *Security Management*, 28 (August), 70-72.
- Griffin, Roger (1989), "Why the Temptation," *Security Management*, 33 (December), 126.
- Guffey, Hugh J., James R. Harris and J. Ford Laumer, Jr. (1979), "Shopper Attitudes toward Shoplifting and Shoplifting Preventive Devices," *Journal of Retailing*, 55 (3), 75-89.
- Haynie, Dana L. (2002), "Friendship Networks and Delinquency: The Relative Nature of Peer Delinquency," *Journal of Quantitative Criminology*, 18 (2), 99-134.
- Herath, Tejaswini and H. Raghav Rao (2009), "Protection Motivation and Deterrence: A Framework for Security Policy Compliance in Organisations," *European Journal of Information Systems*, 18 (2), 106-125.
- Hollinger, Richard C. and Jason L. Davis (2002), "2002 National Retail Security Survey: Final Report," Gainesville, FL: University of Florida.
- Jones, Richard Garner (1968), "A Factored Measure of Ellis' Irrational Belief System, with Personality and Maladjustment Correlates," Unpublished Doctoral Dissertation, Texas Tech University.
- Kahan, Dan M. (1996), "What Do Alternative Sanctions Mean?," *University of Chicago Law Review*, 63, 591-653.
- Kallis, Jeffery and Dino J. Vanier (1985), "Consumer Shoplifting: Orientations and Deterrents," *Journal of Criminal Justice*, 13 (5), 459-473.
- Klemke, Lloyd W. (1982), "Exploring Juvenile Shoplifting," *Sociology and Social Research*, 67 (1), 59-75.

- Klemke, Lloyd W. (1992), "The Sociology of Shoplifting: Boosters and Snitches Today", Westport, CT: Praeger.
- Krasnovsky, Therese and Robert C. Lane (1998), "Shoplifting: A Review of the Literature," *Aggression and Violent Behavior*, 3 (3), 219-235.
- Lo, Lucia (1994), "Exploring Teenage Shoplifting Behavior: A Choice and Constraint Approach," *Environment and Behavior*, 26 (5), 613-639.
- Maddux, James E. (1993), "Social Cognitive Models of Health and Exercise Behavior: An Introduction and Review of Conceptual Issues," *Journal of Applied Sport Psychology*, 5 (2), 116-140.
- Maddux, James E. and Ronald W. Rogers (1983), "Protection Motivation and Self-Efficacy: A Revised Theory of Fear Appeals and Attitude Change," *Journal of Experimental Social Psychology*, 19 (September), 469-479.
- Matthews, Shelley Keith and Robert Agnew (2008), "Extending Deterrence Theory: Do Delinquent Peers Condition the Relationship between Perceptions of Getting Caught and Offending?," *Journal of Research in Crime and Delinquency*, 45 (2), 91-118.
- Matza, David (1964), "Delinquency and Drift," New York, NY: Wiley.
- Mendes, Silvia M. and Michael D. McDonald (2001), "Putting Severity of Punishment Back in the Deterrence Package," *Policy Studies Journal*, 29 (4), 588-610.
- Mendes, Silvia M. (2004), "Certainty, Severity, and Their Relative Deterrent Effect : Questioning the Implications of the Role of Risk in Criminal Deterrence Policy, " *Policy Studies Journal*, 32 (1), 59-74.
- Netter, Brian (2005), "Avoiding the Shameful Backlash: Social Repercussions for the Increased Use of Alternative Sanctions," *Journal of Criminal Law & Criminology*, 96 (1), 187-215.



- Neuwirth, Kurt, Sharon Dunwoody and Robert J. Griffin (2000), "Protection Motivation and Risk Communication," *Risk Analysis*, 20 (5), 721-734.
- Pan, Yue and George M. Zinkhan (2006), "Determinants of Retail Patronage: A Meta-Analytical Perspective," *Journal of Retailing*, 82 (3), 229-243.
- Ray, JoAnn (1987), "Every 12th Shopper: Who Shoplifts and Why - Social Casework," *Journal of Contemporary Social Work*, 68 (4), 234-239.
- Ray, Joseph B., Gary S. Solomon and Richard Mellina (1982), "Shoplifters Irrational Beliefs Scale," Unpublished Test, Lubbock Regional MHMR Center.
- Rogers, Ronald W. (1975), "Protection Motivation Theory of Fear Appeals and Attitude-Change," *Journal of Psychology*, 91 (1), 93-114.
- Rogers, Ronald W. and Steven Prentice-Dunn (1997), "Protection Motivation Theory," in *Handbook of Health Behavior Research*, Gochman D., ed. New York, NY: Plenum, 113-131.
- Setlow, Carolyn (2000), "Frequent Teen Buyers Are Good for Business," *Discount Retailing Today*, 39 (18), 23.
- Tanner, John F., Ellen Day and Melvin R. Crask (1989), "Protection Motivation Theory: An Extension of Fear Appeals Theory in Communication," *Journal of Business Research*, 19 (4), 267-276.
- Tanner, John F. Jr., James B. Hunt and David R. Eppright (1991), "The Protection Motivation Model: A Normative Model of Fear Appeals," *Journal of Marketing*, 55 (July), 36-45.
- Tonglet, Michele (2000), "Consumer Misbehavior: Consumer's Perception of Shoplifting and Retail Security," *Security Journal*, 13 (4), 107-122.
- Tonglet, Michele (2002), "Consumer Misbehavior: An Exploratory Study of Shoplifting," *Journal of Consumer Behavior*, 1 (4), 336-354.

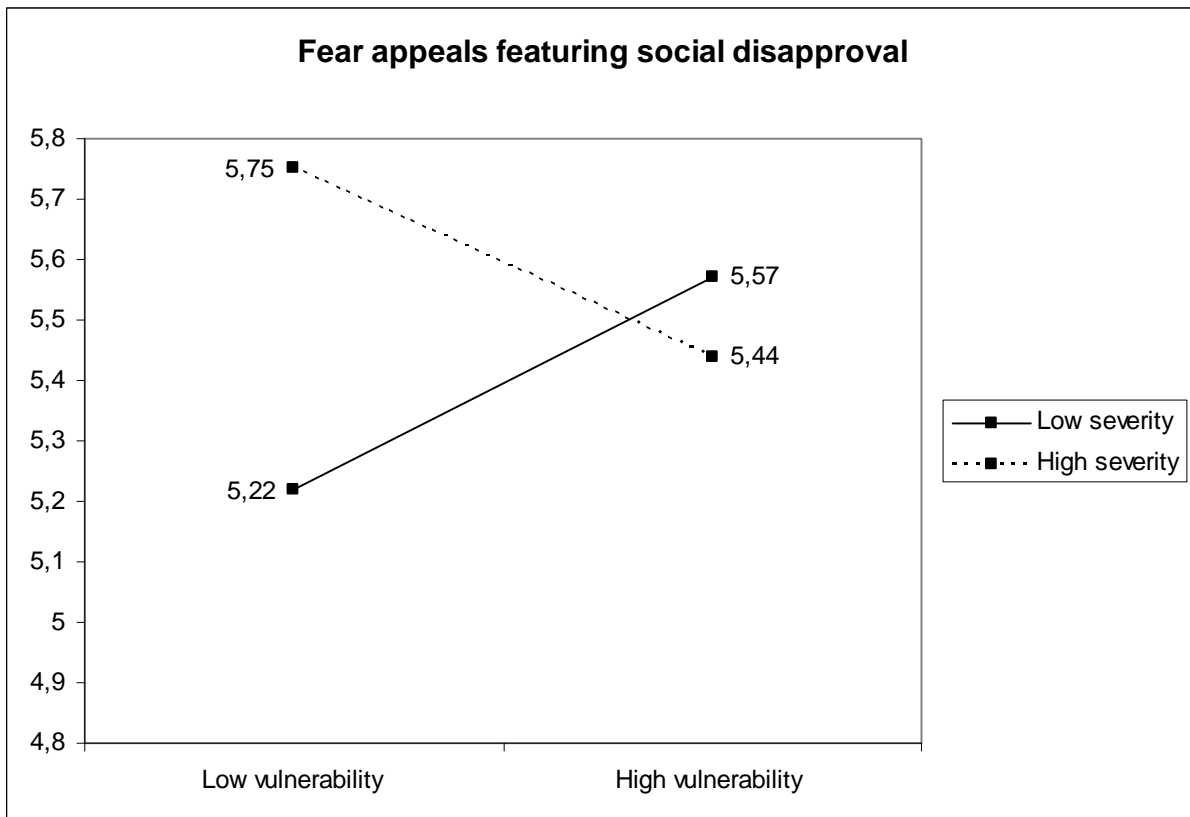
- von Hirsch, Andrew, Anthony E. Bottoms, Elizabeth Burney and P-O Wickström (1999), "Criminal Deterrence and Sentence Severity," Oxford, UK: Hart.
- Whitman, James Q. (1998), "What is Wrong With Inflicting Shame Sanctions?," *Yale Law Journal*, 107, 1055-1092.
- Wolf, Sharon, Larry Gregory and Walter Stephan (1986), "Protection Motivation Theory: Prediction of Intentions to Engage in Anti-Nuclear War Behaviors," *Journal of Applied Social Psychology*, 16 (4), 310-321.
- Wurtele, Sandy K. and James E. Maddux (1987), "Relative Contributions of Protection Motivation Theory Components in Predicting Exercise Intentions and Behavior," *Health Psychology*, 6 (5), 453-466.
- Yaniv, Gideon (2009), "Shoplifting, Monitoring and Price Determination," *Journal of Socio-Economics*, 38 (4), 608-610.

## TABLES AND FIGURES

Table 1: Standardized Regression Coefficients of the Covariates with Protection Motivation	
Construct	Protection Motivation
Message involvement	0.126*
Attitude toward the message	0.250**
General perceived severity concerning shoplifting	0.143*
Attitude toward shoplifting	-0.350**
Number of friends that have already stolen something	-0.145*
Gender	-0.116*

N=352; \*p<.01, \*\*p<.001

Figure 1: Vulnerability x Severity for Fear Appeals Featuring Social Disapproval and Fear Appeals Featuring Fines



### Fear appeals featuring fines

