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**Unpacking the perceived opportunity to misbehave: The influence of
spatio-temporal and social dimensions on consumer theft**

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Abstract

Purpose This research uses opportunity as a theoretical lens to investigate how the spatio-temporal and social dimensions of the consumption environment create perceived opportunities for consumers to misbehave.

Methodology Drawing on Routine Activity Theory and Social Impact Theory, we use two experiments to demonstrate that spatio-temporal and social dimensions can explain consumer theft in retail settings.

Findings Study 1 reveals mixed empirical support for the basic dimensions of Routine Activity Theory, which posits that the opportunity to thief is optimised when a motivated offender, suitable target and the absence of a capable formal guardian transpire in time and space. Extending the notion of guardianship, Study 2 tests Social Impact Theory and shows that *informal* guardianship impacts the likelihood of theft under optimal routine activity conditions.

Originality and Value The study findings highlight important implications for academicians and retail managers: rather than focusing on the uncontrollable characteristics of thieving offenders, more controllable spatio-temporal and social factors of the retail environment can be actively monitored and manipulated to reduce perceived opportunities for consumer misbehaviour.

Keywords

consumer misbehaviour; opportunity; theft; Routine Activity Theory; Social Impact Theory; experimental design

Introduction

During the past decade, both academics and practitioners have begun to focus their attention on consumers who misbehave (e.g., Berry & Seiders, 2008; Grove, Pickett, Jones & Dorsch, 2012; Reynolds & Harris, 2009). The majority of extant research investigates why individual consumers engage in such behaviour by examining traits and dispositions to identify factors that distinguish deviant consumers from their non-deviant counterparts (e.g., Daunt & Harris, 2012a; Egan & Taylor, 2010; McColl-Kennedy, Sparks & Nguyen, 2011).

While research on consumer traits and dispositions has significantly progressed our understanding of why consumers misbehave, this research perspective largely ignores one of the most enduring explanations for inappropriate behaviour in the business sphere: opportunity. This paucity of research is particularly surprising given that Fullerton and Punj's (1993) seminal research framework proposes that situationally-derived opportunity is likely to be a key driver of consumer misbehaviour. Indeed, Fullerton and Punj (1993, p. 573) assert that perceived opportunity 'is the single biggest cause of aberrant behavior'. To date, however, opportunity has not been used as a lens for understanding why consumers misbehave.

Consistent with Routine Activity Theory (Cohen & Felson, 1979), this research proposes that consumers do not typically misbehave because they are inherently "bad". Rather, they arrive at a point in space and time where an opportunity to misbehave presents itself. We posit that when consumers observe an opportunity for theft, they are reacting to environmental stimuli. In particular, we investigate two dimensions of environmental stimuli that may optimise the

perceived opportunity to misbehave: the spatio-temporal dimension and the social dimension.

Using two experiments set in a retail context, we employ a criminology theory and a social psychology theory to investigate how consumers misbehave in response to the opportunities presented by the spatio-temporal and social environment. First, we use Routine Activity Theory as a theoretical framework to explain how opportunities for misbehaviour are created in a particular time and space (Cohen & Felson, 1979). Second, we use Social Impact Theory (Latané, 1981) to more deeply explore the concept of guardianship and explain how opportunities are affected by the real, imagined or implied presence of others in the environment. By investigating these dimensions while controlling for individual differences, we contribute an alternate environmental perspective to existing trait and disposition-focused consumer misbehaviour research.

In answering calls for research into the environmental and situational antecedents of consumer misbehaviour (e.g., Daunt & Harris, 2012a; Fisk et al., 2010; Fullerton & Punj, 1993), this research makes four contributions. First, by testing a criminological framework and a psychological theory, this research presents two alternate causal models grounded in opportunity to extend our conceptual understanding of consumer misbehaviour. Second, via empirical analysis, this research assesses the viability of Routine Activity Theory (Cohen & Felson, 1979) to explain consumer behaviour. Third, by drawing on Social Impact Theory (Latané, 1981), this study theoretically deepens our understanding of one of the tenets of Routine Activity Theory—guardianship—with relation to consumer misbehaviour dynamics and investigates how other social actors in the environment impact perceived opportunity. Finally, the

empirical findings confirm that other social actors play a significant role in mitigating opportunities for consumer misbehaviour.

Research Background

Multiple terms, such as 'aberrant' (Fullerton & Punj, 1993), 'deviant' (Amine & Gicquel, 2011) and 'dysfunctional' (Harris, 2010), are used interchangeably in the marketing literature to refer to destructive, intentional consumer behaviour that violates the norms of consumption (Fullerton & Punj, 1993). In this paper, we use the term 'consumer misbehaviour' to refer to these undesirable acts. While early research assumed that misbehaviour was committed by only a small splinter group of society, more recent research shows that misbehaviour is more commonplace than first thought (Fisk et al., 2010; Fullerton & Punj, 2004; Greer, 2015).

Consumer misbehaviour presents a genuine challenge to both marketing theorists and practitioners because it contravenes the traditional perspective that consumers are functional, good-willed service participants (Reynolds & Harris, 2005; Rosenbaum, Kuntze, & Wooldridge, 2011). The juxtaposition between wanting to satisfy well-behaved consumers and wanting to deter badly behaved consumers has led many researchers to investigate the individual differences between these types of consumers. From a socio-demographic perspective, younger consumers, males, individuals with low incomes and individuals with low educational attainment are most commonly characterised as likely perpetrators of consumer misdemeanours. Conversely, older consumers, females, individuals with high incomes and individuals with high educational attainment are characterised as more ethical (Al-Khatib, Vitell, &

Rawwas, 1997; Daunt & Harris, 2011; Egan & Taylor, 2010). From a personality perspective, Wirtz and Kum (2004) link low levels of morality to consumer cheating, while Reynolds and Harris (2009) link increased sensation-seeking and cynicism to more severe forms of consumer misbehaviour.

Consumers' emotions and cognitions, however, are the most studied antecedents of consumer misbehaviour. In these studies, deviance is typically conceptualised as reactive, retortive behaviour enacted in response to a service failure. Several scholars (e.g., McColl-Kennedy et al., 2011; Watson & Spence, 2007; Zourrig, Chebat & Toffoli, 2009) have used Cognitive Appraisal Theory to explain the link between low perceived interactional, procedural and distributive justice and consumer anger. They posit that consumers experience heightened negative emotions as a result of service failure and thus misbehave as a coping and/or retaliatory response to perceived wrongdoing. Grégoire and Fisher (2008) and Grégoire and colleagues (2010) note that consumer misbehaviour may be enacted to punish firms who have failed to provide equitable service provision.

An alternative, comparatively underdeveloped body of research examines the role of the service environment in fostering episodes of consumer misbehaviour. In contrast to studies that primarily view consumer misbehaviour as a restorative mechanism following a service failure, a small group of scholars argue that the design of the service environment may also drive misbehaviour. Specific physical and ambient dimensions of the environment, such as temperature, noise, cleanliness, comfort, layout, crowding and security, are known to influence perpetrators of consumer misbehaviour (Cox, Cox, Anderson & Moschis, 1993; Daunt & Harris, 2012b). For example, Grove and colleagues

(2012) hypothesise that spectator rage at sporting events may be driven by the elevated noise, cramped layout, elevated temperatures, dense crowding and verbal and physical activity of other consumers. In this regard, the authors foreshadow the importance of spatio-temporal dimensions (i.e., space- and time-based elements) to explain consumer misbehaviour.

While insights into the role that the physical features of the retail environment play in fostering incidents of misbehaviour exist, this small body of research is underdeveloped and focused on the impact of physical and ambient servicescape dimensions. To date, marketing research does not provide a theoretical explanation for why the presence of consumers at a particular time in a particular environment alters the perceived opportunity to enact misbehaviour. To address this deficiency, we investigate the criminological theory of Routine Activity Theory (Cohen & Felson, 1979) and the psychological theory of Social Impact Theory (Latané, 1981).

Routine Activity Theory

Akin to research in consumer misbehaviour, criminological studies broadly take one of two approaches to studying crime. The first, traditional approach investigates whether individual characteristics, such as genetics, personality, parenting and early childhood experiences, can explain why offenders commit crimes. The second approach investigates how criminal events occur in particular environments. The latter approach, which is particularly relevant to this research, shifts away from attempts to understand criminal inclination and instead examines the environment in which a crime might occur (Groff, 2007).

One key environmental criminology theory that explains how the opportunity to commit a crime arises is Routine Activity Theory (Cohen & Felson, 1979). This theory proposes that opportunities to commit direct-contact predatory violations will naturally arise as humans partake in the routine activities of life. Direct-contact predatory violations occur when 'someone definitely and intentionally takes or damages the person or property of another' (Glaser, 1971, p. 4). By definition, these crimes involve physical contact between an offender and the victimised person or object. This contact occurs as humans engage in routine activities, which are defined as 'any recurrent and prevalent activities which provide for basic population and individual needs' (Cohen & Felson, 1979, p. 593). Such activities include travelling to and from work every day, or visiting a store at regular intervals.

Routine Activity Theory posits that three minimal elements must transpire in the time and space where routine activities occur in order to create an opportunity for direct-contact predatory violations: (1) a motivated offender, (2) a suitable target, and (3) the absence of a capable guardian (Cohen & Felson, 1979). A motivated offender is someone who is criminally inclined and has the ability to fulfil those inclinations (Cohen & Felson, 1979). Cohen and Felson (1979) assume that all humans are criminally inclined, as almost everyone is capable of deviant conduct if an opportunity were to present itself. A suitable target is a person or object of sufficient value (both material and symbolic), physical visibility, accessibility and low inertia (Cohen & Felson, 1979). Capable guardians include any mechanism capable of preventing a violation (e.g., police presence, surveillance, etc.) (Cohen & Felson, 1979). Cohen and Felson (1979) argue that the absence of any one of the three elements at a point of space and

time is normally adequate to prevent violations; consequently, RAT is often referred to as an “opportunity model of predatory victimization” (Cohen, Kluegel, & Land, 1981, p. 507).

Cohen and Felson (1979) reject the notion that criminal behaviour is best understood by examining the individual characteristics of the offender and instead propose that crime is fostered by elements in the spatio-temporal environment that present an opportunity for misbehaviour. Similarly, a small number of marketing studies foreshadow how important opportunity may be to understanding consumer misbehaviour. For example, researchers have argued that consumers will rationalise the likely success of their misdemeanour by asking themselves whether they can "get away with it" (Cole, 1989). King and colleagues (2008) illustrate that the perceived ease of misbehaviour increases incidents of deshopping. Similarly, Wirtz and McColl-Kennedy (2010) find that consumers engage in opportunistic (i.e., fake and/or inflated) complaints as a means to restore equity.

We argue that Routine Activity Theory provides an insightful theoretical framework to ground an investigation of consumer misbehaviour. In this research, we investigate whether Routine Activity Theory can explain one of the most prevalent forms of consumer misbehaviour: theft. Assuming Cohen and Felson’s (1979) position that everyone is capable of becoming a motivated offender (Element 1), we aim to test two of the basic tenets of Routine Activity Theory and investigate the impact of target suitability (operationalised by target value and target accessibility; Element 2) and capable guardianship (Element 3) on the likelihood of theft. In line with Routine Activity Theory, we hypothesise

that more valuable, accessible targets, that lack capable guardianship are more likely to be stolen.

H1. The likelihood of opportunistic theft is higher when (a) target value is high, (b) target accessibility is high and (c) capable guardianship is absent.

While Cohen and Felson's (1979) theory offers insight into the spatio-temporal drivers of criminal behaviour, the authors' analysis of the social dynamics within the environment is limited. For example, Cohen and Felson (1979) propose that crime can be mitigated by the presence of capable guardians. These guardians are conceptualised as security guards or police, both of whom are employed in a formal capacity to prevent direct-contact predatory violations. However, Routine Activity Theory does not account for the role that other social actors play in the environment. Indeed, in their discussion, Cohen and Felson (1979) note that in practice, varying forms of informal guardianship may exist and thus the mere presence of others may alter the behaviour of a potential offender. Consequently, we draw on Social Impact Theory (Latané, 1981) to answer this call for further research and examine how social presence impacts the likelihood of theft.

Social Impact Theory

Rooted in social psychology, Social Impact Theory (Latané, 1981) argues that the presence of others represent a significant source of arousal for humans. Interestingly, Social Impact Theory posits that cognition, motives and behaviours are not only influenced by the real behaviours of others, but also the 'imagined

or implied presence or actions of other individuals' (Latané, 1981, p. 343). In the context of the current study, Social Impact Theory suggests that the behaviour of others in the retail environment, whether real, imagined, or implied, is likely to act as a form of informal guardianship by altering the motivated offender's perception of opportunities within the environment (as dictated by Routine Activity Theory).

Social impact is proposed to be a function of three elements: immediacy, social strength and number of others in the environment (Latané, 1981). Immediacy refers to the proximity in space or time of others. Social strength denotes the salience or importance of others, which may be determined by prior relationships or socio-demographic factors. The number of others denotes how many individuals are present in the environment (Latané, 1981). Social Impact Theory aligns with marketing research on the impact of the social servicescape (see for example Bitner, 1992; Tombs & McColl-Kennedy, 2003), which argues that other consumers have a greater influence on consumer behaviour than physical or ambient environmental stimuli.

For its first element, Social Impact Theory posits that social actors are most likely to be influenced by others that are close in space or time, assuming that there aren't barriers or filters to prevent interaction (Latané, 1981). Consequently, proximal social actors are more likely to influence behaviour than distal social actors.

For its second element, Social Impact Theory posits that actors high in social strength (hereafter referred to as "known others") have a greater impact on individuals' cognitions and behaviours than strangers. Known others such as family members and friends are theorised to play a fundamental role in

educating and socialising individuals in what constitutes normative and acceptable behaviour (Mead, 1934; Moschis & Churchill, 1978). Consequently, individuals are less likely to take opportunities to flout norms and rules of conduct when in the presence of someone known to them (Cooley, 1983; Nisbett, 1973). We propose that this is a function of self-preservation: individuals suppress potentially opportunistic behaviour when in the presence of known others because they have a pervasive desire to be judged in a positive light (Argo, Dahl & Manchanda, 2005).

For its third element, Social Impact Theory posits that the number of others present (i.e., the social density) affects individuals' attitudes and behaviours within a given environment. The impact of social density is studied extensively in consumption settings, but the results reveal mixed customer responses to crowding (Eroglu, Machleit & Barr, 2005; Grove & Fisk, 2007; Harris & Ezech, 2008). In the context of this study, we propose that high social density offers anonymity through concealment that would increase opportunistic behaviour. Guerin (1999) proposes that when a social actor is among a group of people, the crowd presents a form of concealment that fosters anonymity. Consequently, the offender will perceive him or herself as less visible and consequently fear fewer negative social consequences from enacting opportunistic misbehaviours. The empirical findings of Grove and colleagues (2012) and Daunt and Harris (2012b) support this assertion. Further, we propose that this effect is heightened when the social actor is in a crowd of strangers (i.e., when social strength is low).

Using Social Impact Theory, we propose that our understanding of one of the tenets of Routine Activity Theory, capable guardianship, can be extended to

account for the influence of others in the retail environment. We consequently explore the role of informal guardianship via the influence of social strength (i.e., someone who is known to the motivated offender) and social density (i.e., the number of others present) in Study 2. We hypothesise that the likelihood of theft is greater when a motivated offender is in the presence of strangers in a crowded environment.

H2. The likelihood of opportunistic theft is greater when unknown others are present and social density is high.

Method

Study 1: Scenario-based experiment of Routine Activity Theory

To test the tenets of Routine Activity Theory, Study 1 manipulates two dimensions of target suitability (i.e. target value and target accessibility) and the presence of capable formal guardianship in a 2 (high vs. low value) x 2 (high vs. low accessibility) x 2 (present vs. absent guardian) between-subjects factorial design.

Sample and procedures

A total of 333 undergraduate students enrolled in a core business course at a university in the United Kingdom participated in this study. Males (53.2%) and females (46.8%) were approximately evenly represented in the sample. The average age of participants was 21.6 years old. Participants were recruited during a lecture and were randomly assigned to one of the eight experimental conditions. They were instructed to read a short scenario and respond to a series of questions that measured the dependent variable (i.e., likelihood of theft), three control variables (i.e., self-monitoring, moral development and sensation-

seeking), and the efficacy of the manipulations. Participants were instructed to respond as quickly and honestly as possible because there were no right or wrong answers and the researchers were looking for general trends rather than individual responses. Participants were given a small chocolate for their participation.

The scenario describes a shopping trip of a gender-neutral third party called Sam, who enters a department store to purchase a winter coat but comes across a potential opportunity to take a product without paying for it. Checks indicated that this scenario was realistic ($M=4.28$, $SD=.770$), believable ($M=4.27$, $SD=.724$) and credible ($M=4.25$, $SD=.768$) given it created an opportunity for theft. The scenario is written in third person to reduce the impact of social desirability bias (Wirtz & Kum, 2004). Although written role-playing scenarios have been criticised for their low level of involvement (Greenberg & Eskew, 1993), such scenarios allow researchers to explicitly manipulate service encounter variables without violating ethical standards (Schoefer and Ennew, 2005). Consequently, scenario-based studies have been widely used in consumer research (Bui, Krishen & Bates, 2011; Kim & Wansink, 2012; Zhou, Huang, Tsang & Zhou, 2013).

Experimental manipulations

Target value is manipulated by varying the product described in the scenario. This construct is operationalised using Apple iPod products, which were chosen because they perform the same basic function, vary significantly in price (e.g., the iPod Shuffle retails for £40 sterling, while iPod Touch retails for £159-249 sterling) and are likely to be considered a desirable product by the

study participants. An Apple iPod Shuffle is used as stimulus for a low-value target while an Apple iPod Touch is used as stimulus for a high-value target.

Target accessibility is manipulated by varying the physical position of the product in the scenario. The high accessibility condition states that the product has been left sitting *on* an unlocked glass cabinet, whereas the low accessibility condition states that the product has been left sitting *in* an unlocked glass cabinet. We control the visibility of the product (i.e., the participants are told they can see the target item in the glass cabinet and see the cabinet is unlocked) and ensure that the less accessible manipulation still allowed theft to occur. Both conditions state that the product has been left somewhere accidentally in order to heighten the opportunistic nature of the event and increase the realism of the scenarios.

Capable guardianship is manipulated by varying the presence and absence of formal guardians that impact the perceived opportunity to steal. The *formal guardian present* condition reads as follows: ‘There is a security guard in the area and the security cameras are focused on this section of the store.’ The *formal guardian absent* condition reads as follows: ‘There isn’t a security guard in the area and the security cameras aren’t focused on this section of the store.’

Measures

The likelihood of theft was measured by a seven-point Likert-type scale item: “What is the likelihood that Sam would slip the [Apple product] into their pocket and leave the store?” A single item scale was deemed appropriate for this research because the likelihood of theft is a simple, concrete construct that does not require multiple items to measure (Bergkvist & Rossiter, 2007; Kim & Wansink, 2012). Three individual difference control variables—self-monitoring

(Snyder, 1974), moral development (Gibbs, Basinger, & Fuller, 1992) and sensation-seeking (Steenkamp & Baumgartner, 1992)—were measured using existing Likert-type scales (see Table 1). The individual difference variables represent traits and dispositions that prior studies have identified as predictive of consumer misbehaviour (e.g., Reynolds & Harris, 2009; Wirtz & Kum, 2004). Study means, standard deviations and correlations are presented in Table 2.

Results

First, we used a three-way analysis of variance (ANOVA) to check the efficacy of the experimental manipulations. The analysis showed that the target value [$M_{\text{Low}}=2.286$, std. error=.048; $M_{\text{High}}=3.410$, std. error=.048; $F(1,325)=273.902$, $p < .001$] and target accessibility manipulations [$M_{\text{Low}}=3.216$, std. error= .067; $M_{\text{High}}=4.048$, std. error = .069; $F(1,325)=74.135$, $p < .001$] worked as intended. However, the guardianship manipulation had a significant effect on both guardianship [$M_{\text{Absent}}=1.988$, std. error =.008, $M_{\text{Present}}=1.012$, std. error =.009; $F(1,325)=6594.421$, $p < .001$] and perceived accessibility [$M_{\text{Absent}}=3.930$, std. error =.068, $M_{\text{Present}}=3.334$, std. error =.068; $F(1,325)=38.076$, $p < .001$]. There were no statistically significant interaction effects between target value, target accessibility and guardianship. Three one-way ANOVAs showed that the covariates and independent variables were independent [all $F(1,331) \leq 3.561$, $p \geq .060$].

Next, we used a three-way analysis of covariance (ANCOVA) to empirically investigate the effects of target value, target accessibility and guardianship on likelihood of theft while controlling for individual differences (see Table 3). The three covariates, self-monitoring [$F(1,322) = 55.362$, $p < .001$, $\eta_p^2 = .147$], moral development [$F(1,322) = 5.410$, $p = .021$, $\eta_p^2 = .017$] and

sensation-seeking [$F(1,322) = 7.791, p = .006, \eta_p^2 = .024$], were significantly related to theft likelihood. There was also a significant effect of target accessibility [$F(1,322) = 37.633, p < .001, \eta_p^2 = .105$] and capable guardianship [$F(1,322) = 172.691, p < .001, \eta_p^2 = .349$] on theft likelihood after controlling for individual differences. Target value, however, does not have a significant effect on likelihood of theft after controlling for individual differences [$F(1,322) = 1.036, p = .310, \eta_p^2 = .003$]. A customised ANCOVA showed that the assumption of homogeneity of regression slopes was upheld [all $F(1,317) \leq 3.826, p \geq .051, \eta_p^2 \leq .012$].

Mean scores (see Table 4) suggest that the likelihood of opportunistic theft is higher when target accessibility is high and capable guardianship is absent. These findings provide support for H1b and H1c, but not H1a. Additionally, there were no statistically significant interaction effects between target value, target accessibility and guardianship.

In Routine Activity Theory, Cohen and Felson (1979) argue that when three minimal elements—a motivated offender, a suitable target and the absence of capable formal guardian—transpire at a point in space and time, they present an opportunity for direct-contact predatory violations. Assuming that everyone is capable of being a motivated offender, Study 1 tested the tenets of RAT by manipulating two of the three elements to assess whether they increased the perceived opportunity for a motivated offender to engage in theft. The results suggest that the likelihood of opportunistic theft is higher when target accessibility is high and when guardianship is absent. Guardianship has a large and significant impact on theft likelihood. Finally, while participants

distinguished between the value of an iPod Shuffle and an iPod Touch, target value does not appear to influence the likelihood of opportunistic theft.

Study 2: Scenario-based experiment of Social Impact Theory

Method

Although Routine Activity Theory outlines the minimal conditions that generate an opportunity for a direct predatory violation to occur, the results of Study 1 suggest that retail environments are more complex than presently represented in Routine Activity Theory. In particular, retail consumption occurs in a social environment that encompasses the presence of others. Consequently, Study 2 investigates the impact of two social dimensions of the retail environment by optimising the opportunity for theft and then manipulating social density and social strength in a 2 (high vs. low social density) x 2 (known others vs. unknown others) between-subjects factorial design. Thus, this study uses Social Impact Theory to more deeply investigate the notion of capable guardianship.

Sample and procedures

A total of 159 undergraduate students enrolled in a core business course at a large university in the United Kingdom participated in this study. Males (48.7%) and females (50.8%) were approximately evenly represented in the sample. The average age of participants was 22.5 years old. Participants were recruited during a lecture and were randomly assigned to one of four experimental conditions. They were instructed to read a short scenario and respond to a series of questions that measured the dependent variable (i.e., likelihood of theft), two control variables (i.e., self-control and moral

development) and the efficacy of the manipulations. Participants were instructed to respond as quickly and honestly as possible because there were no right or wrong answers and the researchers were looking for general trends rather than individual responses. Participants were given a small chocolate for their participation.

This scenario also describes the shopping trip of a gender-neutral third party called Sam, who enters a department store to purchase a winter coat but comes across a potential opportunity to take an iPhone without paying for it. Checks indicated that this scenario was realistic ($M=4.43$, $SD=.692$), believable ($M=4.36$, $SD=.717$) and credible ($M=4.36$, $SD=.650$) given it created an opportunity for theft.

Experimental manipulations

Social density is manipulated by varying the number of people present in the service environment. The *low density* condition states that Sam notices one other shopper browsing nearby. The *high density* condition states that Sam notices a large number of shoppers browsing nearby.

Social strength is manipulated by varying the level of familiarity Sam has with the other people present in the service environment. The *known other* condition states that Sam shares the environment with a person (or people) he knows. The *unknown other* condition states that Sam shares the environment with a stranger (or group of strangers).

Measures

The likelihood of theft was measured by a seven-point Likert type scale item: "What is the likelihood that Sam would slip the iPhone into their pocket and leave the store?" Two individual difference control variables were measured

using Likert scales reported in Table 1. Study means, standard deviations and correlations are presented in Table 5.

Results

First, two ANOVAs showed that the covariates and independent variables were independent [all $F(1,157) \leq 1.441, p \geq .232$]. Next, we used a two-way analysis of covariance (ANCOVA) to empirically investigate the effects of social density and social strength on likelihood of theft while controlling for individual differences (see Table 6).

Both self-control [$F(1,153) = 16.964, p < .001, \eta_p^2 = .100$] and moral development [$F(1,153) = 13.510, p < .001, \eta_p^2 = .081$] were significantly related to theft likelihood. The findings show that both social density [$M_{Low} = 3.122$, std. error = .140; $M_{High} = 4.017$, std. error = .141; $F(1,153) = 19.979, p < .001, \eta_p^2 = .115$] and known others [$M_{Unknown} = 3.976$, std. error = .140; $M_{Known} = 3.163$, std. error = .140; $F(1,153) = 16.784, p < .001, \eta_p^2 = .099$] have a significant main effect on likelihood of theft. Further, there was a statistically significant interaction between social density and social strength [$F(1,153) = 5.438, p = .021, \eta_p^2 = .034$]. A customised ANCOVA showed that the assumption of homogeneity of regression slopes was upheld [all $F(1,150) \leq 1.302, p \geq .256, \eta_p^2 \leq .009$]. Mean scores (see Table 7) suggest that the likelihood of opportunistic theft is greater when unknown others are present and social density is high. This finding provides support for H2.

In Social Impact Theory, Latané (1981) argues that the immediacy, social strength and number of others in the environment represent a significant source of arousal for humans. Study 2 tested this theory by manipulating social strength and the number of others present in the environment to assess whether they

influenced the perceived opportunity for a motivated offender to engage in theft. The results suggest that opportunistic theft is more likely to occur when social density is high but the members of the crowd are unknown to the motivated offender.

Discussion

This research is the first to theoretically apply and empirically assess Routine Activity Theory and Social Impact Theory in a retailing and consumer-based context. In contrast to previous research on consumer misbehaviour, which typically focuses on the impact of individuals' traits and dispositions, this research investigates the predictive capacity of an alternative, opportunity-rooted paradigm. By utilising criminological and psychological theories, we offer theoretical and empirical insights into the spatio-temporal and social drivers of consumer misbehaviour, which have significant implications for marketing academicians and retailing practitioners.

Theoretical Implications

This research makes four significant contributions. First, drawing on the criminological theory of Routine Activity Theory (Cohen & Felson, 1979), our research uses an alternative paradigm to understand consumer misbehaviour dynamics. Overwhelmingly, previous studies in marketing that seek to understand the activities of misbehaving consumers emphasise the characteristics, predispositions and traits of the offender. The identification of deviant consumer profiles, while insightful, is restricted in its explanation of the commonness and pervasiveness of reported consumer misbehaviour. Indeed,

Fullerton and Punj (2004) and Reynolds and Harris (2009), among others, argue that consumer misbehaviour is *representative* of consumer behaviour.

Routine Activity Theory provides a fitting conceptualisation for the reported frequency of consumer misbehaviour because all consumers are theorised to have the potential to be motivated offenders given optimal situational factors. As an alternative viewpoint, Routine Activity Theory forwards that crimes are best understood and managed by controlling perceived opportunities formulated by spatio-temporal elements within the retail setting, rather than the characteristics of the offender. By grounding Study 1 in Routine Activity Theory, our research shifts the theoretical focus from the perpetrator of the misdemeanour to the setting in which the misdemeanour occurs. Consequently, we believe that Routine Activity Theory is useful to marketing theorists in order to understand different forms of customer misbehaviour and has broader applicability in the study of consumer behaviour.

Second, our research makes an empirical contribution as the first to test the applicability of Routine Activity Theory in a consumer-based context. We find support for Cohen and Felson's (1979) assertion that crime can be fostered by elements of the spatio-temporal environment, particularly target suitability and a lack of capable guardianship. However, we find no evidence that these elements interact to influence direct-contact predatory violations. Rather, the results suggest that the absence of a single element may *not* be enough to prevent theft if other environmental dimensions are optimal. Thus, while Routine Activity Theory is theoretically elegant, our empirical findings show that in practice, the three elements may individually contribute to theft likelihood.

Interestingly, when assessing the tenets of Routine Activity Theory, our findings indicate that both socio-temporal factors and personality traits impact theft likelihood. In particular, we show that individual differences in moral development, self-monitoring and sensation-seeking play a role in the likelihood of theft. This suggests that environmental opportunities can be mitigated to some degree by a high sense of moral development, for example. Although individual differences were not the primary focus of our study, the results suggest that these traits impact the degree to which a social actor will misbehave.

Our third research contribution pertains to the theoretical extension of capable guardianship using Social Impact Theory. Cohen and Felson's (1979) conceptualisation of guardianship focuses on the role of formal guardians, which include electronic surveillance and security personnel. However, Routine Activity Theory does not consider the role of other social actors in the retail setting. This is at odds with marketing research that indicates that others social actors in the retail setting can significantly affect consumers' emotions, cognitions and behaviours (Karaosmanoğlu, Baş & Zhang, 2011; Penz & Hogg, 2011).

To address this issue, we expand the notion of guardianship to consider the psychological perspective presented in Social Impact Theory. We posit that capable guardianship is sophisticated because it encompasses both formal and informal facets. Thus, we extend Cohen and Felson's (1979) conceptualisation of guardians to encompass informal guardianship. Using the tenets of Social Impact Theory, we acknowledge the role of social strength (i.e., known vs. unknown others) and social density (i.e., number of others). In doing so, our research

foregrounds the importance of social dimensions of consumer deviance and improves the usefulness of Routine Activity Theory's conception of guardianship within retail settings that are characterised by social nuances.

Fourth, our research forwards an empirical contribution by testing this broadened conceptualisation of guardianship. Our research offers explanatory empirical evidence for Cohen and Felson's (1979) question pertaining to the guises of guardians. In particular, the findings reveal that both social strength and social density have a significant impact on theft likelihood. This suggests that the composition of others in time and space alters the perceived opportunity to steal. In line with mechanism of self-preservation (Argo et al., 2005), theft likelihood is greater when an individual is in the presence of unknown social actors than when they are in the presence of an intimate handler (i.e., known other). Social strength hinders the likelihood than an individual will thief because they will not want to be viewed in a negative light by those with whom they hold strong formal social ties.

Akin with arguments of anonymity of concealment (Guerin, 1999), theft likelihood is revealed to be highest in situations of high social density because the crowd acts as a form of concealment and physical cover. The presence of one informal guardian acts as an inhibitor. However, when social density increases and the environment becomes crowded, individuals who once inhibited theft now act as facilitators because they offer a form of (albeit unintentional) concealment for the behaviour. Thus, individuals are more likely to steal when among a crowd of shoppers.

Interestingly, our results also find evidence of an interaction effect between social density and social strength. Theft is likely to be most prevalent

when consumers are in a crowd of people unknown to them. Consistent with Social Impact Theory and marketing research on the social servicescape (Tombs & McColl-Kennedy, 2003), our findings stress the significance of social factors in comprehending consumer behaviour within retail settings. In particular, they highlight the important role that social strength plays in mitigating or escalating theft likelihood.

Managerial implications

This study adds to managers' knowledge of the drivers of consumer misbehaviour by empirically evidencing that the antecedents of consumer misbehaviour go beyond internal, individual factors. Both spatio-temporal and social dimensions play key roles in determining theft likelihood. This is an important finding because managers cannot adjust or control individuals' personality traits, demographic characteristics or other personal variables. Nor can managers hope to appease every single combination of these variables exhibited by their customers. However, managers do have some control over the social and spatio-temporal composition of their retail establishments. By considering the spatio-temporal and social rhythm of their establishments, managers may be able to alter social and environmental dimensions to reduce the perceived opportunity for offenders to commit misdemeanours.

Our research broadens managers' abilities to mitigate this behaviour in two main ways. First, our findings reveal that theft is most likely to be perpetrated by a lone actor concealed by a crowd. Such an actor would be quite difficult to manually identify, especially as there are likely to be several at any one time. However, existing guardianship resources may be able to be employed

more efficiently to identify these social actors. For example, security systems might be able to feed footage into real-time facial recognition software to identify lone shoppers using algorithms that examine social distance and eye contact. Such a system might allow managers more accurate data to monitor the social environment.

Second, servicescape design may be better employed to reduce the likelihood of theft. For example, if perpetrators derive concealment from a crowd, retail layouts might be manipulated to reduce perceived crowd density. For example, widening aisles, lowering display stands and increasing lighting, might all give the illusion of less concealment due to the wider perceived dispersion of other shoppers. By controlling these social and spatio-temporal dimensions, managers may be able to more deliberately mitigate theft.

Future research and limitations

Cohen and Felson (1979) assert that Routine Activity Theory is a suitable framework for considering acts of deviance that may be classified as direct-contact predatory violations. In line with this definition, this research focuses on acts of theft, which limits the generalisability of the studies. Future research should assess the applicability of Routine Activity Theory to a broader range of individual and group misdemeanours that constitute both direct-contact and non-direct-contact predatory violations (e.g., sweethearting, vandalism, incivility, compulsive consumption) in various consumption settings and contexts. Future experimental research should also integrate the socio-temporal conditions of Routine Activity Theory and the guardianship conditions of Social

Impact Theory into a single experiment. While such an experiment would be complex, its findings would prove insightful.

Driven by Cohen and Felson's (1979) tenets, this research focuses on the impact of spatio-temporal variables and the ability of such variables to affect the perceived opportunity to commit a crime. Although we acknowledge the wider trend of research in consumer misbehaviour by controlling for the effect of individual differences, future research should seek to develop a holistic model of the drivers of consumer misbehaviour. This model should incorporate socio-temporal factors (including target value, accessibility and facets of guardianship) and personal factors (including personality traits, socio-demographics and emotive states). For example, individuals who are sensation-seekers may view a very accessible product as undesirable because the perceived opportunity to steal is "too easy". Such individuals might instead seek stimulation via the thrill of stealing an item that is deemed as less accessible and therefore more of a worthy challenge. Such particularities merit further attention.

Driven by the tenets of Social Impact Theory (Latané, 1981), this research investigates two functions of social impact on theft likelihood: social strength and social density. While our experiments manipulated each of these elements in line with the theory, the practical embodiment of these elements is likely to be complex. For example, how one might behave in front of a relative may differ greatly to the way one might behave in front of a friend (i.e., another known other). Further, how one might behave in front of one friend might differ to how they might behave in front of another friend, particularly if the individual socialises with others for whom deviant behaviour is normative behaviour. Future research should examine the impact of relationship strength beyond

'knowing' a social actor and account for the type, magnitude and norms of relationships held with others.

Our findings are not statistically supportive of a relationship between target value and the theft likelihood. In order to further investigate this relationship, future studies should assess products that are characterised by a greater disparity of target values. Different value thresholds might influence the likelihood of theft: a target product might become valuable enough to make it an attractive candidate for thievery and conversely low value products are often stolen. Consequently, future research should examine the role and potential continuum of target value in greater depth.

Finally, this research uses scenario-based experiments to assess the mechanics of Routine Activity Theory and Social Impact Theory. While scenario-based experiments are widely used in the study of consumer misbehaviour due to their methodological and ethical appropriateness, they lack external validity. Future research might examine the impact of social and environmental dimensions in the field. Although ethically challenging, ethnographic research would garner rich insights into these elements and their convergence. Further, active manipulation of the target suitability and guardianship variables would offer a deeper understanding of the mechanisms and the role of each dimension.

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Table 1: Measurement Scales

Constructs		Likelihood of Theft	
Source	Developed for this research		
Scale	Single item with a seven-point Likert scale anchored at endpoints (1= not at all likely, 7= extremely likely)		
Item	What is the likelihood that Sam would slip the iPod Shuffle into their pocket and leave the store?		
Construct		Self-Monitoring	
Source	Adapted from Snyder (1974)		
Summated Scale	Five-point Likert scale anchored at endpoints (1= strongly disagree, 5= strongly agree)	Item-Total Correlation	Factor Loadings
Items	1. I may deceive people by being friendly when I really dislike them.	.738	.832
	2. I can look anyone in the eye and tell a lie with a straight face (if for a right end).	.730	.828
	3. I am not always the person I appear to be.	.786	.868
	4. In different situations with different people, I often act like very different people.	.778	.865
	5. I guess I put on a show to impress or entertain people.	.803	.880
		Cronbach's alpha	.907
Construct		Moral Development	
Source	Adapted from Gibbs, Basinger and Fuller (1992)		
Summated Scale	Five-point Likert scale anchored at endpoints (1= strongly disagree, 5= strongly agree)	Item Correlations	Factor Loadings
Items	1. It is important to keep a promise made to a friend.	.584	.742
	2. It is important to always tell the truth.	.691	.821
	3. I would always help a friend in need.	.635	.780
	4. It is important to obey the law at all times.	.704	.820
	5. Judges should send people who break the law to prison.	.590	.732
		Cronbach's alpha	.836
Construct		Sensation-seeking	
Source	Adapted from Steenkamp and Baumgartner (1992)		
Summated Scale	Five-point Likert scale anchored at endpoints (1= strongly disagree, 5= strongly agree)	Item-Total Correlation	Factor Loadings
Items	1. I enjoy activities that are dangerous.	.737	.830
	2. I prefer friends who are exciting and unpredictable.	.717	.815
	3. I would like to try an 'extreme' sport like bungee jumping.	.717	.817
	4. I like to try new foods that I have never tasted.	.644	.750
	5. I usually don't enjoy a movie where I can predict what will happen in advance.	.667	.771
	6. I like to explore a strange city or section of town by myself, even if it means getting lost.	.691	.791
		Cronbach's alpha	.883
Construct		Self-Control	
Source	Adapted from Tangey, Baumesiter and Boone (2004)		
Summated Scale	Five-point Likert scale anchored at endpoints (1= strongly disagree, 5= strongly agree)	Item-Total Correlation	Factor Loadings
Items	1. I wish I had more self-discipline.	.606	.702
	2. I have trouble saying no.	.677	.766
	3. I do certain things that are bad for me because they are fun.	.647	.738
	4. I often say inappropriate things.	.706	.789
	5. I am lazy.	.738	.821
	6. I have a hard time breaking bad habits.	.801	.868
	7. I am bad at resisting temptation.	.767	.842

		Cronbach's alpha	.900
Constructs	Target Value (manipulation check)		
Source	Developed for this research		
Scale	Single item with a four-point Likert scale (1= very valuable, 4= not at all valuable)		
Item	How valuable is an (Apple product)?		
Constructs	Target Accessibility (manipulation check)		
Source	Developed for this research		
Scale	Single item with a five-point Likert scale anchored at endpoints (1= not at all accessible, 5= very accessible)		
Item	How accessible was the (Apple product)?		
Constructs	Target Guarded (manipulation check)		
Source	Developed for this research		
Scale	Single item with a dichotomous answer (yes/no)		
Item	From your memory of the scenario, was a security guard present?		
Constructs	Realism, Believability and Credibility (manipulation check)		
Source	Adapted from Sparks and McColl-Kennedy (2001)		
Scale	Three single items with a five-point Likert scale anchored at endpoints (1= strongly disagree, 5= strongly agree)		
Item	I think this situation could have occurred in real life.		
Item	I think there are service situations like this in real life.		
Item	This scenario is believable.		

Table 2: Means, standard deviations and correlations between Study 1 variables

	Mean	SD	1	2	3	4	5	6	7	8	9
1. Theft Likelihood	2.74	1.54	1								
2. Self-Monitoring	2.56	1.13	.509**	1							
3. Moral Development	3.79	.966	-.340**	-.503**	1						
4. Sensation-Seeking	3.17	1.11	.438**	.560**	-.509**	1					
5. Target Accessibility	3.62	1.02	.392**	.176**	-.133*	.219**	1				
6. Target Value	2.85	.844	.012	-.082	.101	-.049	.077	1			
7. Realism	4.28	.770	-.023	-.049	.092	.022	.177**	.116*	1		
8. Believability	4.27	.724	-.045	-.052	.065	.044	.189**	.141**	.737**	1	
9. Credibility	4.25	.768	-.066	-.137*	.147**	-.027	.123*	.146**	.698**	.713**	1

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Table 3: Test of between-subject effects on theft likelihood for Study 1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	465.735	10	45.420	44.107	.000	.578
Intercept	14.475	1	14.475	14.056	.000	.042
Self-Monitoring	57.011	1	57.011	55.362	.000	.147
Moral Development	5.571	1	5.571	5.410	.021	.017
Sensation-seeking	8.023	1	8.023	7.791	.006	.024
Target Value	1.066	1	1.066	1.036	.310	.003
Target Access	38.754	1	38.754	37.633	.000	.105
Target Guarded	177.834	1	177.834	172.691	.000	.349
Target Value* Target Access	1.189	1	1.189	1.154	.283	.004
Target Value* Target Guarded	3.188	1	3.188	3.095	.079	.010
Target Access* Target Guarded	.593	1	5.93	.576	.448	.002
Target Value* Target Access* Target Guarded	.386	1	.386	.375	.541	.001
Error	331.589	322	1.030			
Total	3289.000	333				
Corrected Total	785.790	332				

a. R Squared = .578 (Adjusted R Squared = .565)

Table 4: Descriptive statistics for theft likelihood in Study 1

Value of Target	Accessibility of Target	Guardian Present	Mean	Std. Deviation	N
Low (iPod Shuffle)	Low (in a cabinet)	Absent guardian	2.95	1.396	42
		Present guardian	1.71	.742	42
		Total	2.33	1.274	84
	High (on a cabinet)	Absent guardian	3.63	1.612	40
		Present guardian	2.54	1.142	41
		Total	3.07	1.490	81
	Total	Absent guardian	3.28	1.534	82
		Present guardian	2.12	1.041	83
		Total	2.70	1.429	165
High (iPod Touch)	Low (in a cabinet)	Absent guardian	3.07	1.228	44
		Present guardian	1.65	.842	43
		Total	2.37	1.268	87
	High (on a cabinet)	Absent guardian	4.39	1.641	41
		Present guardian	2.05	1.260	40
		Total	3.23	1.873	81
	Total	Absent guardian	3.71	1.580	85
		Present guardian	1.84	1.076	83
		Total	2.79	1.642	168
Total	Low (in a cabinet)	Absent guardian	3.01	1.306	86
		Present guardian	1.68	.790	85
		Total	2.35	1.267	171
	High (on a cabinet)	Absent guardian	4.01	1.662	81
		Present guardian	2.30	1.219	81
		Total	3.15	1.689	162
	Total	Absent guardian	3.50	1.567	167
		Present guardian	1.98	1.064	166
		Total	2.74	1.538	333

Table 5: Means, standard deviations and correlations between Study 2 variables

	Mean	SD	1	2	3	4	5	6	7	8
1. Theft Likelihood	3.76	1.63	1							
2. Self-Control	3.38	.977	.428**	1						
3. Moral Development	3.83	.763	-.393**	-.439**	1					
4. Target Value	1.41	.611	.028	-.117	-.006	1				
5. Target Accessibility	4.51	.758	.091	.132	.010	-.383**	1			
6. Realism	4.43	.692	.003	.144*	-.049	-.215**	.234**	1		
7. Believability	4.36	.717	-.021	-.053	.003	-.172*	.279**	.584**	1	
8. Credibility	4.36	.650	-.047	.110	-.033	-.215**	.307**	.666**	.669**	1

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Table 6: Test of between-subject effects on theft likelihood for Study 2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	159.762 ^a	5	31.952	20.591	.000	.402
Intercept	40.093	1	40.093	25.837	.000	.144
Self-Control	26.325	1	26.325	16.964	.000	.100
Moral Development	20.964	1	20.964	13.510	.000	.081
Social Density	31.003	1	31.003	19.979	.000	.115
Familiarity	26.044	1	26.044	16.784	.000	.099
Social Density* Familiarity	8.438	1	8.438	5.438	.021	.034
Error	237.420	153	1.552			
Total	2412.000	159				
Corrected Total	397.182	158				

a. R Squared = .402 (Adjusted R Squared = .383)

Table 7: Descriptive statistics for theft likelihood in Study 2

Social Density	Familiarity of Other Shoppers	Mean	Std. Deviation	N
One other shopper	Unknown	3.87	1.542	39
	Known	2.39	1.159	41
	Total	3.11	1.543	80
Many other shoppers	Unknown	4.18	1.357	40
	Known	3.85	1.647	39
	Total	4.01	1.506	79
Total	Unknown	4.03	1.450	79
	Known	3.10	1.588	80
	Total	3.56	1.586	159