

OPPORTUNITY MAKES THE THIEF:
ANALYSIS OF THE PHYSICAL CUES THAT INFLUENCE SHOPLIFTER
PERCEPTIONS OF THE RETAIL INTERIOR AND THE DECISION TO STEAL

By

CAROLINE A. CARDONE

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Caroline A. Cardone

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Abstract of Thesis Presented to the Graduate School
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By

Caroline A. Cardone

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Chair: Mary Jo Hasell
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Shoplifting continues to be a major source of loss in the retail industry. Despite the introduction of many new and advanced technologies aimed at minimizing it, the rate and severity of shoplifting have not ebbed in the past few decades. But shoplifters are human beings; they are usually reasonable people who base their actions on perceptions of crime opportunity or apprehension risk. The action of shoplifting exists in a specific context: the retail store interior. Several studies have linked generalities of the retail interior to shoplifter perceptions and activity. This study further refines previous research on the environment-shoplifting connection by identifying the *specific* design elements that shoplifters cite as most influential to their perceptions and behavior.

In order to identify these elements, the study applies content and narrative analyses to 20 in-depth interviews with known shoplifting offenders. These are examined through the theoretical lens of rational choice theory and situational crime prevention theory. The

study uses a retail-specific adaptation of situational crime prevention's model of opportunity-reducing techniques to classify and quantify shoplifter comments about perceptions of the retail interior. Findings from the content and narrative analyses reveal several patterns amongst the 20 shoplifters. Over 70 percent of their comments about cues in the retail interior fall into the categories of hardened/accessible targets (efforts to limit offender access to coveted items), extended guardianship (in the form of closed-circuit TV), natural surveillance (feeling exposed or like actions are easily monitored), and formal surveillance (the presence and attentiveness of store security staff).

The study's narrative analysis bolsters these results in its inclusion of offender interview excerpts contextualizing how shoplifter perceptions and behavior result from cues in the surrounding environment. The study concludes by outlining some ways retail designers can incorporate the findings of the study into actual design practice.

The process of designing retail interiors to minimize shoplifting is complex. This study provides an important first step in its identification of the elements shoplifters cite as influential to their decision to steal. Further research should aim to test these elements individually, in controlled environments, to determine which design strategies are most effective in shaping shoplifter perceptions and behavior.

CHAPTER 1 INTRODUCTION

At times imperceptible, and at others unavoidable, visual messages abound in the retail environment. *Buy, Covet, Notice, Touch, Enjoy, Relax*. Implied or obvious, these messages surround us, conveyed through the smallest details of product packaging to the overall atmospheric effects of lighting and form. But to a shoplifter, messages in the retail interior are quite different. A shoplifter enters a store, scans the space, and perceives *Unprotected, Understaffed, Easy Access, Quick Escape*. A shoplifter views the retail store through an entirely different pair of eyes. But what does a shoplifter see? The ability to assess and understand exactly how shoplifting offenders interpret the retail environment, and judge the risks and opportunities within it, would be invaluable to retailers, retail interior designers, criminologists, and researchers alike.

Purpose

The purpose of this study is to determine if offenders factor characteristics of retail interiors into their decision to shoplift, and if so, to identify the physical cues offenders cite as influential to this decision. This information will allow retailers, retail interior designers, and loss prevention (LP) professionals to focus on the things that influence shoplifter perceptions and behavior *most*, thereby optimizing the retail interior's ability to minimize loss. At the most basic level, the purpose of the built environment is to provide shelter and protection. "But beyond these basic needs, building design also encompasses two distinct – yet closely related – issues: safety and security" (Nadel, 2004, 1). These issues often extend beyond the integrity of the building structure itself. Within the retail

interior, safety and security also includes protection of the people and products in the store. Shoplifting jeopardizes both of these, and in order to create a safe shopping environment, retailers, designers, and security experts must work together to minimize it.

Modern psychology generally acknowledges that individual behavior is influenced by environment (Gifford, 1996). However, while researchers have examined this interrelationship from a myriad of angles, few have studied the link between criminal behavior and interior environments, and even fewer have analyzed *shoplifter* behavior within *retail* interiors. The current study addresses this paucity by asking whether a shoplifter's perception of the retail interior influences the decision to steal. It addresses this question via a content and narrative analysis of 20 interviews with known shoplifting offenders. Rich in descriptive, qualitative material, these interviews provide detailed first-person accounts of how offenders arrive at the decision to steal. By analyzing the data in these interviews, this study explores how the retail interior factors into a shoplifter's decision-making process, identifying the physical cues shoplifters cite as deterrents to, or opportunities for, shoplifting. Furthermore, the study explains how the offenders' "rational," salient, decision-making process hinges on the physical design of a store and presence/position of security measures. Finally, the study suggests ways in which interior designers may affect this process in a positive way, creating retail spaces that minimize theft opportunities and enhance the shopping experience.

Overview of the Shoplifting Problem

Shoplifting is a specific form of larceny, defined as "an act of theft from a retailer committed during the hours the store is open to the public by a person who appears to be a legitimate customer" (Sennewald and Christman, 1992, 1). In the past century, as the Industrial Revolution has given way to a culture of consumption based on desire for and

availability of goods, shoplifting has evolved into a complex social problem (Klemke, 1992). Retailers have tried everything to minimize it – stringent apprehension policies, high-tech protection devices, and increased security measures – but none of these is a proven panacea (Welsh and Farrington, 2001). Today’s savvy, adaptive criminals can easily circumvent such reactive “band-aids.” To be effective, LP must be a comprehensive, holistic process – a process that begins with store design itself.

The Role of Interior Design

Retail design presents a unique opportunity to help offset the threat shoplifting poses. Retail design can either help or hinder the security of a store’s interior. It can enhance the effectiveness of LP technologies and facilitate safety, with aisles planned to coincide with security camera angles, and shelves designed to maximize employee visibility. Or, alternately, it can create hiding spots for criminals to conduct illicit activity with poorly-planned exit access, and dark, unprotected corners. LP’s effectiveness is compromised without a retail interior that conveys a sense of risk, sanction, and vulnerability to would-be offenders. However, research is still unclear as to which specific design strategies convey this message most effectively. So how do retail designers know where to focus their efforts? In order to create safe, well-protected interiors, retail designers must have an awareness of which design elements most effectively influence shoplifter perceptions, thereby optimizing the retail interior’s role in minimizing theft loss.

Scope of Project

This exploratory study examines 20 shoplifter interviews in an attempt to code and measure the visual cues in retail environments offenders cite as influential to their perceptions of shoplifting risk or opportunity (the specific methodology for coding and

measuring is discussed in Chapter 3). The interviews, conducted over several years with a variety of known shoplifting offenders, present a wide range of information, in narrative form, about the act of shoplifting. Such detailed, informative interviews are indeed rare, and the opportunity to study their content makes this study at once unique and complex. Through a combined strategy of content and narrative analyses, this study focuses in on shoplifters' perceptions of the physical environment within retail store interiors. It then examines how specific cues in that environment (like the height of display shelves, for instance) affect reported perceptions of opportunity versus risk, and subsequently, the criminal decision-making process.

The scope of this study is limited to shoplifters' reported perceptions of retail interiors as they affect the decision to shoplift. While it is hoped this study's findings will prompt further research on how such perceptions could generate a set of "best practice" guidelines for curtailing shoplifting via store design, specific recommendations can only be suggested, not proven or prescribed. The intent of this exploratory study is to improve designers' and retailers' understanding of how offenders perceive retail interiors – an understanding which, in turn, can inform retail design in meaningful ways. The study does not, however, propose that the "answer" to the shoplifting problem can be reduced to a predetermined set of design practices. The issue of retail crime and loss is always a highly individualized one, and responses to it must be tailored to a given time, place, and situation: "the application of standard formulae or prescriptions without careful consideration of local circumstances and the full involvement of local people in this process is much more likely to result in failure or at any rate underachievement" (Schneider and Kitchen, 2002, 299). Therefore, the design strategies presented at the end

of this study are only broad recommendations – starting points for future research, and from which designers and retailers can conjointly develop a targeted, security-based design program.

Definitions

This study explores how offender perceptions of certain cues within the retail space affect their assessment of shoplifting opportunity or risk. For the purpose of this study, the terms “environment,” “retail interior,” and “retail environment” are used interchangeably, and are defined as the physical design of the store’s interior including immediate situational factors such as architectural layout, territorial boundaries, lighting levels, fixture and shelf placement, product display, and users present. These are all physical attributes or design features that *retailers* can control, influence, or affect. (The definition of “environment” does not include manufacturer-based features, such as product packaging, or urban planning issues, such as a store’s neighborhood location or proximity to roadways.)

The study’s results are based on shoplifter perceptions of such physical conditions. As such, the term “perception” is defined as “the process of selection, organization, and interpretation of information about the world conveyed by the senses” (Glassman, 2001, 5). This study is most concerned with how the retail interior, and specific cues within it (such as cameras, mirrors, or visible employees), help steer this interpretive process. Therefore, the term “shoplifter perceptions” refers specifically to perceptions of the physical environment, and how the inferences shoplifters draw from physical cues in retail interiors influence assessments of ease or difficulty associated with shoplifting. The study frequently addresses offender perceptions of shoplifting “risk” or “opportunity”. The term “risk” refers to the level of danger offenders perceive as inherent in the

shoplifting act: the risk of detection, apprehension, and sanction. The term “opportunity” very rarely refers to a direct invitation for shoplifting. Instead, it generally refers to a lack of risk: a perception that the risk of detection, apprehension, and sanction is low.

Finally, the study focuses on how shoplifters perceive certain “physical cues” in the retail environment. These “cues” can be either animate or inanimate: the term refers to anything that helps communicate to offenders how risky (or easy) the act of shoplifting might be. Cues like visible cameras, products placed in clear view of employees, and anti-shoplifting signs all impart a certain message to potential shoplifters. Ruesch and Kees (1956) described the collective meaning that physical cues convey to viewers as “object language”. The intent of this study is to analyze the “object language” of the retail interior as perceived by shoplifters, in order to determine which cues they cite most as influential to their decision to steal.

Assumptions

This study assumes offender perceptions will typically differ from those of legitimate users, and therefore focuses solely on *shoplifter* perceptions, not the perceptions of employees or shoppers. In a 1994 study on perceptions of home vulnerability to burglary, Shaw and Gifford found, contrary to previous beliefs, offenders’ perceptions differed from legitimate users’ (possibly due to the offenders’ first-hand experience with burglary). This study assumes the same to be true of shoplifters; that is, shoplifters’ perceptions of retail interiors will differ from legitimate users’ because the shoplifter’s focus, intent, and experience level is generally different.

Because the offender interviews employed in this study do not address specific retail environments (like the type, size, or location of stores), this study also assumes any

comments about retail interiors are general comments about store design, and not a reference to a specific location or incident (unless otherwise noted by the offender).

Lastly, and most importantly, this study assumes shoplifter perceptions of many LP strategies are contingent on the physical design and layout of a store's interior. The design-perception link is in some cases more obvious than others. For instance, the link between lowered shelf heights (less than 60") and a shoplifter's resulting sense of vulnerability may be implicit: lower shelf design makes it easier for employees to monitor a space, which in turn heightens a shoplifter's perception of risk and sanction. But this link is not always so clear. For instance, a shoplifter may describe an experience of walking into a store and feeling uncomfortable, as if he/she is "being watched". This study assumes perceptions like this are predicated on a visual assessment of the physical design of the space, as it is difficult to watch or be watched without a design that facilitates surveillance. Therefore this study assumes that, explicitly or not, offenders factor retail interior design into their assessment risk in the retail interior.

CHAPTER 2 SIGNIFICANCE AND REVIEW OF LITERATURE

Significance

Accounting for over 23 million jobs, the retail industry is the second-largest employer in the United States. Along with employee theft, shoplifting is the largest source of inventory loss, with the average dollar value per incident exceeding \$265. In 2004, the US retail industry suffered an estimated \$10 billion in losses due to shoplifting alone (Hollinger and Langton, 2005).

These numbers, however, are simply the tip of the iceberg. They account for only direct losses – missing merchandise at retail pricing – like multiple inventory counts, inventory replenishment, loss prevention payroll, training, and technologies. The indirect, peripheral losses retailers incur as a result of shoplifters are also high. Crime and loss decrease profits by adding expense and decreasing operating revenues. Sales decrease when theft or efforts to curtail theft (such as storing items behind a register) render popular items unavailable to legitimate consumers. Sales may also decline if customers begin to view a store as unsafe (Hayes, 1997). Consumers' fear of retail crime can lead to a wide range of avoidance behaviors, including reduced shopping activity, limited nighttime shopping, shortened shopping visits, switching to competitors, or turning to alternative shopping formats, including the internet or catalogs (Warr, 2000). In addition, legal claims resulting from wrongly-accused shoplifters, or from anyone harmed during a crime incident, often result in more financial losses for retailers (Laska, 2000). On a macro level, shoplifting is an unnecessary burden on courts, jails, and police forces. It

strains social services departments, indirectly increases cost of living, incurs tax losses, and imposes a heavy toll on society as a whole (Farrell and Ferrara, 1985).

Retail Reactions to Shoplifting

To mitigate the effects of shoplifting, retailers employ various LP strategies (Clarke, 1997; Hayes, 1991; Hayes 1997). Some retailers focus LP on procedures, training and customer services, while others rely on technologies like electronic article surveillance (EAS) tag systems and cameras (Hollinger & Langton, 2005). EAS gates work with corresponding tags attached to items. Unless deactivated at the point of purchase, these tags activate an alarm when passed through the gates. In theory, store employees will react to these alarms and either reconcile a faulty tag with a receipt, or apprehend a shoplifter. However, the reality is that few alarm activations actually elicit a proactive response from staff (Hayes and Blackwood, 2006b). Other retailers attack theft with store detectives who patrol the store on foot or with the assistance of CCTV (closed-circuit television) cameras (Hayes, 1993; Jones, 1998). However, despite many years of technological advances in security systems, little research exists to prove that these measures have been effective in reducing the impact of shoplifting, and thus, the problem persists today (Welsh & Farrington, 2001).

Literature Review

Shoplifting has been studied through a variety of lenses, including its connection to social factors (Klemke, 1992), greed and temptation (Carroll and Weaver, 1986), gender (Abelson, 1992; O'Brien, 1983; Pousner, 1988), psychological problems (Katz, 1988), life history and upbringing (Snodgrass, 1982), drug use (Jarvis and Parker, 1989), mental pathologies like kleptomania (Cupchik, 1997), and the market-based “culture of consumption” that seems to pervade every facet of Western life (Cohen, 2003).

Despite the range of studies focused on the phenomenon of shoplifting, until recently, very little research has been directed toward understanding its link to retail interior design. However, a growing body of literature exploring the relationship between criminal behavior and the environment positions this relationship as a promising one in terms of how retail interior design affects shoplifter behavior. In a 2004 review of literature, Moussatche, Hayes, Schneider, McLeod, Abbott, and Kohen found that current trends in retail design hold much promise: “Innovative store design can increase convenience and excitement for the customer while simultaneously allowing for more staff efficiency and better product protection . . . effective retail design can both enhance sales and safeguard against shrinkage” (Moussatche et al, 2004, 5). This literature review examines how security issues like shoplifting are addressed in current retail design resources and professional practice. It then reviews several studies on the crime/environment connection in architecture, interior design, and other disciplines. Finally, it presents a theoretical framework from which the current study is derived.

The Design-Security Disconnect

Although recommendations for “designing out crime” are often outlined in crime-based literature (Felson, 1996; Ekblom, 1997; Farrington, Bowen, Buckle, Biurns-Howel, Burrows & Speed, 1993; French et al 1984; Lin et al, 1994; Hollinger, 2004) and occupational health literature (Casteel, 2004; Casteel, 2000; Hendricks, 1999; Mair 2003), there is a paucity of security-based information in the existing body of retail design literature, rendering it difficult for designers or architects to implement loss prevention into design programs. This may be due to a perceived conflict of interest between merchandising and loss prevention: “the paradox is intense. It is a miracle if store operations can resolve the opposing purposes of attracting buyers and thwarting the

illegal removal of merchandise” (Israel, 1994, 97). Retail LP departments are often at odds with marketing, merchandising, and design departments, who feel that security strategies impede their ability to stock, sell, and display items in an attractive, alluring manner. The retail industry often views merchandising and loss prevention as two very different (and sometimes contradictory) endeavors. Therefore, while retail designers can choose from a wealth of resources on how to create stores that support merchandising, very little literature exists to guide designers on how to do so with security in mind.

Review of Security Coverage in Retail Design Literature

This study reviewed 19 books on retail design and found that only seven contained information addressing crime and loss in store design. Even fewer mentioned shoplifting specifically (see Table 1). Most publications on retail design focus on sales-based goals of merchandising and marketing and their connection to superficial aesthetic conceits like branding, identity, image, and overall appearance (Cliff, 1999; Currinbhoj, 1999; Dean, 2003; Pegler, 2002; Reinwoltdt, 2000). Of the seven books that did mention incorporating security into retail design programs, four had been published over 10 years ago, suggesting that what little information on security-focused design is available to designers is fairly outdated. Most retail design literature focuses on how stores effect consumer behavior (Donovan, Rossiter, Marcoolyn, & Nesdale, 1994; Gilboa & Rafaeli, 2003; Ogle, Hyllegard & Dunbar, 2004; Sherman, Mathur & Smith, 1997; Turley & Chebat, 2002), perceptions of branding (Ailawadi & Keller, 2004), or perceptions of merchandise value (Baker, Parasuraman, Grewal & Voss, year). Such research foci are not surprising considering the retail industry’s understandable preoccupation with the bottom line. However, shoplifting also has an enormous impact on the bottom line, and should thus be more of a priority than it currently is in design literature.

Table 1: Review of Security Coverage in Retail Interior Design Literature

Year	Title	Author	Discuss Security?	Shoplifting?	Defensive Design ?	Comments
1986	Designing to Sell	Barr & Broudy	yes	yes	yes	Explains some CPTED concepts and corresponding design strategies.
1991	Design for Shopping Centres	Beddington	yes	no	no	Security section focuses mainly on safety, hazards, fire code, & emergencies.
1999	Trade Secrets of Great Design	Cliff	no	no	no	About retail atmosphere, trendiness, aesthetics.
1999	Designing Entrances for Retail & Restaurant Spaces	Currimbhoy	no	no	no	Focus is on first impressions & overall appearance.
2003	The Inspired Retail Space	Dean	no	no	no	About branding & image.
1990	Retail Design	Fitch & Knobel	yes	yes	yes	Discusses surveillance (formal & natural), blind spots, CCTV, EAS, & employee awareness.
1986	The Retail Store: Design & Construction	Green	yes	yes	yes	Outdated but thorough. Has specific recommendations for designing a secure store.
2001	The Power of Visual Presentation: Retail Stores/Kiosks/Exhibits/Environmental Design	Horton	no	no	no	
1994	Store Planning/Design : History, Theory, Process	Israel	yes	no	no	Pessimistic about reconciling merchandising & security goals. Few design recommendations.
1995	Retail Store Planning & Design Manual	Lopez	yes	no	no	Covers all phases of retail planning, budgeting, scheduling, and construction.
1981	Shops - A Manual of Planning and Design	Mun	yes	yes	yes	Outdated but detailed: covers many specific ways to implement security into design.
1992	Market, Supermarket, Hypermarket Design/2	Pegler	no	no	no	Concentrates on merchandising, mood, marketing.
2002	Designing the World's Best Supermarkets	Pegler	no	no	no	About branding & image.
2002	Brandscaping	Reinwoldt	no	no	no	Mostly about creating image & identity via design.
2000	Retail Design	Reinwoldt	no	no	no	Focuses on retail experience & trends, not security.
2001	Influencing Sales Through Store Design	Saucier	no	no	no	
2004	New Shops and Boutiques	Serrats	no	no	no	
1999	Better Models for Chain Drugstores	Stillman	no	no	no	Suggests ways drugstores can better fit in with communities and historic areas.
2005	Retail Desire: Design Display and Visual Merchandising	Tucker	no	no	no	

Security Coverage in Professional Practice of Retail Design

Unfortunately, the current outlook for integration of security into the professional practice of interior design is just as bleak. In a 2001 study presented to the Fourth European Academy of Design Conference, British design professor Mike Press shared the results of his survey on crime reduction awareness amongst designers. Press conducted semi-structured qualitative interviews with 43 “key stakeholders” in the design industry, including educators and practitioners. In his study, Press noted that retail design is usually more focused on increasing sales than decreasing crime, and that despite Design Week magazine’s annual supplement on retail design, the issue of crime reduction has never been addressed in it. He concluded that although “designers can play a vital role in ensuring that crime is embedded explicitly in design . . . the general picture that emerges from the professional design practice is one of little understanding of the issues, a lack of specific knowledge that can be applied in design, and an overall failure to design against crime” (Press, 2001, 12). Clearly, then, the marriage of loss prevention and interior design is long overdue.

Understanding Shoplifter Perceptions

Research on environment and behavior indicates people prefer environments that assist them in achieving certain goals. Stephen and Rachel Kaplan’s theory of “cognitive affordances” tells us environmental preferences are based on how the “functional qualities of environments help us meet important goals” (Gifford, 1996, 172). For a shoplifter, that goal is to steal, and his/her perception of the retail interior is an assessment of the functional qualities it presents that will help or hinder the attainment of that goal. In their book *Environmental Criminology*, Brantingham and Brantingham (1981) explain that the location and characteristics of a certain place will influence a

criminal's perception of that place, thus influencing the likelihood of a crime occurring there.

Offender perceptions can sometimes differ from reality. Consistent with the common phrase "perception is reality," a store that *seems* well-secured or monitored to a shoplifter may suffer less crime than one that does not, despite any actual difference in security measures. Consider CCTV monitors, for example. Some retailers install inactive dummy cameras to ward off potential crime. Despite the fact that the cameras aren't actually recording anything, some offenders see them and are discouraged from committing a crime because they fear they are being monitored. In this case, the dummy cameras are not *actual* risks; they are *perceived* risks. But because the offender knows no difference, the effect is the same. It therefore follows that, as Newman points out, crime prevention "should be aimed at perception of a situation in addition to, or even instead of, the situation itself" (1997, p. 10). In the retail setting, changing the perception of the situation involves identifying – and later adjusting – those physical cues that contribute to a shoplifter's perceptions.

This study explores the physical cues shoplifters perceive in the retail interior. These correspond to situational crime prevention's more broad classification of behavioral cues: "eliciting stimuli" and "discriminative stimuli" (Wortley, 1997, 67). Eliciting stimuli consist of environmental conditions that provoke predictable behavioral responses: the sight of blood, for example, may make a person feel nauseous - the blood being the eliciting stimulus, and nausea the predictable response. Conversely, discriminative stimuli are environmental conditions that "signal the likely consequence of a particular action," thereby prompting appropriate behavior (Wortley, 1997, 67). Some

examples of discriminative stimuli include signs on exit doors that indicate an alarm will sound if the door is opened; a yellow traffic light signaling that a driver should slow down and stop; or more symbolic signals like a hedge around a property line indicating a territorial boundary (Wortley, 1997, 67). Applying Wortley's concept to the retail interior, some physical cues may function as eliciting stimuli for shoplifters, activating certain behaviors. For example, if a shoplifter sees valuable merchandise left unguarded and unprotected in a store (an accessible target), that cue may be perceived as an invitation to shoplift because of a lower amount of perceived risk. At the same time, other physical cues are like discriminative stimuli in that they signal sanction, repercussion, and risk to the offender: an EAS gate at the entrance, for example, signals a likely consequence – that an alarm will sound when stolen merchandise leaves the store. The challenge for retailers and retail designers, then, is to prompt appropriate behavior (purchasing) and prohibit inappropriate behavior (theft) by altering perceptions of the retail interior via the identification and manipulation of cues within it.

Research on the Crime-Environment Connection

In a lecture delivered to Rutgers University School of Criminal Justice in the late 1990s, noted criminologist Ronald V. Clarke began by revisiting a basic tenet of psychology: "Behavior is a product of the interaction between person and setting" (Clarke, no year). His point was simple: for a crime to occur, a motivated criminal (person) must encounter the opportunity for crime (setting). Clarke went on to explain this equation allows us to reduce crime prevention into two basic categories: "1. Action to prevent the development of criminal dispositions and 2. Action to reduce criminal opportunities" (Clarke, no year,1).

These two categories represent two broad types of theory within the field of criminology: the first attempts to understand crimes such as shoplifting in terms of *behavioral* tendencies, the principle causes of which lie in an individual's genetic makeup, psychological conditions, upbringing, and socio-economic standing. The second category is more relevant to the current study, as it attempts to understand crime as a result of *situational* factors that come together to form a crime opportunity (Clarke, 1997). The idea that certain elements of the physical environment (such as dark alleys or parking lots) can be "criminogenic," or crime-causing, is not new. Urban planners have been applying this mindset to their discipline for several decades (Jeffrey, 1977; Newman, 1973, 1976, 1981). Early research examining crime levels and public housing (Wood, 1961, 1967), street life (Jacobs, 1961), and personal space (Hall, 1959) came to influence an entire generation of urban planners and criminologists who recognized the inextricable link between environment and criminality – how certain physical or environmental conditions can either inhibit or facilitate crime activity.

“Place-Based” Crime Prevention

More recent research on the idea of “place-based” crime prevention has brought the concept indoors, focusing on how it applies to interior environments, including retail interiors (Eck, 2002). Place-based crime prevention seeks to understand first why certain places attract crime or criminals while others do not, and suggests that “some places are safer than others, in part, because of how they are built and how people use them” (Mair, 2003, 211). Mair provides the following concise summary of environmental approaches to crime prevention:

- Physical design and immediate situational factors of a place may encourage or inhibit violence
- Physical design and immediate situational factors can create a sense of territoriality in legitimate users of a space and induce them to act on that attachment in order to protect against violence and other illegitimate use
- Modifications can be made to an environment to reduce opportunities for [crime] by making the commission of an [offense] appear more risky, more difficult, less rewarding, and less excusable to the potential offender (Mair, 2003, 217).

In the past 20 years, research on place-based crime has begun to link crime to certain facets of retail interiors, including how they affect employee and consumer behavior (Bitner, 1992), criminal behavior (Farrell and Ferrara, 1985) and shoplifter perceptions (Carroll & Weaver, 1986; Hayes, 1998; Butler, 1994; Tonglet, 2001). Other studies have explored how certain environments and store designs seem to “invite” criminal behavior (Munday, 1986; Francis, 1980), but lack substantive investigation of the specific elements that contribute to this sense of invitation.

Butler (1994) began to address this lack of specificity in his survey of 15 shoplifters’ views on security. Thirteen out of 15 respondents noticed security measures or other possible risks within the store environment of the research setting. In all, the respondents identified 29 possible risks which they felt could lead to their apprehension, the most frequently mentioned being staff, customers, store detectives, CCTV, and alarms. Similarly, respondents most frequently mentioned being followed by security and the presence of staff as measures that would actually deter them from shoplifting. Thus, Butler concluded, “people exercise a very real deterrence” to shoplifters (Butler, 1994, 62). It is interesting to note respondents in Butler’s study did not feel “items placed on a high shelf” were a deterrent. Indeed, one can assume such high shelves might even negate the usefulness of actual deterrents (people) by blocking lines of sight.

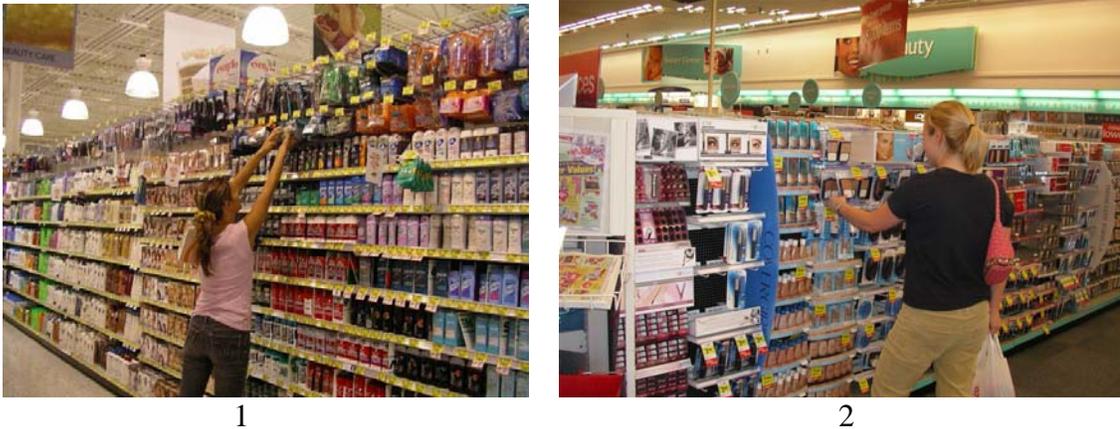


Figure 1: High Shelf Height. In Butler’s study, shoplifters did not cite “items on a high shelf” as a deterrent to shoplifting. As seen in Figure 1, placement of CRAVED products on high shelves may make access a stretch, but not impossible. In fact, high shelves may actually *facilitate* theft acts, since they block lines of sight.

Figure 2: Lowered Shelf Height. This image illustrates how items placed on lower (>60”) displays help make users more visible, and thus rendering shoplifting more risky.

Tonglet’s (2001) study of shoplifters’ perceptions of security found that, for recent shoplifters, the retail interior played a significant role in the decision to steal, underscoring her hypothesis that crime is often impulsive, not premeditated. In fact, 74 percent of recent shoplifters in Tonglet’s study said they would shoplift again even if they hadn’t planned on it, “suggesting that if the retail environment provides a shoplifting opportunity, then potential shoplifters may take advantage of it, even though they may not have planned to shoplift before entering the shop” (Tonglet, 2001, 347). Tonglet’s research is important in that it presents the retail interior as a factor in the shoplifter’s decision-making process. However, Tonglet, like many others who have explored “place-based” crime prevention, was focused more on the idea of crime prevention than on place, making it difficult for designers to understand or her research or apply it in retail interior design practice.



Figure 3: Blind Spot. Shoplifters often take items from high-visibility areas to a “dead zone” (a.k.a “blind spot”) like this in order to hide things in bags, containers, or on their person. Therefore, even if there are no CRAVED items in them, designers must strive to eliminate “blind spots” from the retail interior.

Tonglet’s findings are emphasized by Hayes’ (1998) comprehensive survey of over 2,000 shoplifters, 64 percent of whom admitted they decided to steal *after* entering a store. Furthermore, Hayes’ study found that 62 percent of stolen items were taken from high-visibility zones. This suggests that shoplifters were removing items from high visibility zones and taking them to “dead” zones, or “blind spots,” (see figure 3) to hide the items before exiting the store (Hayes 1998). Hayes recommends that “a deterrence model could focus on altering offenders’ decisions by implementing and ‘marketing’ cues aimed specifically at reducing theft motives and opportunities while increasing the perception of risk” (Hayes, 1998, 8). For example, many stores use CCTV to monitor activity. However, few stores “market” this fact to shoplifters. The simple addition of a sign at a store’s entry reading “CCTV monitoring in use - shoplifters will be prosecuted to the fullest extent of the law” could underscore to offenders that the store means business (see figure 4).



Figure 4: Signage. According to Hayes’ study, “marketing” deterrent cues like this CCTV dome can increase their effectiveness. Designers can enhance CCTV’s power with the simple addition of signage.

Perhaps the most relevant research in the area of how retail interiors affect shoplifter perceptions is Carroll and Weaver’s 1986 process-tracing study. In it, the researchers asked 17 experienced shoplifters to walk through retail environments while “thinking aloud” about deterrents or facilitators that might influence the theft act. Similar to the current study, the researchers coded the resulting accounts into categories in order to examine how rationality explains shoplifters’ decisions to steal. Carroll and Weaver found that the major deterrents to shoplifting were the presence of security devices, item inaccessibility, the possibility of being observed, and the presence of employees. Facilitators included the lack of the aforementioned deterrents, as well as “a store layout conducive to shoplifting (e.g., high counters that impede observation)” (Carroll & Weaver, 1986, 29). In this study, Carroll and Weaver began to address how some specific interior design conditions shape offender perceptions and resulting behavior. However, overall, their study was general – they examined a wide range of factors that contribute to shoplifter perceptions of stores. The current study further refines the concept of how

rationality affects the criminal perception of a retail environment by focusing solely on design-related issues.

Collectively, these studies are significant in that they all attempt to classify the perceptions that come together to motivate a potential offender into shoplifting action. Several of the studies address the perception of the retail interior, and certain elements within it, as influential on a shoplifter's assessment of risk, and subsequent decision to steal. However, none of these studies has been precise enough to pinpoint the specific physical cues shoplifters cite as influential to their decision-making process.

Theoretical Background

In order to operationalize shoplifter perceptions of the retail environment, this study draws on three major crime theories: rational choice theory, the theft triangle, and CPTED/situational crime prevention. The latter theories serve to operationalize rational choice theory. While each of these theories addresses a similar theme (environmental criminology), this study's theoretical background frames them in a consecutive order, from general to specific:

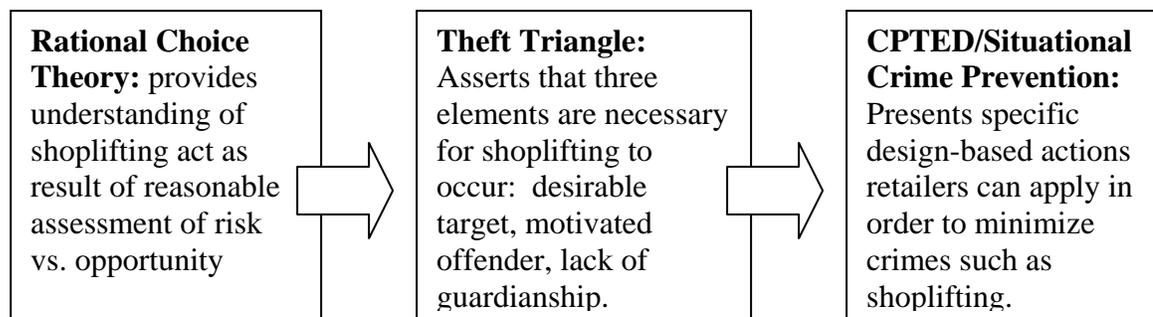


Figure 5: Theoretical Frameworks

The relevance of each of these theories to the current study is discussed below.

Opportunity Theories

In order to understand how the retail environment (and specific cues within it) affects criminal perception, it is important to review some basic theories of environmental criminology. Several well-known criminology “opportunity” theories correlate to and legitimize the present study: rational choice theory, the theft triangle, the U.K.-born situational crime prevention, and its American cousin, crime prevention through environmental design (CPTED). The three latter theories all serve to operationalize rational choice theory, bringing it to life in a way that allows retail designers to apply theory to practice. As explained below, these theories are by no means mutually exclusive; they overlap in some areas, and present complimentary views in others. Together, they provide a theoretical context for the present study, locating it within well-established environmental criminology theory and providing guidelines for its methodology.

Rational Choice Theory

Rational choice theory examines crime from the viewpoint of the offender, asserting that most criminals (like shoplifters) are normal, reasonable people who weigh the relative risks and rewards associated with a crime before deciding to commit it (Cornish and Clarke, 1986; Felson and Clarke, 1993). In the case of shoplifting, a potential offender might weigh how much he/she needs, desires, or will profit from an item against the chance of being caught and the resulting punishment. To understand how rationality affects decision-making, consider the following shoplifter’s first-person account of the risks and rewards involved in the shoplifting act:

It’s very, you know, you can get in trouble, you know you can get caught, you know you can get in a lot of trouble, but you know if you can walk in and take a bag off the shelf, like a duffel bag or something like that, your duffel bag, and fill that

thing up with DVDs, CDs, and Gillette razors and stuff like that that you can sell, and you can pick that thing up and get out with it, you start thinking the risk is worth it. You've gotten away with it once or twice, the risk is worth it. Maybe you can run and take off. . . when you think well if I get out with this bag I got 40 DVDs, 25 CDs, 20 Gillette razors and everything, I've got a \$500 bag right here. Maybe \$600. And if that pays for this bill, that bill, this bill, that bill. Then you can just relax, you know, for a couple of weeks. - "Joey", a known shoplifting offender

The present study is particularly concerned with the role the interior environment has in this assessment process: for instance, would a rational shoplifter be more likely to steal in a hidden store aisle than in front of a cashier? Which physical cues lead a shoplifter to determine where, when, or if to steal? This study will address such questions.

The Theft Triangle

The theft triangle model (Hayes, 1993) takes crime theory to a more micro level than rational choice theory, focusing on the assimilation and identification of the multiple variables that contribute to a criminal act. The theft triangle assumes a potential brings "background factors" (such as genetic coding, personality traits, socialization, learning experiences, and perceived need) to a specific situation. These then combine with three "foreground factors":

1. the perception of need or want for an item and motive for theft;
2. the perception that the item is accessible and obtainable;
3. a low perception of low personal risk associated with committing the offense.

This study is most concerned with the second two elements (perception of access and perception of risk). They are listed in red in Figure 6.

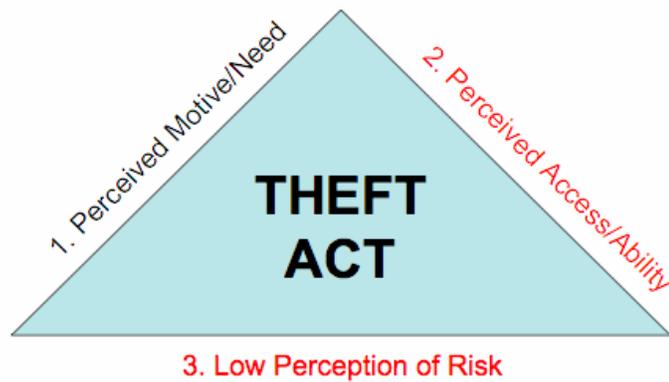


Figure 6: The Theft Triangle

According to the theft triangle, all three components generally must be in place for a crime to occur. It is this focus on the personal and situational perceptions of offenders (Hayes, 1997) that marks the theft triangle’s appropriateness for the current study, as the design of a retail interior is a major determinant of a shoplifter’s *mise en scene*. In order to truly impact loss, it is not enough to prevent crime; retailers must prevent attempts at crime. An effective way to do this is to influence an offender’s perception of the crime situation – to increase a sense of risk, and decrease a sense of accessibility while attempting to reduce criminal motivation. The theft triangle allows this study to “operationalize the study of an offender’s situational decision-making” (Hayes, 1998). Its methodology employs the second and third factors of the theft triangle (perceptions of accessibility and risk) as the two main classifications for analysis of physical cues in retail interiors. In order to understand how these two factors converge to influence a shoplifter’s behavior, consider the following offender’s comment:

First things first you want to know if they got what you want. The second factor is the risk involvement. The risk involvement will be security times cameras times employees times space times customers. Those are the five factors you’re going to have. Why? Because all of them conflict with each other to catch you . . .
 – “Nolan”, a known shoplifting offender

In this excerpt the offender clearly spells out how two elements of the theft triangle – opportunity (“you want to know if they got what you want”) and risk (“the risk involvement”) – interact to determine the perceived feasibility of the shoplifting act. This offender also makes clear how risk factors can be reduced to specific LP measures: security, cameras, employees, customers. These types of cues and their effect on offender perceptions are the foci of the current study. Figure 7 below provides examples of different types of retail interiors and how their physical design clearly impacts the store’s desirability as a shoplifting target:



A



B

Figure 7: Two Retail Interiors. Note the differences in physical layout between these two images. In image A, the store interior is designed in such a way as to hinder shoplifting opportunity: shelves are less than 60” high (allowing visibility across the entire space) lighting is clear, and a long unobstructed line of sight allows visitors to be seen from many vantage points. In image B, high shelving, dim lighting, and a lack of CCTV cameras make this a potential area for a shoplifter to conduct illicit activity.

CPTED

CPTED is actually a group of related place-based crime prevention theories that have become increasingly popular through the last few decades. At its core, the concept

of CPTED is based on the premise that “the proper design and effective use of the built environment can lead to a reduction in the fear of crime and the incidence of crime” (Crowe, 2000, 1). Architect and urban planner Oscar Newman carried out some of the first CPTED research in the 1970’s in his study of how design could inhibit crime in public housing developments (Newman, 1972). CPTED has evolved over the years, but its foundation is still based on how the interrelationship between people and environment can affect crime. Crowe (2000) describes CPTED’s most recent iteration as having evolved to include three fundamental principles:

- Access Control – any measure that denies access to a crime target, whether through spatial definition, locks, glass cases, or guards, access control helps inhibit crime opportunity (see figure 8).



Figure 8: Access Control. This electronics retailer uses cables to secure products to an interactive display. This type of access control prohibits theft while allowing customers to examine and try products. Photo courtesy of author.

- Surveillance – this concept involves elements that enable occupants and casual observers to observe and monitor a space, thus increasing the sense of risk for offenders. Surveillance can be facilitated by employees, security guards, or CCTV, but cannot be effective without design and spatial arrangements that maximize lines of sight (see figure 9).



Figure 9: Surveillance. This type of aisle configuration (sometimes called “feathering”) maximizes surveillance opportunities, increasing a sense of risk for potential offenders. Photo courtesy of author.

- Territoriality – a more recent addition to CPTED, this concept refers to the formation, through physical design, of a “sphere of influence” in which legitimate users begin to feel a sense of responsibility or proprietorship, which in turn leads to their active protection of the space. In the retail setting, territoriality is often defined through real and symbolic space markers: a “territory” may be very clear, such as a jewelry counter, or more ambiguously defined through flooring pattern, color, light, ceiling condition, or displays. In either case, employees are more apt to monitor their “turf” if spatial features make its boundaries obvious (see figure 10).



Figure 10: Territoriality. A simple yet clear change in flooring material in this grocery self-checkout area identifies it as a distinct territory, making it easier for the employee on duty to monitor activity in the space. Photo courtesy of author.

- Activity Support – refers to any activity that increases legitimate consumers and encourages increased business, since these can have an indirect effect on crime. Facilitation of legitimate activity is one of the easiest areas for design to affect in

retail interiors: adding a café of small coffee/tea area to a store will cause legitimate consumers to spend more time in the space, which indirectly contributes to informal surveillance (see figure 11).



Figure: 11: Activity Support. This clothing retailer’s addition of a small café near the store entrance increases legitimate activity and users, which may in turn affect perceptions of risk and/or opportunity. Photo courtesy of author.

Although some studies have questioned CPTED’s effectiveness in specific situations (Taylor, 2002; Amandus, Hunter, James & Hendricks, 1995), researchers generally concur that “design plays a role, albeit often difficult to define, in making crime more or less likely to occur in the built environment” (Schneider, 2005, 273). CPTED is considered a “mainstream” crime prevention technique, and a number of research studies have documented how its application can reduce crime, especially in convenience store and urban planning settings (Crow and Bull, 1975; Scott et al, 1985; White, 1986; Jeffery et al, 1987; Hunter, 1988; Leistner, 1999; Casteel, 2000). The urban planning discipline in particular has produced some promising research in terms of how CPTED principles can affect crime, including Minnery and Lim’s (2005) research on how CPTED measures reduced victimization in residential neighborhoods. Similarly, Brown and Bentley’s 1993 interviews with home burglars found that territorial concerns, neighbor reactivity, and difficulty of entry – all CPTED-based features – affected burglars’ perceptions of a

home's vulnerability. In addition, Shaw and Gifford (1994) found that "surveillability" and "symbolic barriers" – two defensible space cues – made homes seem less vulnerable to burglars. LaVigne (1997) examined how implementing CPTED techniques like maintenance, lighting, natural and employee surveillance affected crime rates in the Washington DC Metro subway system. She found they reduced crime rates, and concluded that the Metro is "unusually safe" considering the relatively dangerous context aboveground, and that this safety is undoubtedly correlated to the design and maintenance of the Metro's physical environment.

But despite its conceptual basis in design, CPTED research on interior environments is relatively scant. Therefore, the few examples we *do* have of how CPTED-derived environmental cues shape offender perceptions of interior spaces are of particular relevance to the current study. In one such example, Swanson (1986) interviewed 65 convenience store robbers in order to identify the environmental cues they cited as either desirable or undesirable in terms of committing a crime. Some of the desirable cues in a store robbers cited are below (their corresponding CPTED categories in parentheses):

- Easy access to and from the store (access control)
- Only one clerk and no customers (surveillance)
- Accessibility of safe (access control)
- Poor visibility (surveillance)
- Obstructed windows (surveillance)

Some of the "undesirable" cues Swanson identified were:

- Customers at the store (surveillance)
- Surveillance cameras (surveillance)
- A raised and deep cashier's counter (access control)

Although performed in a convenience store setting, Swanson's study provides evidence of how offender perceptions are shaped by CPTED-based physical cues. Because this study focuses on retail interiors, not convenience stores, the cues shoplifters mention will likely differ in specifics. However, the same concepts of access control, surveillance, and territoriality will likely arise when shoplifters discuss their perceptions of retail interiors.

In a more recent study, Casteel (2004) examined the effectiveness of similar CPTED techniques in liquor stores and found that those employing CPTED-based crime "countermeasures" such as good visibility, bright lighting, and controlled exit access saw a 33 to 87 percent decrease in crime. The implication of both of these studies is, of course, that it *is* possible to manipulate physical cues in retail environments in order to reduce criminal opportunities. This study will help identify which cues offenders perceive as most influential to shoplifting.

Situational Crime Prevention

Similar to CPTED, situational crime prevention presents way to use the larger concepts of rational choice theory in real-world applications. It is predicated on the notion that offenders assess the risks and rewards of a potential crime before deciding to commit it. However, situational crime prevention further refines this concept, locating the precise characteristics of a particular situation as pivotal in the offender's rationalization process. Situational crime prevention suggests that effective crime prevention reduces opportunities for crime by reducing rewards and increasing efforts and risks for perpetrators. It contends that, in so doing, an environment can be changed in a way that "affects assessments made by potential offenders about the costs and benefits associated with committing particular crimes" (Clarke, 1997, 5).

A Matrix of Opportunity-Reducing Techniques

Situational crime prevention is a particularly helpful framework due to its fundamentally “tactical” approach: it’s an evolving, evidence-based matrix of crime prevention techniques that (currently) consists of 25¹ tangible, specific strategies aimed at reducing crime (see Table 2) (Clarke, 1997; Smith and Cornish, 2004). Like the theft triangle model, this micro scale renders the matrix particularly useful for understanding the current study. The 25 strategies provide a useful starting point for categorizing shoplifter comments about risks and opportunities within interior environments.

Situational crime prevention’s matrix of 25 Opportunity-Reducing Techniques evolved out of 15 years’ collective experience in reducing crime via control of situational elements. The techniques are categorized into five overarching groups: increasing perceived effort, increasing perceived risks, reducing anticipated awards, reducing provocations, and removing excuses (Clark and Cornish, 2003). This study is most concerned with the first two groups: increasing effort and risk. The techniques in these two categories are related to rational choice theory, in that they aim to affect crime incidents by influencing offender perceptions of risk or opportunity. The strategies in third group, reducing rewards, are geared toward making a crime target less desirable by minimizing the potential payoff it has. The last two groups, reducing provocation and excuses, contain strategies that minimize or remove catalysts for crime: situations or elements that “provoke” crime or provide excuses for it. The original matrix of all 25 Opportunity-Reducing Techniques is included in Table 2.

¹ The original matrix consisted of 16 opportunity-reducing techniques, but has since evolved to 25.

Table 2: Situational Crime Prevention's Matrix of 25 Opportunity-Reducing Techniques

INCREASED EFFORT	INCREASED RISK	REDUCED REWARD	REDUCED PROVOCATION	REMOVED EXCUSES
1. Hardened Targets:	6. Extend Guardianship:	11. Concealed Targets:	16. Reduced Frustrations:	21. Set Rules:
Steering column locks Anti-robbery screens Tamper-proof packaging	Routine precautions like going out in a group at night Neighborhood watch programs	Off-street parking Gender-neutral phone listings	Efficient queues & polite service Expanded seating Soothing music & lights	Rental agreements Harassment codes Hotel registration
2. Controlled Access:	7. Assist Natural Surveillance:	12. Removed Targets	17. Avoid Disputes	22. Posted Instructions:
Entry phones Electronic card access Baggage screening	Improved street lighting Defensible space design Support whistleblowers	Removable car radio Women's refuges Prepaid pay phone cards	Reduce crowding in pubs Separate enclosures for rival soccer fans Fixed cab fares	"No parking" "Private Property" "Extinguish camp fires"
3. Screened Exits	8. Reduced Anonymity	13. Identified Property	18. Reduced Emotions:	23. Alert Conscience:
Ticket needed for exit Export documents Electronic merchandise tags Security guard at door	Taxi driver IDs "How's my driving?" decals School uniforms	Property marking Vehicle licensing, VIN Cattle branding	Controls on violent pornography Enforce good behavior at sport games Prohibit racial slurs	"Shoplifting is stealing" signs Roadside speed display signs
4. Deflect Offenders:	9. Use Place Managers:	14. Disrupted Markets	19. Neutralize Peer Pressure	24. Assist Compliance
Street closures Separate womens' bathrooms Disperse pubs at certain times	Two clerks at convenience stores Reward employee vigilance	Monitored pawn shops Controls on classified ads Controls on internet auction sites Licensed street vendors	"Idiots drink and drive" "It's OK to say no" Disperse troublemakers at school	Easy library checkout Public lavatories Numerour litter bins
5. Controlled Tools/Weapons:	10. Strengthened Formal Surveillance:	15. Denied Benefits	20. Discourage Imitation:	25. Control Drugs & Alcohol
"Smart" guns Disabling stolen cell phones Restrict spraypaint sales to juveniles	Red light cameras Burglar alarms Security guards	Ink merchandise tags Graffiti cleaning Speed bumps	Rapid repair of vandalism V-chips in TVs Censored details of modus operandi	Breathalyzers in pubs Server interventions Alcohol-free events

Retrieved April 22nd, 2006 from www.popcenter.org.

The matrix of 25 Opportunity-Reducing Techniques is helpful to this study in that it provides a framework for organizing, categorizing, and quantifying the physical cues shoplifters cite as influential to their decision to steal (this process is explained in Chapter 3). Because the matrix is so detailed, it also helps clarify exactly how retailers and designers can manipulate physical cues in the retail interior so as to deter crime.

Matrix of Physical Cues in the Retail Interior

Originally, the prevention techniques in the matrix of 25 Opportunity-Reducing Techniques were geared to a wide array of circumstances – from protecting cars to preventing hooliganism. However, a retail adaptation was necessary for the study, since the idea of situational crime prevention is “to change the circumstances leading up to or surrounding the situation, thus making it more difficult for the potential offender to accomplish the crime ”(Newman et al, 1997, 9). In order to affect the circumstances surrounding shoplifting behavior, it is necessary to have a set of strategies tailored to the retail environment. This study proposes a retail-based matrix based on the original 25 Opportunity-Reducing Techniques, but specifically tailored to retail interiors. Following an extensive literature review and consultation with some experts in the field of loss prevention and situational crime prevention, the study determined ten categories to be either redundant when considered in the retail context, or simply irrelevant. These categories were removed, and the result is a specifically retail-based matrix consisting of 15 categories (see Table 3)².

² The categories removed are Reduced Anonymity, Controlled Tools/Weapons, Neutralized Peer Pressure, Controlled Drugs and Alcohol, Avoided Disputes, Disrupted Markets, Identified Property, Removed Targets, Assisted Compliance, and Denied Benefits.

Table 3: Matrix of Physical Cues in the Retail Interior.

PERCEIVED EFFORT	PERCEIVED RISK	PERCEIVED PROVOCATION	PERCEIVED EXCUSE
1. Concealed & Hardened Targets	5. Extended Guardianship	9. Visible Targets	13. Rules
Presence of glass cases Items kept behind counters Accessibility of displays Accessibility of items Presence of cords, locks, cables	Presence of CCTV Quantity of CCTV system Well-monitored CCTV Quality of CCTV system	Presence of highly visible CRAVED items	Presence of shoplifting signage ("Shoplifters will be Prosecuted")
2. Exit Access	6. Natural Surveillance	10. Frustrations	14. Instructions
Access to exits Emergency exits Number of exits Presence of garden areas	Presence of blind spots Being noticed/unnoticed Number of customers in Store layout Crowds Store size Lighting Item location	Quality of customer service	Signs indicating store policies "Ask for assistance" signs
3. Exit Screening	7. Place Managers	11. Emotions	15. Conscience
Presence of EAS tags/sensors Presence of EAS gates at door Store greeter at door Security guard at door	Attentiveness of employees Quantity of employees Employees (general)	Antiestablishment sentiment	"Shoplifting is stealing" signs
4. Offender Deflection	8. Formal Surveillance	12. Imitation	
Police presence at store	Security (general) Attentiveness of security Uniformed security staff Undercover store detectives	Maintenance level Presence of previous crimes	

The 15 categories in this matrix are explained and illustrated in further detail below, including how each relates to design strategies that may help retailers and designers minimize shoplifting through retail interior design. It is important to realize the duality of each of these cues. The visible presence of a cue can contribute to an offender's sense of risk, while the lack of a cue can contribute to an offender's perception of shoplifting opportunity (because of a perceived lack of risk):

1. **Target Hardening & Concealment:** A specific brand of opportunity reduction, target hardening involves obstructing an offender's immediate access to CRAVED³ merchandise via locks, cases, safes, cords, cables, or reinforced materials (see figure 12). Target hardening often creates opportunities for attractive, consumer-friendly retail design; for example, an electronics display with hardened targets allows shoppers to approach and try merchandise, but prohibits theft via cables attached to products. However, if not mindfully implemented, hardened targets can be off-putting to legitimate shoppers.



Figure 12: Target Hardening. At most jewelry stores, products are protected by locked glass cases that prevent illegitimate access. But hardened targets need not be unattractive: here we see how elegantly-designed cases can contribute to a pleasant store atmosphere. Photo courtesy of author.

2. **Access Control:** In retail design, this technique refers to restricting offender exit access and impeding speedy getaways. Several design strategies can facilitate this: for moderately crime-prone stores, the simple addition of some displays or shelving in the exit path can help. For stores with serious crime threats, installing railed

³ CRAVED stands for Concealable, Removable, Available, Valuable, Enjoyable, and Disposable. Products meeting all these criteria are most likely to be stolen, like batteries and premium razor blades. See http://crimeprevention.rutgers.edu/case_studies/effort/hot_products/cravedlist.htm

pathways or channels leading to the exit can deter offenders, impede getaways, and contribute to apprehensions (see figure 13).



Figure 13: Restricted Access Control. In this pharmacy retailer's high-crime store, the retailer and designer worked together to install rails at the point of exit, making it difficult for shoplifters to make a hasty getaway. Photo courtesy of author.



Figure 14: Unrestricted Access Control. This is a safer store in the same pharmacy retailer's chain. Because this store suffers less theft, it is able to provide patrons unrestricted exit access: a clear path straight to the door. Photo courtesy of author.

3. **Exit Screening:** Exit screening provides a way for retailers to monitor activity at the point of exit. In retail design, exit screening consists of two measures: electronic article surveillance (EAS) gates, and door "greeters". "Greeters" may reconcile receipts with items, maintain surveillance for shoplifting activity, or

ensure that returns are not fraudulent. However, to be most effective, the entry/exit point must be designed to support these activities. Clear lines of sight will enable employees to monitor the space, and well-defined spatial boundaries reinforce territoriality and clearly define the space to be monitored.

4. **Offender Deflection:** Although not the easiest technique to accomplish via design, it is possible to deflect offenders from stores. Some retailers accomplish this by coordinating a police presence outside the store. This type of cue can dissuade offenders from entering the store at all.
5. **Extended Guardianship:** In terms of retail design, the concept of “extended guardianship” generally refers to the use of CCTV, which, when thoughtfully planned and installed, can provide clear views of various store spaces (see figure 17). This technology allows retailers and LP experts to literally extend protection of the store past the limits of their immediate view, providing “eyes” into hidden spaces. Store design plays a crucial role in the effectiveness of CCTV: inadequate camera coverage can contribute to “blind spots.” These are desolate areas of the store where offenders can go to surreptitiously stash products in bags or clothing, unseen by cameras or people. The elimination of “blind spots” should be a consideration for all retail designers. Design also affects the success of CCTV technology itself, as camera coverage and viewing angles are often blocked by poorly-placed monitors, shelves or displays (see figures 15 and 16) (Cardone, 2004).



Video capture courtesy of IntelliVid Corp.

Figure 15: Poor CCTV positioning: The performance of this store’s CCTV system is limited by the large monitor blocking the camera’s view. When designers and retailers don’t collaborate on CCTV installation, views like this result. CCTV image capture courtesy of IntelliVid Corp.



A



Video captures courtesy of IntelliVid Corp.

B

Figure 16: Poor CCTV Positioning: These examples show how poor design and planning can hinder CCTV effectiveness. In image A, reflected glare in a store's entry/exit point limits the clarity of one camera image. This makes it difficult for security to identify theft acts on the CCTV monitor. In image B, signs and monitors block CCTV camera views, again rendering it difficult for security staff to monitor crime via the camera system. CCTV image captures courtesy of IntelliVid Corp.



A



Video captures courtesy of IntelliVid Corp.

B

Figure 17: Optimal CCTV positioning: In images A and B, we see the ideal CCTV camera placement, uninterrupted by signs or objects. Designers should keep CCTV cameras in mind when designing stores, and strive for these types of expansive views. CCTV image captures courtesy of IntelliVid Corp.

6. **Natural Surveillance:** The term “natural” simply refers to design strategies whose functions, when incorporated into the overall environment, become “an inherent, or natural part of the design” (Atlas, 2001, 40). Natural surveillance gives users and casual observers the ability to monitor a space, and therefore increase an offender’s sense of vulnerability or risk. The visual presence of employees or the feeling of “being watched” can have a significant deterrent effect on would-be offenders. However, neither of these effects will work without retail design that supports surveillance (see figure 18). Although considered a single technique in the matrix, “natural surveillance” actually encompasses a wide range of strategies, including lowered (> 60”) shelf and fixture heights; wide, clear aisles; placing CRAVED products in very visible areas; the installation of mirrors; ample lighting; and the

creation of lengthy, unobstructed lines of sight. Any technique that aids in viewing or observing the retail space (and thus increasing offenders' sense of risk) falls into the category of natural surveillance (see figures 19 and 20).

The success of natural surveillance as a tool for actually detecting and apprehending criminals is contingent on two factors: a design that supports visual surveillance of the space, and competent and compliant observers who actively respond to crime incidents. While it is impossible to ensure that a store will always contain vigilant and observant customers ready to spot and react to shoplifting, it *is* possible to create an environment that allows certain observers to react to certain crime situations (some shoplifters indeed fear being seen or apprehended by a "hero" customer, as will be discussed later). Again, it is the potential for being seen that affects a shoplifter's perception of risk, and design that facilitates natural surveillance increases that potential.



Figure 18: Poor natural surveillance. Here, the cashier's view of the store is blocked by high shelves and poorly-arranged aisles, making it difficult for active monitoring of the space. Also, CRAVED items are placed far from the employee's line of sight. Ideally, CRAVED items would be placed in direct view of employees, as it can indirectly increase a potential offender's sense of risk. Photo courtesy of author.



Figure 19: Good natural surveillance. Here, thanks to mindful store design, the pharmacists have a clear line of sight down several aisles. Photo courtesy of author.



Figure 20: Good natural surveillance. This is one view from the pharmacy department. CRAVED items are on the left, plainly visible to the employees working in the pharmacy. This product placement increases a sense of risk for potential shoplifters. Photo courtesy of author.

7. **Place Managers:** “Place managers,” in the retail context, refers to store employees. This strategy is dependent, in part, on the idea of territoriality: through the creation of clearly defined “territories,” employees are more apt to defend and protect the “places” they “manage”. Retail design can optimize place management in a couple of ways: first, designers and retailers should work together to determine where in the store employees should be located. Positioning multiple clerks in strategic areas of the store can facilitate a variety of situational crime prevention techniques. Secondly, store layout should aim to position CRAVED products as close to these place managers as possible in order to provide an extra level of protection (see figure 21). It is important to note the role management and motivation plays in LP efforts here: while retailers often cite employees as the first and best line of defense against shoplifting (Hayes and Blackwood, 2006c), even the best planned store cannot force an employee to monitor a space. Retailers must provide employees incentive and reward for vigilant surveillance of the store - without it, a well-designed, security-focused interior layout may be wasted.



Figure 21: Place Management: This national discount retailer uses a “store-within-store” design to protect CRAVED electronics. Here, we see how the Home Electronics department has its own checkout point. The entire department is surrounded by high shelves, making this point the only way to enter or exit. The department was also designed to allow the employee staffing the checkout a clear line of sight (the yellow arrow) to numerous displays of CRAVED items like DVDs and music CDs. Photo courtesy of author.

8. **Formal Surveillance:** Like natural surveillance, the concept of formal surveillance is based on the idea that increasing observation opportunities decreases crime. However, while natural surveillance applies to users and casual observers, formal surveillance refers specifically to retail employees and LP staff, including both uniformed security officers and undercover store detectives. The design strategies that enhance formal surveillance are the same as those for natural surveillance (see figure 22).



Figure 22: Formal Surveillance: The design of this pharmacy includes a designated counter placed in the cosmetics department. The employee at this counter has a clear view of the area she manages, allowing her to assist customers and provide formal surveillance of the space. Photo courtesy of author.

9. **Visible Targets:** Similar to target hardening, the goal of target concealment is to prevent illegitimate access to CRAVED products. For example, some pharmacy retailers position CRAVED products like batteries, film, razor blades, or tooth whiteners behind checkout counters. Signs in the items' usual aisle locations inform consumers of the items' relocation, redirecting them to the checkout area (see figure 24). While this strategy works well to minimize shoplifting, legitimate consumers are often left frustrated, which can decrease sales (Moussatche et al, 2004). Retail design can mitigate this situation through the incorporation of other defensive strategies, like positioning CRAVED products in direct sight of employees or LP staff (see figure 23).



Figure 23: Visible Targets. Instead of concealing targets or relocating them behind counters, a better tactic may be to locate CRAVED products (circled in yellow) in direct view of employees. Here, for example, store design has places CRAVED film and disposable cameras in an area closely monitored by store employees. Photo courtesy of author.



Figure 24: Target Concealment. In order to minimize loss, many retailers move CRAVED items to more secure locations. Razor blades, for example, may be relocated from the aisle to behind a counter. Signs in the aisle redirect consumers to the counter for products. This tactic may prevent theft but can also be off-putting to legitimate consumers. Photo courtesy of author.

10. **Reduce Frustrations:** Shoplifting, at times, can result from sheer frustration with the retail experience: long lines, inattentive customer service, or high prices can reduce a legitimate shopper to an enraged shoplifter (Klemke 1992). While research linking shopping frustrations with shoplifting is scant, a pleasant, well-designed interior can't hurt. Retail interiors should be planned with the consumer's ease of shopping in mind; layouts should facilitate fast checkout, and designers should strive to position employees at multiple places in the store to assist with customer queries (see figure 25).



Figure 25: Reduce Frustrations. The amount of clear space in front of this checkout counter prevents a frustrating queue, minimizes confusion due to crowding, and prevents consumers from becoming upset. Photo courtesy of author.

11. **Reduce Emotions:** Some research has linked antiestablishment attitudes with shoplifting, as some offenders believe that giant corporations either “deserve” to be stolen from, or can easily absorb shoplifting losses (Klemke, 1992). Design can, to some extent, project an image that offsets such beliefs. Smaller-scale stores, “store-within-store” design, or the overall feeling of a “mom-and-pop” establishment may help.
12. **Discourage Imitation:** Research points to signs of incivility (like trash or vandalism) as possible factors conducive to crime (see figure 26)⁴ (Coleman, 1990; Harcourt, 1998; Kelling, 1996). Therefore, a well-maintained store interior will contribute to decreased crime more than a shoddy, ill-kept one (see figure 27).



Figure 26: Poor Maintenance. Here, CRAVED items are haphazardly positioned on shoddy, ill-kept shelves. According to “broken windows” theory, this may attract crime. Photo courtesy of author.



Figure 27: Excellent Maintenance. This store’s display shelves are in good condition, clean, and well-lit. Store design that projects this type of well-maintained atmosphere may dissuade potential offenders because it seems cared for. Photo courtesy of author.

⁴ Like many CPTED research, Coleman’s research has been disputed over the years. However, a well-maintained store environment has many benefits aside from crime prevention, so retailers should strive for it regardless of research disputes.

13. **Set Rules:** In terms of shoplifting, the best way to “set rules” is to post visible signage indicating the store’s shoplifting policy (see figure 28). This may help deter offenders



Figure 28: Set Rules. Retail designers should always keep in mind the influence signage can have on user behavior. This store has clear signs indicating their use of CCTV, which implies a stringent shoplifter apprehension policy. Photo courtesy of author.

14. **Post Instructions:** Similar to #21 above, visible signage alluding to stringent store policies (such as returns, exchanges, or check-writing) can help deter offenders.
15. **Alert conscience:** Also similar to #21, visible signage reminding shoplifters that “shoplifting is a crime” has been shown to have a deterrence effect (Klemke, 1992).
16. **Assist Compliance:** Similar to #18 (reduce emotions), a store that is designed to make legitimate shopping as easy and pleasant as possible can contribute to minimizing crime in some cases.

Each of the abovementioned techniques has design implications in the retail interior. Understanding the matrix of Physical Cues in the Retail Interior and how its techniques translate into the world of shoplifting and retail interiors is integral to the current study, as it is used to categorize and quantify the elements offenders mention in

their interviews. Furthermore, the matrix forms the foundation for this study's most crucial connection: how retail design can maximize the effectiveness of these offender-influencing environmental cues.

Summary

This chapter provided a context for the study of how cues in the retail interior influence shoplifter perceptions. It began with an overview of the scale and scope of the shoplifting problem and a description of how the many responses to retail theft have not, to date, solved the problem. A literature review underscored a paucity of security/shoplifting information in the current body of retail interior design literature. It went on to summarize several research studies addressing the link between crime and environment and shoplifter perceptions of the environment. While none of these studies is interior-design-based, collectively they underscore the potential interior design has for influencing criminal behaviors like shoplifting. Finally, this chapter presented a theoretical framework for the current study based on three theories: rational choice, the theft triangle, and situational crime prevention. An explanation of how this study uses the framework follows in Chapter 3.

CHAPTER 3 RESEARCH METHODOLOGY AND LIMITATIONS

In order to explore how shoplifters factor retail interiors into the decision to steal, this study employs a theory of environmental criminology: rational choice. Rational choice theory tells us that crime offenders are active decision-makers who apply reason to their assessment of criminal opportunities⁵ (Clarke and Felson, 1993). For instance, a shoplifter assesses a situation, collects available information, and weighs potential risks and rewards before deciding whether or not to steal. The current study uses two frameworks derived from rational choice theory in order to operationalize shoplifter statements regarding retail interior environments: the theft triangle and situational crime prevention. Together, these frameworks help us understand how particular situations present physical elements that may shape criminal behavior, prompting it or discouraging it. The retail interior is an integral component in this process, as it is within its context that these “cues” manifest themselves and are processed by offenders. According to the paradigms presented by these three cited criminology frameworks, then, if retailers and designers apply strategic, security-focused designs to store interiors, it may be possible to manipulate environmental cues in such a way as to discourage theft.

However, before this can occur, we need to better understand what these environmental cues are, and which ones influence shoplifter perceptions with the most frequency. Several past studies on offender behavior have used offender interviews to

⁵ Rational choice theory excludes from this generalization the mentally ill, kleptomaniacs, and those under the influence of drugs.

obtain this type of data (Forrester, Chatterton & Pease, 1988; Butler, 1994). The challenge of extracting this information from shoplifter interviews forms this study's research question: using interviews with known shoplifting offenders, can we isolate and identify the physical cues shoplifters cite as influential to their perceptions of crime risk versus crime opportunity in retail interiors? Answering this question will provide a better understanding of how retail environments shape shoplifter perceptions – an understanding that can, in turn, inform helpful new strategies for designing effective and secure retail spaces.

Sample Participants

In order to analyze shoplifter perceptions of retail interiors, it is necessary to gather data from shoplifters themselves: a difficult and time-consuming task. The easiest way to collect a sample for a study such as this is through store or court records of apprehended shoplifters. But historically, these samples have been viewed skeptically, owing to range restriction bias with apprehended (and perhaps incompetent) offenders (Decker, 2005).

The 20 interviews comprising this study's sample were originally conducted by the Loss Prevention Research Council (LPRC), a multidisciplinary team of professionals based in Gainesville Florida, several of whom are affiliated with the University of Florida. In order to offset the aforementioned bias, LPRC solicited research participants via a snowball sampling method. Working in conjunction with store detectives at major retailers, LPRC obtained profiles of recently apprehended, but not jailed, shoplifters. These individuals were contacted and informed of the research project. LPRC then provided willing participants a monetary incentive for the names and contact information of other known offenders. The sampling process ensured the sample was not solely comprised of apprehended shoplifters.

Quality of Data

While this sample size (20 participants) may seem small, it is in fact quite substantial considering the transitory, unstructured lifestyle many experienced shoplifters live, and the inherent difficulty involved in scheduling and performing interviews with criminals. As Forrester et al point out, the “particular difficulties of this approach are obvious” (1988, 3). While each individual interview was only an hour or so in duration, the process of identifying, locating, and meeting with each offender often took several weeks. However, the opportunity to use data from active, repeat offenders also had its advantages, as “repeat offenders can be among the most useful sources of information for strategic purposes” and “interviewing active offenders makes it much more likely that the information about motives, techniques, and associations will be closer to the offense, and thus more valid” (Decker, 2005, no page). The resulting 20 interviews used in this study are comprehensive in nature, rich in data, and dense in content – a literature review reveals that this type of data source is rare in the world of criminology, a fact that in itself marks this study as significant.

LPRC conducted the interviews used in this study in Orlando, Florida, in 2000; Dania, Florida, in June of 2002; and Chicago, Illinois, in July 2002. LPRC conducted the interviews in person in a hotel room. The interviews were both video- and audio-recorded, then transcribed by an independent transcription agency. The resulting transcripts ranged in length, due primarily to the length and wordiness of the offenders; some offenders expounded on each topic with long, descriptive responses while others gave curt one-word answers. Two examples of average-length offender transcripts are included in Appendices A and B.

Sample Demographics

The demographics of the participants in the study are detailed in Table 2. Of the 20 interviewed participants, the majority were male (90 percent) and white (35 percent). 45 percent of the participants had been arrested for shoplifting, again indicating this sample was not biased toward incompetent offenders.

Table 4: Sample Demographics

n=20

AGE (in years)		GENDER		ETHNICITY		INTERVIEWED IN	
20-29	(4) 20%	male	(18) 90%	white	(7) 35%	Chicago, IL, 2002	(5) 25%
30-39	(3) 15%	female	(1) 5%	black	(1) 5%	Dania Beach, FL, 2002	(10) 50%
40-49	(6) 30%	unknown	(1) 5%	hispanic	(4) 20%	Orlando, FL, 2000	(5) 25%
50-59	(2) 10%			unknown	(8) 40%		
unknown	(5) 25%						

ARRESTED FOR SHOPLIFTING?		TIMES ARRESTED		EMPLOYMENT		EDUCATION	
yes	(9) 45%	<01	(7) 35%	full-time	(8) 40%	<H.S. degree	(3) 15%
no	(7) 35%	1-5	(6) 30%	part-time	(1) 5%	GED	(4) 20%
unknown	(4) 20%	6-10	(1) 5%	unemployed	(6) 30%	H.S. degree	(4) 20%
		11-15	(0) 0%	unknown	(5) 25%	some college	(2) 10%
		16-20	(1) 5%			Assoc. degree	(1) 5%
		>20	(1) 5%			4-year degree	(1) 5%
		unknown	(4) 20%			unknown	(5) 25%

Methodology

The primary study method involves a secondary data analysis of semi-structured interviews with known and admitted shoplifting offenders. The analysis is secondary because the initial goal of the interviews was to examine a wide range of the determining factors behind shoplifting, including product type, display techniques, product packaging, potential for item resale, store location, interior design, and existing security measures. The study employs both narrative and content analyses. The content analysis provides a systematic approach to categorizing and quantifying the massive amounts of qualitative data contained in the interviews. Narrative analysis (in the form of individual excerpts

from the offender interview transcripts) provides a contextual “safety net” that catches important tonal implications or thematic subtleties overlooked by the content analysis (Spence, 1982). Both methods are described in detail below.

Content Analysis

A content analysis is “a technique used to extract desired information from a body of material (usually verbal) by systematically and objectively identifying specified characteristics of the material” (Smith, 2000, 314). In the current study, the body of material refers to the 20 transcribed offender interviews. The specified characteristics of the material refers to the cues the study seeks to categorize and quantify: physical cues in the retail interior shoplifters cite as influential to the decision to steal.

According to Smith (2000), a content analysis consists of 11 steps. These steps, and their relevance to the current study, are:

1. *State the research problem.* Do certain physical cues in the retail interior influence offender perceptions ease or difficulty associated with the shoplifting act? If so, what do they notice, how do they interpret it, and how does this process affect their subsequent behavior? Moreover, do analytical tools derived from the theft triangle and situational crime prevention help us understand, categorize and practically use offender interview data?
2. *Decide whether the content analysis will provide the needed information.* As a research tool, the content analysis determines the existence and frequency of certain words, phrases, sentences, and concepts pertaining to physical features of a retail environment within the transcript texts. Codifying these elements allows for systematic description of the form and content of written or spoken material methodical categorization and analysis of data within various interview transcripts. It also enables the study to go beyond the immediate content of the interviews and further capture the thoughts and beliefs that fuel the offenders’ decision-making processes (Sommer and Sommer, 2002).
3. *Decide what type of qualitative material will best provide the information.* The LPRC interview instrument used in this study was well-suited for determining shoplifter perceptions because while it posed the same questions to each participant, it was also flexible (a list of the questions used in this instrument are included in Appendix C). The presentation or order of the questions varied, often in accordance with the natural flow of conversation. This is called a *semi-structured*

interview (Bartholomew, Henderson, & Marcia, 2000); an interviewing method that allowed participants to expand on and describe thoughts and ideas. Using it gave the data a richness and complexity that frequently approached narrative form (the implications of which will be discussed later). One of the drawbacks of the semi-structured interview, however, is that relevant data was often scattered and somewhat unorganized. A content analysis was therefore appropriate for this study because the coding process identified information relevant to the current study – information which was often descriptive in nature and did not lend itself to immediate quantification.

4. *Decide how to select the chosen material and the amount needed.* N/a – the material was predetermined in the interview transcripts.
5. *Decide on a content analysis coding system.* In order to reduce the massive amount of text in the interviews to an organized set of quantifiable data, the content analysis employs a process called coding, in which “coders” classified words or phrases according to content, context, and meaning. The formation of a reliable, thorough coding system is an integral part of any successful content analysis, as it enables accurate collection, identification and operationalization of all data relevant to the research question and allows the analysis to be replicated with some amount of consistency (Stemler, 1997). The coding system in this study is informed by a combination of situational crime theory and security-minded design practice. It is derived from situational crime prevention’s 25 Opportunity-Reducing Techniques, but reduced to 15 techniques targeted toward retail interiors. The resulting Matrix of Physical Cues in the Retail Interior (see Matrix 2) contains four general category headings, 15 categories, and numerous detailed subcategories. Offender statements are coded using these detailed subcategories (which can also be referred to as secondary variables, as they are “subsumed by, or a constituent of, the primary constructs [categories] under investigation”) (Bartholomew et al., 2000, 294). The subcategories further assist with sifting scattered data, an important step for reliable, valid data analysis, since “faulty definitions of categories and non-mutually exclusive and exhaustive categories” are the two fatal flaws in a content analysis (Stemler, 2001, no page). The thoroughness and expansiveness of these categories provide a classification system that facilitate accurate content analysis.
6. *Obtain pilot material on which to try out the coding system.* For the purpose of this study, one offender interview serves as as pilot material.
7. *Train coders.* This involves reviewing the entire study with a fellow coder, and explaining in detail how the coding system works. As stated previously, a very clear, well-defined coder manual is imperative for accurate results and optimal validity. However, the categories in this study’s coding manual (the Physical Cues in the Retail Interior matrix) are by no means mutually exclusive. Although situational crime prevention’s matrix attaches specific strategies to theoretical concepts, it is still in essence a flexible, dynamic framework. The system of categories in this study’s coding manual matrix may *seem* rigid, but it is in fact not.

Some shoplifter statements fit as easily into one category as the next. This is an important clarification to make when training coders.

8. *Obtain the final material to be analyzed.* n/a, since interview transcripts had already been obtained.
9. *Code the material.* The coding process inherent to the content analysis provides a systematic approach to categorizing and quantifying the massive amounts of qualitative data in the study's sample of 20 semi-structured interviews. This study's content analysis uses the matrix of Physical Cues in the Retail Interior to identify words, phrases or sentences about perceptions of risk versus opportunity in retail interiors. In addition to actual coding of interview transcripts, it is also important to determine the inter-rater reliability of the coding system. As Stemler (2001) explains, this tests whether coding schemes lead to the same text being coded in the same category by different people. An inter-rater reliability test applied to 15 percent of the interview transcripts measures how well two different coders agree on interpretation of the data (Batholomew et al, 2000). As Smith notes, one of the most frequently-used indices for determining this was developed by McClelland et. al. in 1953: $2 \text{ (# of agreements between coders on presence of category) } / ((\text{\# coded present by Coder 1}) + (\text{\# coded present by Coder 2}))$. Agreement of 85 percent is considered satisfactory, but for exploratory studies such as this one, a "somewhat lower degree of inter-rater reliability is acceptable" (Smith, 2000, 325). The results of the inter-rater reliability test are included in Table 3.
10. *Analyze the data.* For this study, data analysis involves a dual perspective. While a retail interior's environmental cues can be neatly categorized into the various categories of the Physical Cues in the Retail Interior matrix, shoplifters sometimes perceive individual cues in decidedly opposing manners: again, one shoplifter's risk is another's opportunity. This phenomenon is further explained in Chapter 4's Discussion section
11. *Interpret the results.*

Inter-Rater Reliability

In order to ascertain the reliability of content analysis as a research tool, this study includes an inter-rater reliability test that measured one coder's results against another's. A fellow coder was selected based on her basic familiarity with the project. After reading the study research proposal, the primary coder explained the coding manuals (the Physical Cues in the Retail Interior matrix) and performed a pilot analysis while the secondary coder looked on. Once the secondary coder was familiar with the content

analysis process, she was given three random offender interviews to code. Both coders performed a content analysis on these same three random interviews. Again, it is important to realize here that the Physical Cues in the Retail Interior matrix (which is also the coding manual) was not rigid, and the categories not always mutually exclusive.

Table 4 shows the results of the Inter-rater Reliability test. Results show that each of the two coders who performed the test identified a total of 107 offender statements about physical cues that influence perceptions of shoplifting risk or opportunity⁶. In addition, each coder found that over 80 percent of offender statements fell into the same four categories. The test shows that categorical agreement ranges from 55 percent to 98 percent, with an average percent agreement of 78 percent, suggesting a fairly reliable coding system.

Table 5: Inter-Rater Reliability Test Results

Category	Amt. Coded Present by Coder 1	Amt. Coded Present by Coder 2	Percent Agreement
Hardened Targets	25	26	98%
Exit Access	8	3	55%
Exit Screening	11	8	84%
Extended Guardianship	15	8	70%
Natural Surveillance	24	39	76%
Place Managers	4	2	67%
Formal Surveillance	20	21	98%
TOTAL	107	107	AVG: 78%

⁶ Although a similar number of identified statements between the two coders was expected, the fact that they each identified exactly 107 statements is probably due, in part, to chance.

Validity

This study uses a matrix of Physical Cues in the Retail Interior as the instrument to measure offender statements about cues they cite as influential to the decision to steal. Because this instrument was developed as part of the project, it is important to discuss its validity. Validity is defined as “the extent to which any measuring instrument measures what it is intended to measure” (Carmines and Zeller, 1979, 17). In this case, the study is measuring offender perceptions of cues in the retail interior. Therefore, it is important to assess the validity of the matrix of Physical Cues in the Retail Interior as a means of measuring such perceptions. As Carmines and Zeller (1979) point out, establishing a valid means of measurement in the social sciences can be complex, as abstract theoretical concepts (like perceptions of risk and opportunity) do not often have “an agreed upon domain of content relevant to the phenomenon” (1979, pg. 21). In such cases, face validity is often applied. Face validity “concerns the extent to which [the instrument] measures what it appears to measure according to the researcher’s subjective assessment” (Frankfort-Nachmias, 1992, 158). However, this subjectivity is an inherent limitation to face validity, as there are “no replicable procedures for evaluating the measuring instrument” (Frankfort-Nachmias, 1992, 158).

Several components contribute to the validity of this study’s measuring instrument, the Matrix of Physical Cues in the Retail Interior (Table 3). First, it was specifically adapted with the researcher’s experience in the retail design and loss prevention field in mind, and only after an extensive review of loss prevention, retail design, and environmental criminology literature. Second, the instrument was derived from situational crime prevention’s 25 Opportunity-Reducing Techniques (Table 2), a well-known framework of crime prevention strategies developed by an expert in the field of

crime prevention, Ronald Clarke (1997). As Schneider and Kitchen (2002) make clear, this group of techniques is a “robust and developing” means of assessing situational crime prevention, as “its growing number of advocates have significantly broadened the theoretical bases on which crime prevention planning rests (pg. 104). Finally, while Clark developed the original 25 techniques to address a wide range of situational crime prevention goals (Clark, 1997), they have also been applied in strictly retail settings. Hayes’ (1997) research on improving deterrence and reducing loss in retail stores also employed these techniques. Hayes referred to the set of techniques as “a very useful model for retail crime and loss control purposes” (Hayes, 1997, 4). Therefore, the face validity of this study’s matrix of Physical Cues in the Retail Interior as a measuring instrument is strengthened by both the source from which it is derived, and the researchers and industry experts who advocate its use.

Narrative Analysis

As mentioned earlier, the semi-structured nature of the offender interviews allowed participants to provide lengthy, descriptive responses to questions if so desired. Some of these responses are so lengthy, in fact, they resemble narrative. For example, consider this offender’s response when asked what part of the store he goes to in order to hide an item:

It depends, because um, it depends, it depends on how many people are in the store, how many people are on that aisle, how many cameras are around me, and how many employees are in that section. Okay, those are all factors you’ve got to look at, now as you get, as you see it coming you got to understand that it’s like when you’re driving you’ve got to premeditate what might come like that guy right there in the next lane might just jump into your lane, but you’re premeditate before it happens, you know. So you’ve got to worry, okay, what if that lady right there standing next you isn’t, you know, a customer and yet she’s an undercover employee, security, you know, so you’ve got to look at it like that so basically what they’re going to is you’re going to go to the bathroom because in a bathroom, like I said, you pocket it, go to the bathroom make sure you know de-code it you know,

make sure you get the alarm off or if they're going to take the whole package before they even do that they'll act like they're looking at it. You know what I'm saying, like okay, but what they're really looking at it in an upper angle, you know like, "oh wow, it's pretty nice" da-da-da, but yet they're balling the cameras to see where the cameras are located and that's how they know. –"Joey"

In this one response, the offender mentions several themes relevant to the current study's content analysis:

- Natural Surveillance (it depends how many people are in the store, how many people are on that aisle)
- Extended Guardianship (how many cameras are around me . . . see where the cameras are located)
- Place Managers (how many employees are in that section)
- Formal Surveillance (what if that lady next to isn't, you know, a customer and yet she's an undercover employee, security, you know, so you've got to look at it like that)
- and Target Hardening (make sure you got the tag off) among others.

However, while the passage can be reduced to these individual themes, it is also worthwhile to examine the response holistically, as a recollection of past events, since, in essence, what the offenders are doing as they answer these questions is providing a summarized oral history of their shoplifting history. When Joey's response is considered from a narrative angle, thematic subtexts arise: paranoia, worry, vulnerability, and nervousness could all characterize the tone implicit in his account. Such nuances are too vague to be accounted for by a strictly code-based content analysis, which is why the flexible, subjective nature of narrative analysis is so helpful to this study. As Smith (2000) explains, a narrative is "an oral, written, or filmed account of events told to others or to oneself . . . used to refer to accounts of personal experiences, or the experiences of others, or to fictional accounts." Smith also makes the important distinction between narrative and impersonal explanation: narratives are not "purely descriptive, expository (e.g., an explanation of how to assemble furniture), disconnected, or abstract" (pg. 328).

It is in this context that the relevance of narrative analysis methodology to the current study becomes evident. Because so many of the offender responses are narrative in nature, it is impossible to capture the embedded context and layers of meaning using content analysis alone. Narrative analysis is more appropriate when primacy of context is an issue, and is thus better equipped to convey the expressive breadth of an offender's response (Smith, 2000, 327).

Narrative Analysis in Interior Design Research

Narrative analysis is also particularly well-suited for this study because of its growing popularity in interior design research. A number of recent studies in the design field have employed narrative analysis to explore various issues (Danko, Meneely, Portillo, 2006; Miller, 2005; McDonnell, Lloyd & Valkenburg, 2004; Portillo and Dorr, 2000; Zeisle, 2000; Ganoe, 1999) including an entire issue of the *Journal of Interior Design* (Portillo, 2000) devoted to the subject. Why the pairing of narrative analysis and interior design? Some cite a similarity in theme between narrative inquiry and the design process itself: "Narrative, like design, is context-dependent. Both are a creative outgrowth of the details and situational events that characterize a particular time and place" (Danko et al, 2006, 12). Others propose that it is the inherently interdisciplinary, multifaceted quality of narrative analysis that warrants its suitability to design research. "The characteristics of the narrative that help to organize the complex world of people, entities, and events through the language of stories provides a flexible framework for understanding and expanding the meanings of design" (Ganoe, 1999, 2). In essence, narrative analysis provides a way to understand perceptions of retail interiors in context, in perspective, and in a holistic manner.

This study incorporates various excerpts from offender interviews throughout Chapter 4. Due to the subjective and flexible nature of narrative, a formal tally of the narrative analysis' "findings" is not feasible; however, the study uses narratives to emphasize and expand on the content analysis' findings. In this way, the two forms of analysis reinforce one another and provided a means of understanding the data that is more comprehensive than if either form were used alone.

Limitations

Several limitations affect the outcome of this study. One is the source and validity of the transcript data. As experts in the field of loss prevention research, LPRC routinely conducts studies focusing on crime and loss techniques for the retail sector, and understands the complex nature of gathering shoplifting data. This type of data is usually based on either apprehension case reports or self-report data. LPRC understands that both of these methods are inherently limited by sampling and measurement error. Apprehension data, collected when the shoplifter is caught and in various states of mind, can be more indicative of security personnel skill, scheduling, search imaging, and workplace practices than shoplifting behavior. Self-report data are most often collected via self-administered questionnaires or surveys. This too can lead to flawed data, as results depend on shoplifters' abilities, and willingness to share, past events, as well as their truthfulness (Klemke, 1992). To avoid these pitfalls, LPRC conducted the interviews via a snowball sampling method in which apprehended shoplifters were given monetary incentives to provide the names and phone numbers of other known offenders. Nevertheless, this study was still limited to the interviewed offenders' ability to recollect past events and willingness to (truthfully) share them.

LPRC conducted these interviews with a wide range of shoplifters from various cities and backgrounds. The interviews did not focus on any particular type of store or setting. Therefore, the data acquired from these interviews is general in nature, without reference to specific stores, times, or incidents (unless noted by offender). This study is limited by such generalization, and future follow-up studies may be improved by focusing the data on specific stores, settings, or incidents, to generate more targeted offender responses.

Similarly, the data in this study is based on shoplifters' recollections of store environments. Were the interviews administered in the actual retail environment, answers could have been more specific. It is important to note, however, some proponents of narrative analysis prefer experiential recollections. Spence (1982) differentiates between historical truth and narrative truth, concluding the historical, or literal, truth of an event is often less useful to research than the narrative truth, which is more indicative of an individual's subjective recollection of the experience, and thus more informative of their beliefs and intentions. For example, an offender's recollection (accurate or not) of feeling vulnerable in a space because of CCTV monitors could be just as useful – if not more so – as an offender's actual experience of feeling vulnerable in a space because of CCTV monitors.

Another limitation to this study is the small sample size. Sample size is an integral component of successful research, as it “affects the range, reliability, and accuracy of the values measured” (Smith, 2000, 320). Due to the inherent costliness of conducting the interviews and the difficult nature of contacting and scheduling interviews with criminal

offenders, only 20 are included in this study. Future studies, conducted with more participants, could further improve results.

The content analysis process itself also has limits. This study employs just two coders, and only one reliability test is performed. Were the study to employ several coders, the reliability of the results may have been different and perhaps improved.

The main limitation of narrative analysis stems from its purely subjective and interpretive nature. As a method of research, the narrative analysis is based solidly in the ability of the reader to interpret the meaning and context of the discourse. While some advocates of narrative analysis “do not regard the concept of validity as directly applicable to narrative research,” in reality it suffers many of the same limitations as other qualitative methods of research, like content analysis (Smith, 2000, 331).

The use of secondary data presents its own limitations. As previously mentioned, the interviews in this study were originally gathered by LPRC for numerous purposes. Perceptions of retail interiors, while present in the interviews, were only one component of a larger range of questions. To further improve the validity of this study’s results, it could be specifically tailored to gathering of design-based information about retail interiors.

There are also some inherent limitations to the use of the semi-structured interview. Paradoxically, its main benefit – flexibility – is also its main drawback. While the SSI allows interviewers to steer the conversation in natural directions and participants to provide elaborate responses and detailed data, this flexibility also inhibits data analysis since lengthy, conversational data is difficult to code and categorize (Bartholomew et al, 2000).

Summary

This chapter described the study's research methodology, providing details about the sample of participants involved, including their demographics. After a detailed explanation of the study's methodology, the two forms of analysis used – content analysis and narrative analysis – were both defined discussed in terms of applicability to and appropriateness for this particular study. The reliability and validity of the content analysis were discussed, as well as the applicability of narrative analysis in the field of interior design. The chapter concluded with an overview of the various limitations impacting this study's outcomes.

CHAPTER 4 FINDINGS

Findings

The purpose of this study is to determine if offenders factor retail interior design into their decision to shoplift, and if so, to identify the physical cues they cite as influential to that decision. Analyzing these cues through the lens of rational choice theory and two related frameworks (situational crime prevention and the theft triangle), this study's content analysis indicates that offenders do consider retail interiors in their decision to steal. Moreover, the content analysis shows evidence that offenders consider some features of retail interiors more frequently than others. This chapter explains these findings through a detailed account of the content and narrative analysis results.

Content Analysis

The Matrix of Physical Cues in the Retail Interior (see Table 3) was the coding tool used in this study's content analysis. A specifically retail-oriented version of situational crime prevention's matrix of 25 Opportunity-Reducing Techniques, this matrix categorized offender statements about cues in the retail interior on three different levels:

- **Category Headings.** The most general categories in the Matrix of Physical Cues in the Retail Interior are the four category headings: Perceived Effort, Perceived Risk, Perceived Provocation, and Perceived Excuses. The content analysis findings (see Table 6) placed over 95 percent of offender statements into the first two category headings, Perceived Effort and Perceived Risk. This presents strong support for the theories of rational choice and the theft triangle, which both assert that offender perceptions of risk are a major determinant in the decision to commit a crime.
- **Categories.** The content analysis revealed a total of 639 statements in which offenders cited a physical cue as influential to their perception of shoplifting risk or opportunity (see Table 6). The analysis categorized each of these into one of the 15

main categories in the Matrix of Physical Cues in the Retail Interior. Results show that over 70 percent of offender statements fell into four of the 15 categories: Hardened Targets, Extended Guardianship, Natural Surveillance, and Formal Surveillance.

- Subcategories: The content analysis further refined offender statements into subcategories containing detailed descriptions of various interior conditions found in the retail environment. These descriptions include statements such as “Presence of glass cases” under the category heading of “Hardened Targets,” or “Quantity of Employees” under the category heading of “Place Managers”. The content analysis placed any offender statements about such conditions in that subcategory, whether the offender’s statement conveyed a perception that the condition was a risk or an opportunity. For instance, an offender’s comment about the presence of a glass case being a shoplifting risk was categorized the same way as a statement about the lack of glass cases being an opportunity. In either statement, the offender cited the presence of a physical cue (or lack thereof) as influential to his/her perception of crime risk or opportunity.

Table 6 shows a detailed breakdown of the content analysis findings. The findings are discussed below:

1. Hardened Targets - 14 percent of offender statements about physical cues contributing to a perception of shoplifting risk or opportunity fell into this category. Its subcategories (and number of statements they contain) include:

- Glass cases (items within perceived as deterrent, lack thereof perceived as opportunity): 17 statements
- Cashier counter (merchandise kept behind perceived as deterrent, merchandise not kept behind perceived as opportunity): 3 statements
- Display racks (displays perceived as easy to access or difficult to access): 38 statements
- Access to items (items perceived as easy to access or difficult to access): 21 statements
- Locks, cables, cords and chains (locked and secured items perceived as shoplifting deterrent, or unlocked, unsecured items as opportunity): 10 statements

Table 6: Content Analysis Findings

PERCEIVED EFFORT: 29%	PERCEIVED RISK: 65%	PERCEIVED PROVOCATION: 2.5%	PERCEIVED EXCUSES: 2%
1. Concealed & Hardened Targets: 14% Presence of glass cases 17 Items kept behind counters 3 Accessibility of displays 38 Accessibility of items 21 Presence of cords, locks, cables 10 <i>total 89</i>	5. Extended Guardianship: 18% Presence of CCTV 80 Quantity of CCTV system 14 Well-monitored CCTV 16 Quality of CCTV system 10 <i>total 120</i>	9. Visible Targets: 2% Presence of highly visible CRAVED items 10 <i>total 10</i>	13. Rules: 2% Presence of shoplifting signage 0 <i>total 0</i>
2. Exit Access: 4% Access to exits 9 Emergency exits 4 Number of exits 6 Presence of garden areas 9 <i>total 28</i>	7. Natural Surveillance: 28% Presence of blind spots 22 Being noticed/unnoticed 72 Number of customers in store 13 Store layout 39 Crowds 17 Store size 19 Lighting 1 Item location 1 <i>total 184</i>	10. Frustrations: 0% Quality of customer service 0 <i>total 0</i>	14. Instructions: 0% Presence of fitting room limit signs 0 "Ask for assistance" signs 0 <i>total 0</i>
3. Exit Screening: 10% Presence of EAS tags/sensors 32 Presence of EAS gates at door 14 Store greeter at door 7 Security guard at door 9 <i>total 62</i>	8. Place Managers: 7 % Attentiveness of employees 19 Quantity of employees 13 Employees (general) 10 <i>total 42</i>	11. Emotions: .5% Antiestablishment sentiment 2 <i>total 2</i>	15. Conscience: 0% "Shoplifting is stealing" signs 0 <i>total 0</i>
4. Offender Deflection: 1% Police presence at store 5 <i>total 5</i>	9. Formal Surveillance: 13% Security (general) 25 Attentiveness of security 8 Uniformed security staff 24 Undercover store detectives 24 <i>total 81</i>	12. Imitation: 0% Level of maintenance 0 Presence of previous crimes 0 <i>total 0</i>	

2. Exit Access – Four percent of shoplifter statements about physical cues

contributing to a perception of shoplifting risk or opportunity fell into this category. Its subcategories (and number of statements they contain) include:

- Access to exits (obstructed access perceived as risk or easy, clear exit access perceived as opportunity): 9 statements
- Emergency exits (control of exits perceived as risk; uncontrolled exits perceived as opportunity): 4 statements
- Number of exits (multiple exits perceived as opportunity): 6 statements
- Garden areas (presence of perceived as opportunity): 9 statements

3. Exit Screening – Ten percent of shoplifter statements about physical cues

contributing to a perception of shoplifting risk or opportunity fell into this category. Its subcategories (and number of statements they contain) include:

- EAS tags, sensors (presence of perceived as shoplifting risk, absence perceived as opportunity): 32 statements
- EAS gates (presence of perceived as shoplifting risk, absence perceived as opportunity): 14 statements
- Store “greeter” positioned at entry/exit point (presence of perceived as shoplifting deterrent): 7 statements
- Security personnel positioned at entry/exit point (presence of perceived as shoplifting deterrent): 9 statements

4. Offender Deflection – One percent of shoplifter statements about physical cues

contributing to a perception of shoplifting risk or opportunity fell into this category. Its subcategory (and number of statements they contain) include:

- Police presence at store (presence of perceived as shoplifting deterrent): 5 statements

5. Extended Guardianship Levels – 19.5 percent of shoplifter statements about

physical cues contributing to a perception of shoplifting risk or opportunity fell into this category. Its subcategories (and number of statements they contain) include:

- Presence of CCTV (presence of perceived as risk, or lack thereof (i.e., “blind spots”) perceived as opportunity): 80 statements

- Quantity of CCTV cameras (high number perceived as risk or low number perceived as opportunity): 19 statements
- Monitoring of CCTV (perception of well-monitored systems as deterrent or perception of poorly-monitored systems as opportunity): 16 statements
- Quality of CCTV (high-tech system perceived as deterrent): 10 statements

6. Natural Surveillance – 28 percent of shoplifter statements about physical cues contributing to a perception of shoplifting risk or opportunity fell into this category. Its subcategories (and number of statements they contain) include:

- “Blind spots” (hidden, unmonitored areas of the store perceived as shoplifting opportunity): 22 statements
- Being seen (perception of being seen perceived as deterrent, or perception of going undetected perceived as opportunity): 72 statements
- Number of customers (high number perceived as deterrent, low number perceived as opportunity): 13 statements
- Store layout (possibility of being seen perceived as deterrent, or ability to scan store perceived as opportunity): 39 statements
- Crowds (confusion due to crowds perceived as opportunity): 17 statements
- Store size (large store with high-tech security perceived as risk, store too large for security to monitor perceived as opportunity): 19 statements
- Lighting (dimly-lit store perceived as opportunity): 1 statement
- Item location (CRAVED item positioned in unmonitored part of store perceived as opportunity): 1 statement

7. Place Managers – Slightly more than six percent of shoplifter statements about physical cues contributing to a perception of shoplifting risk or opportunity fell into this category. Its subcategories (and number of statements they contain) include:

- Employees in general (any type of employee presence perceived as shoplifting risk): 10 statements
- Attentiveness of employees (conscientious employees perceived as risk, apathetic employees perceived as opportunity): 19 statements
- Quantity of employees (high number perceived as risk, low number perceived as opportunity): 13 statements

8. Formal Surveillance – 12.5 percent of shoplifter statements about physical cues contributing to a perception of shoplifting risk or opportunity fell into this category. Its subcategories (and number of statements they contain) include:

- Security in general (security presence perceived as shoplifting deterrent, lack thereof perceived as opportunity): 25 statements
- Attentiveness of security (apathetic security perceived as opportunity): 8 statements
- Uniformed security guards (presence of perceived as deterrent): 24 statements
- Undercover store detectives (presence of perceived as deterrent): 24 statements

9. Target Visibility – Two percent of shoplifter statements about physical cues contributing to a perception of shoplifting risk or opportunity fell into this category. Its subcategory (and number of statements they contain) include:

- Visibility of CRAVED items (highly visible CRAVED items perceived as opportunity): 10 statements

10. Frustrations – This category included poor customer service, long waiting lines, and minimal checkout areas as possible motivators for theft. However, the content analysis did not identify any offender statements referring to this category.

11. Emotions – Half of a percent of shoplifter statements about physical cues contributing to a perception of shoplifting risk or opportunity fell into this category. Its subcategory (and number of statements it contains) include:

- Antiestablishment sentiments (lack of moral consequences in stealing from big corporations perceived as opportunity, guilt involved in stealing from small “mom-and-pop” store perceived as deterrent): 2 statements

12. Imitation – This category referred to signs of past crimes or low-maintenance (which can contribute to a perception of low guardianship or monitoring) as a possible opportunity for theft imitation, while signs of a well-maintained interior (which imply higher guardianship and monitoring) as a possible risk, thereby discouraging imitation. However, the content analysis did not identify any offender statements referring to this category.

13. Rules – Two percent of shoplifter statements about physical cues contributing to a perception of shoplifting risk or opportunity fell into this category. Its subcategory (and number of statements it contains) included:

- Signage (presence of clear signage indicating shoplifter prosecution policy perceived as deterrent): 11 statements

14. Instructions – This category referred to the posting of clear instructions (such as return, fitting room, or check-writing policies) as cues that may increase offender perceptions of risk. However, the content analysis did not identify any offender statements referring this category.

15. Conscience – This category referred to the posting of conscience-raising signage (like “shoplifting is stealing”) as a cue that may deter potential offenders. However, the content analysis did not identify any offender statements referring to this category.

Narrative Analysis

While the content analysis findings illustrate the number of statements in each category of the Physical Cues in the Retail Interior matrix, they do not communicate the full depth of an offender’s decision-making process. A second method of analysis, narrative analysis, complements the content analysis by lending context, tone, and emotion to the study’s findings. Below, the results of the content analysis are explained in greater detail, and with the added dimension of offender narratives. These narratives serve several purposes: clarifying the connection between offender perceptions and interior design characteristics; conveying the complex, personal nature of the offender’s decision-making process; and underscoring how the opportunity theories laid out by

rational choice theory, the theft triangle, and situational crime prevention manifest themselves in this process.

1. Hardened Targets – The study’s content analysis identified the accessibility or inaccessibility of shoplifting “targets” (usually CRAVED items) as one of the four top-scoring categories, with 14 percent of offender statements. Overall, the narrative analysis found offenders perceive the accessibility/inaccessibility of shoplifting targets as a simple, black-and-white situation: an accessible target is perceived as a shoplifting opportunity while an inaccessible target is perceived as a deterrent. As Hayes (1997) describes, retail crime prevention exists on varying tiers, or “zones of influence”: the community level, the exterior of the store, the interior of the store, and the “asset point,” or area where the item is displayed. This asset point can be further refined to refer to the item’s position on/in store fixtures (behind counters or in cases), and position on/in displays (on hooks, locked vs. unlocked). Over 60 offender statements referred to item/display accessibility (or inaccessibility) as influential to their perception of shoplifting risk or opportunity. Some statements referred to the “asset level”, as the excerpt below explains:

It depends on how [the store] has [CRAVED items] set up. If they just have them on racks, you can take the whole box. Just slide them off. – “Paul”

Other offender comments about item accessibility referred to item placement within the store’s layout. Offenders perceived certain locations in the store to be more conducive to shoplifting than others. The offender below presents the decision to shoplift as a logical equation, in which item location is key:

It’s not rocket science. [A CRAVED items has] a high resale value, it’s easy to take, it’s in a part of the store, they’re usually in a part of the store, you know you go into Walgreen’s or something like that and they’re in the back of the store, it’s easy. It’s easy to work. – “Mike”

This offender discusses item location more specifically:

I mean, the thing about the [items I take] is they're also very accessible. You know what I mean? It's not like they put them behind the counter. And I always thought to myself they should probably, like . . . keep them back there. I mean people are going to buy them whether they're behind the counter or out with the rest of the stuff. It's just easy access. You walk up to, you know [the product], and just take a quick look around and pull a bunch and stick them right in your pocket.
– “Joe”

Twenty offender statements in the content analysis referred to physical cues that communicated “hardening,” or inaccessibility, as a perceived shoplifting risk. As the excerpts below suggest, offenders perceive items protected by glass cases, stored behind counters, or attached to displays as a real deterrent, sometimes impossible to steal:

The only time [shoplifting] is really difficult is when you can't get [items] because they put them behind the glass and you have to ask someone to come get it. Or sometimes they have them behind counters or stuff like that . . . the only way to stop [shoplifting] is to keep them behind glass or behind the counter.
– “Julian”

Sometimes you go into a place and you just don't have the accessibility to some of the products you want because they're behind the counters or locked up, you know what I mean. That's a big thing. I mean, at that point you walk out and go someplace else. Deterrents work. They do.
– “Ian”

If [CRAVED merchandise] is behind a place like the register, I know it's tough to put everybody's products behind a register, or you know, behind a key like they do with cigarettes . . . The bottom line, it's the location. Because if it's easy to get they're going to take it.
– “Cowboy”

As these narratives illustrate, merchandising and product placement can communicate a clear perception of shoplifting risk if planned correctly.

2. Exit Access – Four percent of offender statements about perceived risk and opportunity cues referred to the idea of exit access. Most offender statements in this category (9 statements) cited uncontrolled exit access (like a clear, unobstructed path to an exit) as a perceived shoplifting opportunity. This finding suggests that cues like unobstructed exit access, multiple exits, and garden center exits all contribute to an

offender's perception that he/she will "get away" with the shoplifting act, as the narratives below attest:

[A shoplifter will] run through the emergency exit and the alarm will go off but it takes about 15 minutes, not 15 minutes, about 5 minutes, for security to actually get to that part of the building and by the time they get there we're already on the next road. – "Joey"

[Walgreens is easy to steal from] 'cause I don't know, usually, just, I don't know, it's big and it's just easy to run out the door right there. . . we leave through the aisle, actually it's the cosmetics, so it's like no walking by the [checkout] counter. – "Nolan"

One of the subcategories with the highest scores in this category (9 statements) was the presence of a garden area. Many large mass-merchant chains include garden areas for the sale of plants and garden accessories. These areas are fenced-in, and connected to (but outside of) the store interior. As such, they provide an alternate form of exit access. If the ceilings of these areas are not fenced as well, they also provide an easy way for offenders to shoplift. The offender simply brings stolen good to the garden area, tosses them over the fence, and exits the store. He/she retrieves the stolen items afterward:

You get outside and there's a fenced-in garden where there's no top of the fence. Just throw the bag [of stolen items] over the fence. – "Joe"

Garden center because they always have a fence and that fenced area you could always find a nice gap-sized hole . . . you try to find a spot where nobody's paying attention and you get yourself little clippers and clip clip and make yourself a hole through the fence and have a friend on the other side . . . say hey, man go up to the garden center. There's a bag out there, go pick it up. – "Gary"

As the following offender explains, using the garden center as a means to shoplift can allow evasion of other LP technologies, like EAS:

I would just leave [products with advanced EAS tags attached] alone because it's going to be a real big hassle. Unless like I said you're in a store that is very opportunistic to throw it over the fence, like you got a good store where you can fill up a bag and throw it over the fence and go back and get it. – "Philip"

3. Exit Screening – Ten percent of shoplifter comments referred to the screening of exits (EAS systems, store “greeters,” or receipt-checkers at the door perceived as risk, or a lack of these cues perceived as opportunity). As the excerpt below conveys, some offenders perceive certain exit-screening techniques as more risky than others:

I think the difference between [stores that are easy versus hard to steal from] is the electric sensors and cameras; where they're positioned. Kind of like in the public library where they have these magnetic walls and stuff instead of just having a greeter to check your receipt. – “Julian”

However, the fact that only 10 percent of the total amount of offender statements referred to exit screening cues as contributors to perceptions of risk or opportunity suggests that other cues in the matrix are more influential to offenders’ decision-making. This finding might imply that shoplifters find exit screening devices like EAS easy to circumvent or evade. It might also imply that retailers should focus their efforts in areas other than exit screening.

4. Offender Deflection – Offender deflection refers to measures that actually keep offenders from coming into the store. One method retailers use is positioning a police presence outside the store. However, this is not a common practice, which may explain, in part, why only one percent of offender statements referred to offender deflection as influential to the perception of risk or opportunity in the retail store.

5. Extended Guardianship – The category of extended guardianship scored second-highest in terms of frequency, with 19.5 percent of shoplifter statements. In the retail context, the idea of “extended guardianship” involves the use of CCTV, which allows retailers and LP staff to “extend” their guardianship over parts of the store that they cannot see firsthand. The presence or absence of CCTV makes a difference in terms of offenders’ perceptions of risk or opportunity. Indeed, the presence of CCTV was the

single most frequently-cited physical cue in the study, with 80 offender statements referring to it as a risk (if present) or an opportunity (if absent). These findings suggest that any CCTV use, be it poor quality, scant coverage, or poorly-monitored, helps contribute to an offender's sense of risk and sanction. The following narrative excerpts underscore this perception:

I mean, the camera's gonna get you. It's just a matter if security is watching or who's watching. That's what it comes down to is if someone sees ya. Cameras are always on. It's just if you've been seen or not. - "Donny"

I think the difference between [stores that are easy to steal from versus those that are difficult] is the electric sensors and the cameras; where they're positioned . . . I mean, some places are harder, some places are easier. - "Greg"

You know, you're thinking, the camera's seeing me take off more than one, and it's definitely watching. So that's definitely, that right there, that will work [to deter crime]. - "Phillip"

In some instances, offenders perceived the quality of the CCTV system as influential to their decision to steal, expressing a perception that high-tech video tracking devices could be hidden from sight or programmed to recognize faces:

I believe they also have little tiny cameras like on the shelves, I ain't too sure, but I always look out for those. - "Nolan"

I don't look at [CCTV monitors located above store entrances] because they have cameras on those so they can catch a picture of your face. "Joey"

Correspondingly, offenders cited poor-quality CCTV systems (lack of cameras, or unmonitored, poorly positioned cameras) as a perceived opportunity for shoplifting. Most of these statements had to do with a lack of CCTV coverage, and the resulting "blind spots":

A blind spot . . . like where the cameras can't see you . . . [the local Wal-Mart] has a blind spot actually in the filing cabinets. They also have a blind spot in their hunting goods . . . I can see a blind spot and there's rarely anybody walking through there, and you can't detect any cameras. There might be a little tiny one somewhere . . . Like, it's not full coverage of the store. - "Cowboy"

In some of these statements, offenders perceived shoplifting opportunity due to CCTV systems with apparently incomplete store coverage:

Like I say, everyone knows they aren't much up on the security camera thing. Just the way the store is set up, there's plenty of areas to go, you know, and slip something in your pocket. - "Dan"

Wal-Mart was one of the easiest [stores to steal from] before they made the new store, which is like full of cameras. But they do have some aisles where you can pick something up from an aisle that does have a camera, walk around like you're looking for something else, go to the aisle that doesn't have a camera, and just, like, take it out of the pack, slip it in your pocket, and walk around some more. Something like that. - "Joe"

Other offenders cited the difficulty for a very large store to thoroughly cover the space with CCTV as a shoplifting opportunity, again linking the size of the store to its security capabilities:

A large store is easier to steal from because] just the difference, the space, the amount of cameras there . . . a bigger, open area compared to a smaller enclosed space with more cameras. Circuit City is not huge like Wal-Mart, and they've got a lot of cameras. Wal-Mart doesn't have a lot of cameras. Target doesn't have as many cameras as they should either . . . Those big stores are easy to steal from. - "Pat"

Still other offenders described a perception that stores simply don't monitor their CCTV systems well enough for them to be a real deterrent:

A lot of companies just don't put a lot of effort into security cameras and things of that nature. - "Arlene"

It's confusing. It's just a big ball of confusion, you know? It's like, let's say you're trying to be god, you're trying to look all over the world, but you don't have the same power he does. If you're trying to watch everybody at the same time you'd just be lost. So that's exactly what they got – somebody in the security room just lost as hell. - "Nolan"

As a method for extending guardianship, CCTV can influence crime levels in different ways according to the level and extent of use (Spriggs and Gill, 2006).

According to the statements collected in this study, offender perceptions are frequently

altered by the presence of CCTV. Collectively, these narrative excerpts and content analysis findings indicate the offenders in this study perceive CCTV as a real deterrent. Retailers and retail designers, therefore, should pay particular attention to the use, set-up, and quality of CCTV when planning the retail store, as the resulting system will likely have an impact on how offenders gauge shoplifting risk and opportunity.

6. Natural Surveillance – As a CPTED principle, the goal of natural surveillance is to give legitimate users and casual observers the ability to monitor a space, therefore increasing an offender's perception of vulnerability or risk (Crowe, 2000). Natural surveillance is not a result of store employees. It is provided by customers and other legitimate users of the retail space (like vendors, browsers, or passersby). The ability of these users to scan the space contributes to "natural" surveillance; that is, surveillance resulting from the "natural" design of the store, and the activity within it (Atlas, 2001). In order to avoid risk of apprehension, shoplifters attempt to avoid being seen by these users.

Of course, the ability to assess whether or not anyone is looking is predicated on the built environment, and whether or not it is constructed to support this kind of surveillance (again, the paradox of surveillance). A store designed to facilitate sight and surveillance can assist both retail staff and shoplifters, allowing them both to visually canvas the space (offenders for threats and opportunities, employees for theft activity). This duality was reflected in the amount of offender statements in this category: many offenders perceived natural surveillance as a risk, while others perceived it as an opportunity. Some recognized that natural surveillance, as it exists in the built environment: is both a risk and an opportunity:

I'm looking for cameras. I'm looking for the amount of employees. I'm looking for people that are looking at me. - "Paul"

Of the 639 statements about cues perceived as shoplifting opportunities or risks, a majority of these (28 percent) fell into the category of natural surveillance. Because this category contains so many offender statements, its various subcategories will be discussed singly:

6.1 Blind Spots – A "blind spot" is a hidden area in the store free from cameras, employee surveillance, or natural surveillance. The study identified 22 offender statements referring to "blind spots" as an opportunity for shoplifting. This further corroborates Hayes' (1998) finding that offenders often take CRAVED items from high-visibility zones to "blind spots" in order to hide them on their person, in clothing, or in bags. This finding also supports the theft triangle's assertion that offenders measure the risk of being caught before stealing. As the narratives below imply, the presence of blind spots gives offenders the perception that they can shoplift covertly, and thus avoid apprehension. Many shoplifters in this study expounded on the usefulness of blind spots, especially in terms of picking up a CRAVED product from one area and actually concealing it in another:

Just the way the store is set up, there's plenty of areas to, you know, go and slip something into your pocket . . . a lot of hiding spots. And it's kind of dark in there.
- "Arlene"

If you have a big shopping cart maybe you throw some things into it and all you have to do is take one and throw it into your cart and go to a different section and do what you want with it. - "Joe"

I know a lot of people that will sit there and work on [products in theft-deterrent packages], you know what I'm saying, they'll work on them in an aisle.
- "Gary"

I'll find, like, the most unlikely place a customer's going to go, like the most boring items in the store, I'll go into that aisle and try to get into the package as fast as I

can . . . then I just keep the product with me . . . and just walk out the normal exit.
- “Pat”

As these narratives suggest, even one blind spot in a store can provide a shoplifting opportunity. Being in a “blind spot” surrounded by high sight-obstructing shelves can also contribute to an offender’s sense of going unnoticed, as the following narrative excerpt attests:

Video stores are especially easy. They’re small. There’s usually only one or two people working them. They’ve got these big high shelves where they can’t see you.
- “James”

6.2 Being Seen – Offenders frequently made statements about being seen as influential to their perception of shoplifting risk or opportunity. This made “being seen” one of the most-cited subcategories in the content analysis, with a total of 72 statements. According to the theft triangle theory, one of the three factors offenders assess before acting on a crime is the perceived risk of being caught. Logically, an offender’s perception of being seen is a determinant of this risk assessment. It therefore follows that shoplifters would frequently cite “no one looking” as an opportunity for theft, and conversely, “being seen” as a risk. The following narrative excerpts explain how the ability to scan a retail interior is important to a shoplifter, and helps shape the decision to steal, while the perception of “being watched” is a major deterrent:

If somebody’s watching – if somebody’s watching I’ll go over and buy my popcorn or whatever and leave. - “James”

I’d be kind of nervous about [large clothing retail chains]. There’s just something about them. I’ve taken a couple shirts from, I think it was Dillard’s, and I didn’t get caught. But I don’t go now. I was just really uncomfortable about the whole thing.
- “Paul”

If someone’s not watching you, you can come by and take one of them gray baskets and put 30 DVDs in it and put that inside your cart and have another gray basket and fill it up with razors and everything and a lot of times you just push that thing right out the door and a lot of times no one sees nothing that you done. - “Dan”

A thief is usually paying more attention to what's around him you know, who's looking, if there's a camera. You know he's got to have like ten eyes just to do what he's got to do. -"Cowboy"

The worry and paranoia these statements imply is as much a goal of natural surveillance as actual apprehension, as the offender's perception and fear of being seen is often as effective a deterrent as actually being seen.

6.3 Number of Customers in Store – Thirteen offender comments cited a high number of customers in the store as influential to the decision to steal. This finding supports the idea of natural surveillance in its suggestion that some offenders are wary of being spotted by legitimate shoppers in the store. Offender statements referred to the presence of customers in the store as both an opportunity for, and a deterrent to shoplifting. Some shoplifters cited a very busy store packed with customers as an effective shoplifting camouflage, while others perceived the presence of customers as a threat because of their ability to see (and potentially respond to) the shoplifting act:

I never ever, like, let a customer follow me and see my concealment tactic. The customer will never see me [shoplift]. And I have to make sure I can't see the customer. I can't see no cameras. Nothing can see me . . . I got caught one day because of a hero customer. Took me to the ground. -"Joey"

I don't think there's a time when I'm not concerned about [being seen by customers] . . . You know it's kind of like you'll see them looking at you or like looking or talking, like telling their friends, 'Look that guy's taking something'. Or if someone's kind of keeping an eye on you. -"Mexico"

Sometimes you just take a chance that you're going to run into a Good Samaritan that's going to say something. Because if you're in between two or three people shopping for this stuff and you grab a handful of stuff and just put it n your cart, sometimes they notice that, and they look at you like, 'What's this kid doing? What's this guy doing?' and sometimes they don't, so that's something to take a chance on. - "Joey"

As these excerpts illustrate, some offenders seem embarrassed by the idea of a customer seeing them ("you'll see them looking at you, like looking or talking, like telling their

friends”), while others fear more drastic ramifications (“I got caught one day because of a hero customer. Took me to the ground.”) In either case, many offenders perceived the ability for customers and other legitimate users to “naturally” monitor and survey a space as a risk, because being seen increases the level of risk associated with the shoplifting act.

6.4 Store Layout – Several offenders said they perceived “big” stores as shoplifting opportunities. These offenders referred to a perception that it is too difficult for employees or security to monitor the whole store at once:

The weak link in [big-box chain] stores is that they’re very big, so oftentimes the area you want to target is completely barren because everyone is concentrated on maybe another section of the store. - “Phillip”

However, other offenders linked the physical size of the store with a certain perceived level of security. Some shoplifters cited a large corporation, and large store, as indicative of a comprehensive security program:

The problem with Target and Wal-Mart is that they’re very big stores and they’re harder [to steal from]. I mean you’re an easier target. I mean, they have loss prevention guys in there . . . they have good security. - “Julian”

Seven shoplifter statements about crime opportunity were directly related to store size, design, and layout. Stores were cited as simply having an “easy” layout, which could allude to any number of design-based qualities, such as poor surveillance, poor product positioning, or lack of CCTV coverage:

K-Mart [is easy to steal from]. I haven’t taken from K-Mart in a while, but I think from what I’ve seen just being in there, you know, just normal shopping, it looks like it’s pretty easy to take from. - “Donny”

Offenders also said they perceived certain store layouts as conducive to shoplifting:

. . . it depends on the layout. I mean, there’s situations where I could just - I could load up 50 and just walk out the front door. - “Dan”

The following offender stated a belief that his location within the store determined whether or not he was actually shoplifting:

I understand they have to, they cannot arrest you in the heart of the store. Like if you're in the middle of the store they have to have probable cause . . . I really doubt that they're going to come to you in the store and arrest you right there in the heart of the store . . . they'll probably pick you up at the exit, most likely.
- "Joey"

Although not always specific, these narratives underscore the content analysis' finding that design and layout are influential to the shoplifting offender's decision-making process.

6.5 Crowds – Seventeen statements about shoplifting opportunity suggested that shoplifters perceive a crowded, chaotic store as an easy one from which to steal. This finding indicates some offenders perceive a busy store as a sort of camouflage, ensuring that employees are be too busy helping customers to monitor theft activity.

And like I said on the weekends if there's a lot of people it's a lot easier to get in and out. - "Mike"

Correspondingly, some offenders cited a lack of activity in the store as a shoplifting deterrent, since the perceived absence of people and commotion leaves the shoplifter feeling exposed and observed. Consider the following offender's explanation of a desolate versus busy store. For him, an empty store spells vulnerability, while a busy store provides opportunity:

If it's a weekend it's more packed. If you think security's a little tougher then, it's not. They might have a few more spotters walking around, but you can go in there a little better . . . During the weekdays, if you walk in the store and it's pretty much desolate, there's not many people in there, you tend to come back later in the afternoon when there's more people in there . . . sometimes they get so packed, everyone's working here and they're working there . . . it's easy to pick up something. - "Donny"

7. Place Managers – Anecdotally, retailers consider place managers (employees) to be one of the most effective forms of shoplifting deterrence (Hayes and Blackwood, 2006c). However, only 6.5 percent of shoplifter statements referred to place managers specifically. The narrative analysis helps in explaining these findings. Some offenders in this sample did not perceive employees as a serious risk:

If you look around and it's younger [employees], they don't care. I'll be sneaky about it but I don't think they care. - "Gary"

[I'd go to a certain store because] I'd know that the employees are kind of lax, or there's not many of them . . . they hire like, young, skater type teens and hey really don't care. They don't give a crap. - "Nolan"

Those guys [employees] are just in La-La land half the time . . . generally, employees are pretty lax. - "Joe"

Others viewed employees as a deterrent, and expressed fear of being spotted or apprehended by an employee:

If I actually see [an employee] looking over, then I'll leave . . . if I saw him kind of scoping out the area where I was in I'd just kind of abort everything and get it some other time. - "James"

Thirteen shoplifter statements referred specifically to the number of employees in a store, correlating a high number of employees to a higher risk level:

If there's more employees than customers I'll definitely leave a store in a heartbeat. That's how circuit city is. They have a million employees. - "Paul"

It's been hard to steal from Target, you know . . . there's so many employees there you know what I'm saying, and there's more employees – you know like sometimes you look and if you pay attention and start counting the ratio between employees and customers you'd be like, how do they make their money? - "Joey"

This study's findings indicate a wide range of offender perceptions of employees, making their presence/awareness neither a real deterrent nor their absence/apathy a real opportunity. Indeed, the deterrence effect of employees is more likely to be based on

hiring practices, management policies, and reward systems than on number of employees alone.

8. Formal Surveillance – The study’s content analysis found 12.5 percent of offender statements fell into the category of formal surveillance. Different from natural surveillance, formal surveillance includes surveillance performed by security staff, store detectives, and LP staff. These employees can be uniformed or undercover. Over 50 offender statements cited the perceived presence and high quality of security personnel (either uniformed or undercover) as a shoplifting deterrent, and the absence/low quality of such personnel as an opportunity. This suggests offenders assess a store’s apparent level of security staffing and attentiveness before deciding to steal, an assessment that relies upon a spatial layout that promotes surveillance. In the quote below, one offender illustrates how the spatial layout of the store assists in his ability to assess security threats (linking back to the “duality of surveillance” concept discussed previously in this chapter):

A lot of [undercover security staff] will walk past you and they’ll do something as dumb as to make eye contact with you . . . and you’ll see them go around the corner, and off in the distance where they can still see you but they’re not on top of you. And you’ll notice that there’s nothing in their cart . . . sometimes they’re just looking and you know who they are. So you’re watching them. And you go up to somewhere else and go into that aisle and just wait a few seconds and shop and look around real nonchalantly, and there he is again. And so you know right then it’s off; he’s onto you. - “Mike”

This narrative underscores the influence design has over other, seemingly non-design-related loss prevention strategies. In the quote below, the offender explains how the mere sight of a uniformed security officer can be a deterrent:

A uniform is a good deterrent. Like if I was walking in a store and have stolen stuff and I come back to an exit and and I see like 4 uniform guys that weren’t there before, I’ll dump the stuff instantly, ‘cause all I know they could be there for me, you know? - “Pat”

Again, the offender perceives this security strategy (formal surveillance) as the interaction of space (“I come back to an exit”), surveillance (“I see like four”) and security (“uniform guys”). Some ways in which retail design can improve the effectiveness of formal surveillance are included in Chapter 5.

9. Target Visibility – Reducing the visibility of CRAVED items is one strategy for minimizing shoplifting. Some retailers replace CRAVED products with signs on shelves. The signs redirect shoppers to a counter where an employee retrieves the item. Any examples of offenders perceiving this practice as a deterrent were included in the hardened targets category. However, 10 offender statements referred to highly visible CRAVED items as a perceived opportunity for shoplifting. The design implications of this finding are similar to those for “easily accessible targets” and are discussed in Chapter 5.

10. Emotions – A few offender statements (.5 percent) cited the perception of a large corporation unaffected by loss as a reason to shoplift. (This can also be viewed as an opportunity if it’s moral hesitation preventing an offender from acting.) A few other statements cited the perception of a small, family-run type of atmosphere as a moral deterrent to shoplifting:

I don’t [steal from flea markets] because those are owned by like family businesses and I feel really bad . . . you know, ‘cause they don’t have a million-dollar insurance policy or anything. I don’t even know if that’s true, but yeah, it makes me feel better.
- “Julian”

In either case, this study’s results show emotions (whether provoked or reduced) did not appear to influence many offenders’ perceptions of crime risk or opportunity in the retail interior.

13. Rules – The study identified 11 shoplifter statements pertaining to anti-shoplifting signage (like “Shoplifters will Be Prosecuted”) as influential to the decision to steal. However, most of these statements came from just one of the 20 offenders in the sample. Below is an example of that offender’s perception of anti-shoplifting signage:

Major stores like Wal-mart, Sears, they’re starting to get tougher, getting better at cracking down. I mean, they even have signs: do not try and steal something and come back with it because we’re going to catch you; something like that. That kind of persuades you not to try it. Signs and stuff like that. Visual types of things . . . I think that’s the best way. - “Joe”

Although few offenders cited signage as a deterrent cue, the fact that even one did should be taken into consideration when designing retail interiors. Signage is a relatively inexpensive and easy strategy to implement. If it deters even one potential offender it could be worthwhile.

Categories with No Scores

Of the 15 categories in the matrix of Physical Cues in the Retail Interior, the content analysis identified four with no scores at all. These were: Frustrations (reduced vs. provoked), Imitation (discouraged vs. promoted), Instructions (unclear vs. posted), and Conscience (ignored vs. alerted). None of the offender statements in this study identified cues in these categories as influential to their perception of shoplifting risk or opportunity. The implication of this finding is simple: retail designers and retailers should focus their efforts not on these categories but rather on the categories that shoplifters overwhelmingly cited as influential to their perceptions: Natural Surveillance, Guardianship, Formal Surveillance, and Target Accessibility. Some suggestions on how interior designers can enhance the effectiveness of the loss prevention techniques in these categories follows in Chapter 5.

Summary

Overall, the content analysis findings revealed several patterns in the types of physical cues offenders cited as influential to their perception of shoplifting risk or opportunity in the retail interior. In terms of the matrix' four overarching category headings (perceived effort, perceived risk, perceived provocation, and perceived excuses), 66.5 percent of offender statements referred to perceived risk, and 29 percent referred to perceived effort. A negligible amount referred to the other two category headings of perceived provocation and excuses (two and a half and two percent, respectively). The analysis placed 639 shoplifter statements into nine of the 15 categories in the Physical Cues in the Retail Interior matrix. Although all 15 of matrix categories contain defensive design strategies for the retail interior, the content analysis revealed that over 70 percent of offender statements fell into just four categories: Hardened Targets, Natural Surveillance, Extended Guardianship, and Formal Surveillance. This finding suggests that offenders perceive the physical cues in these four categories most influential to their assessment of shoplifting risk or opportunity.

The narrative excerpts reiterated the findings of the content analysis: that is, while a variety of physical cues in the retail interior influence offender perceptions of risk and opportunity, those that influence offenders most often are related to levels of risk or opportunity inherent to the shoplifting act. Indeed, the tonal and contextual implications of the narrative analyses emphasized the content analysis' finding that over half (66.5 percent) of offender statements refer to perceptions of risk (which in turn affects the decision to steal). The idea that situational, environmental cues combine to affect an offender's perception of shoplifting ease or difficulty also lends support to the theories of rational choice, the theft triangle, and situational crime prevention.

CHAPTER 5 DISCUSSION AND RECOMMENDATIONS

Discussion

This study's content and narrative analysis of 20 semi-structured interviews with known shoplifting offenders revealed the specific physical cues shoplifters cite as influential to perceptions of crime risk or opportunity in the retail interior. The content analysis revealed some patterns in the types of cues that influence offender perceptions most often, and the narrative analysis further emphasized these patterns. While these findings are significant in themselves, they also present a range of implications for retail design as well as opportunities for future research.

One of the study's most significant findings is that over 95 percent of offender statements were categorized into two of the four matrix category headings: Perceived Effort and Perceived Risk. Within these two headings, the matrix categories of Hardened Targets, Extended Guardianship, Natural Surveillance, and Formal Surveillance contained the highest numbers of offender statements. Considered in light of rational choice theory and the theft triangle, these findings are unsurprising. Rational choice theory asserts that potential shoplifting offenders weigh the possible risk of sanction and apprehension against the possible reward of the theft in the time period leading up to their decision to shoplift. This time period can range from a fraction of a second to a few minutes (Clark & Felson, 1993). Therefore, this study's finding that cues pertaining to targets, surveillance, and guardianship scored highest in terms of perceptions of risk or opportunity supports rational choice theory. The excerpt below illustrates this connection:

First things first you want to know if they got what you want. The second factor is the risk involvement. The risk involvement will be security times cameras times employees times space times customers. Those are the five factors you're going to have. Why? Because all of them conflict with each other to catch you. -"Matt"

Another finding worth discussing is the pattern of categories that contained no offender statements at all. These four categories (Frustrations, Imitation, Instructions, and Conscience) all exist under the category headings of Perceived Provocation and Perceived Excuses. Together, these two category headings comprised just 4.5 percent of the overall offender statements, suggesting that cues in the retail interior that communicate shoplifting provocations or excuses do *not* often factor into an offender's decision to steal. Again, this finding supports rational choice and the theft triangle, since these categories bear the least relevance to risk and/or opportunity.

In terms of rationality, the study's findings suggest that, in the retail interior, offenders are influenced most often by physical cues that communicate risk of detection (and consequently, apprehension and sanction). This finding supports that of Carroll and Weaver (1986) whose process-tracing study found that, once inside the store, shoplifters acted in a proactive, rational manner, "actively scanning the store for information on risks and opportunities before considering items for shoplifting" (p. 32). However, the current study goes one step farther in identifying some of the specific cues that comprise this information, and inform the offender's perception of risk or opportunity.

Design Recommendations

Through a combined content and narrative analysis of offender interviews, this study was able to isolate specific categories of physical cues in the retail environment that influence offender perceptions of risk, and decisions to shoplift. The strategies in these categories, while untested, nevertheless present an array of areas in which design-based

solutions may minimize shoplifting incidents. The four categories this study identified as most influential to offenders' perceptions of shoplifting risk and/or opportunity are:

- Natural Surveillance
- Extended guardianship
- Formal Surveillance
- Hardened Targets

While the identification of these specific cues is helpful, retail designers should understand that incorporating design into the retail environment cannot be reduced to such a tidy list. Building a secure retail environment is a holistic process. It begins at the most preliminary stages of programming and schematic design, and should be a priority throughout installation. Today's retail designers have an advantage in that modern drafting programs usually include a three-dimensional modeling component, which allows for virtual "tours" of a space well before construction begins. Such programs can allow for strategic and targeted security planning, as retailer and designers can see and address potential weak or insecure areas of the store well in advance. Even after construction is complete, secure retail design should be considered an ongoing priority, built into the store's maintenance and management procedures.

In essence, to be most effective, security (and, in part, security-focused retail design) should be a priority just like merchandising or marketing: a goal that starts at the top levels of the retail corporation, is consistently carried through every department, and manifested in the everyday operations of store management. For an example consider one of the four categories this study identified as influential to shoplifters' decision-making – formal surveillance. To make formal surveillance as effective as possible, retailers would begin to address it at the outset of the conceptual and programming phase, assigning certain square footages and strategic placements for security staff. The store's

entry, for example, would have long, clear lines of sight to other parts of the store. Fixtures and displays would be positioned so as to support security activity. Further into the process, the designer would consider materials, floor patterns, and ceiling treatments with the idea of territoriality in mind. Reflective surfaces would be installed in various parts of the store to help security staff and undercover detectives track suspicious behavior. The designer would work closely with loss prevention and merchandising to determine product placement, ensuring that CRAVED items were placed in the most secure areas of the store, where security could potentially monitor them. CCTV would be an important part of the reflected ceiling plan, and the designer would coordinate with the CCTV vendor, the retailer, and security staff to ensure optimal camera positioning. The designer would also be closely involved in the positioning of EAS gates, again coordinating with security to develop the best placement for reacting to alarm activations. After construction was complete, the designer would work with management to discuss how the store's everyday policies and procedures will affect design (Will moveable or temporary fixtures impede security's surveillance opportunity? Will signs or carts get in their way?) Ideally, the designer would re-visit the store, talk to security staff, and perform a post-occupancy evaluation to assess how well the store's design is supporting security's efforts, or if anything could be changed.

Each of the four categories identified in this study present this kind of range for defensive design opportunities, and are the areas in which retailers and retail designers should focus if they intend to alter shoplifter perceptions and resulting behavior. While it is not in the scope of this paper to discuss the comprehensive range of applications each category presents, a few suggestions are presented. Each of these tactics may help alter a

shoplifter's perceptions, heightening their sense of risk associated with shoplifting, and minimizing their assessment of opportunity.

Optimizing Natural Surveillance Through Design

Natural surveillance received some of the highest scores in this study. The goal of optimizing natural surveillance is to present both a real and psychological deterrent to offenders. As the findings of this study suggest, when a would-be shoplifter enters a retail interior and has a "gut feeling" they're being watched, they may decide against shoplifting. Natural surveillance can also be a tangible deterrent, as an offender enters the interior and, because the design promotes natural surveillance, is able to see the amount of security and employees in the store. The decision to shoplift or not, then, becomes a matter of how many deterrent cues an offender sees as a result of this enhanced capability for spatial surveillance.

Below are some potential strategies for retail designers wanting to enhance natural surveillance. These strategies, while derived from the results of this study, are untested. Future research in the area of situational crime prevention in the retail interior should be aimed at testing such strategies:

- Minimize or eliminate "blind spots": Designers should work with retailers to make sure the layout does not contain any hidden, unmonitored blind spots (see figure 3). Areas of the store containing CRAVED products should fall within the sight lines of employees (figure 19), and CCTV cameras should be installed all other areas in order to offset the theft opportunity a blind spot creates (figure 28). Offenders in the study often described blind spots as areas where customers rarely go; designers and retailers should work together to create a store layout that draws legitimate customers to *all* areas of the store, either through merchandising strategies or other additions (like a café (figure 11) or customer service station). This could improve selling as well as minimize theft.
- Minimize perceptions of confusion and chaos: Offenders in this study cited a chaotic, bustling store interior as a conducive one for theft due to its ability to preoccupy employees and provide a camouflage for offenders. Some simple store design techniques can help minimize crowds and confusion, including wide, clear

aisles (figure 7A); clear, direct store signage; a clean, well-maintained interior (figure 27); and a logical store layout. While such design tactics will not eliminate all crowds and chaos (especially during busy shopping times) they will help contribute to the perception of the store as orderly and well-monitored.

- **Improve lines of sight:** This tactic is a potentially self-contradictory one, as some offenders in the study identified “the ability to scan the store” as an opportunity for theft (because it allows offenders to scan for threats and targets). However, the study’s findings imply that the deterrent effects of natural surveillance outweigh the theft opportunities. Stores with low (>60”) shelf and fixture heights (figure 2); long, unobstructed views of aisles (figure 9); and CRAVED products positioned within eyeshot of employees (figure 23) may benefit from the psychological message such a design conveys to offenders. As mentioned previously, the goal of natural surveillance is to instill a sense of risk and vulnerability, and all of these design strategies help to contribute to that sense.

Optimizing Target Hardening/Accessibility Through Design

The accessibility of targets was one of the most clear findings of this study.

Offenders perceived “hardened” (locked or otherwise rendered inaccessible) targets as a shoplifting risk, and “easy,” accessible targets as an opportunity. In the retail setting, target hardening exists on three levels: positioning merchandise in a secure part of the store, placing merchandise on/in a secure fixture, and attaching it to a secure display.

Each of these levels has design implications:

- **Protect on the store level:** A retailer should identify which items in the store are most vulnerable, and position them in the most secure areas of the store: When designing retail interiors, designers should consider that some products need more protection than others, and focus on particular areas of the store as “safe zones” where CRAVED products can benefit from redundant methods of protection. These zones should be located away from the front exit access, away from desolate areas of the store, and in clear sight of employees and staff. They should be designed to facilitate surveillance (both natural and formal) and be monitored by CCTV.
- **Protect on the fixture level:** Retailers should keep CRAVED merchandise behind counters or in cases (figure 12). It is important to emphasize that these measures need not (and should not) be off-putting to legitimate customers. Retail designers should focus on how to incorporate such fixtures in engaging, attractive ways that also facilitate customer service and marketing goals (figure 8). Thoughtfully-designed fixtures have the potential to lure customers to the product, and allow them to engage with employees in a positive way, thus enhancing their shopping experience, all while protecting the product from theft.

- Protect on the display level: Attaching CRAVED products to fixtures with locked cords, cables, or chains will deter shoplifters (figure 8). However, as mentioned above, designers must strive to ensure that these measures will still attract customers to the area. The cords should be designed to be flexible and ergonomic, allowing a customer to touch and try the product. Fixtures with such devices should also be planned next to, or in conjunction with, customer service. This adds an element of protection for products and service for customers.

Optimizing CCTV Guardianship Through Design

The study's content analysis revealed that offenders commented on the presence of CCTV more than any other cue in the retail interior. While the use of CCTV is mainly an LP strategy, retail interior design can help increase its effectiveness and power. Here are some strategies designers may consider:

- Include CCTV coverage throughout the store: As Spriggs and Gill (2006) note, the success of CCTV systems in fighting crime is significantly affected by camera coverage (the amount of cameras per square foot in the retail space). Retail designers can help expand CCTV coverage of a retail interior by planning shelves, displays and signage that do not interfere with or obstruct CCTV views (figure 17). Designers should also consider how CCTV cameras are seen from the floor, since offenders are more likely to be deterred if they can see CCTV cameras.
- Include CCTV signage: the simple addition of signs near CCTV cameras may help communicate to offenders that the system is active and well-watched (figure 28). Signs saying "CCTV monitoring in use" can enhance the power of the CCTV system by reiterating to offenders that the cameras are watching them, contributing to a sense of vulnerability and risk of apprehension.

Optimizing Formal Surveillance Through Design

The study's findings suggest the presence and attentiveness of formal security measures like security guards and undercover store detectives contributed to a perception of risk for the offenders, while the lack thereof contributed to a sense of opportunity. Some of the retail design implications of these findings are very similar to those for Natural Surveillance: improving sight lines, lowering fixture heights, and designing wide, clear spaces will help security staff better monitor the retail interior. However, this

category also presents opportunities for a few unique design strategies for impacting offender perceptions:

- Create entry/exit spaces that support security efforts: Many times, uniformed security guards are stationed at the entry/exit point of a retail store. Designers should keep this in mind when designing this particular space. Clear territory definitions (made obvious through material changes or floor/ceiling conditions) will help security staff monitor this important space.
- Install mirrors and reflective surfaces. These materials, when installed strategically in the retail interior, help store detectives track offenders. As the content and narrative analysis revealed, offenders are constantly scanning the store searching for security (or anyone) who might catch them. The addition of mirrors and reflective surfaces gives store detectives an advantage in this game of cat-and-mouse, as their intimate knowledge of the store layout will allow them to use such surfaces to track and apprehend shoplifters.

Recommendations for Future Research

The patterns revealed in this study's findings present many opportunities for future research. The study identified 70 percent of offender statements refer to just four categories of physical cues as influential to perceptions of risk, and the decision to steal. Within these four categories, the study also identified several specific subcategories of interior conditions that offenders cited as influential to their perceptions of shoplifting risk and opportunity. These included the presence of "blind spots," item location, the presence of CCTV cameras, and accessibility of displays, among others. Because this study has isolated the cues offenders cite as influential to their decision-making process, future research can now test the effectiveness of these cues in more controlled environments. A logical follow-up study might involve having offenders look at and respond to photos of the different physical cues this study identified. Along the same lines, a "process-tracing" study in which offenders walk through a store a "think aloud" about these specific interior conditions would be another appropriate follow-up study. This study could also be used as a starting point for analyzing retail interiors in the field,

comparing how store shoplifting levels are affected by different combinations of the cues this study identified. Because the results of such a study could directly impact retail profitability, it may behoove retailers to consider providing funding for such research. As mentioned in Chapter 3, reliable sources of shoplifter data are scarce. If retailers were to provide funding for the type of snowball sample this study used, more independent research on shoplifting could be performed, and results could be improved.

Conclusion

The purpose of this study was to determine if shoplifters consider retail interiors in their decision to shoplift. If so, the study also intended to determine which physical cues offenders cited as influential to their perception of risk or opportunity (and subsequent decision to steal) in the retail interior. The study approached the analysis using rational choice theory and the theft triangle as a theoretical framework. Both of these theories attest that criminals like shoplifters are rational beings who weigh various risks and rewards before deciding to commit a crime. Applying a content analysis to 20 semi-structured interviews with known offenders, this study classified shoplifter statements about physical cues in the retail interior that convey a message of either risk or opportunity.

The study found that offenders do consider retail interiors when assessing the opportunity or risk inherent in shoplifting. Moreover, the cues they identified as influential to that assessment consistently fell into the same four categories: Natural Surveillance, Guardianship levels, Formal Surveillance, and Target Accessibility. The fact that offenders so often cited cues in these categories as influential to their decision to shoplift supports both rational choice theory and the theft triangle, as the cues shoplifters

identified were consistent with loss prevention strategies aimed at affecting the reasoning criminal's perception of risk or opportunity.

This study's results are important to retail interior designers because they provide information on which loss prevention strategies influence offender perceptions most - information which was previously unavailable. Retailers and retail designers can now focus loss prevention efforts on those areas that shoplifters cite as influential to their decision-making process. However, this study was just the first step. In order to create retail interiors that effectively curtail shoplifting, this study's findings must be further tested in the field. By testing the effectiveness of the cues identified in this study, retailers and designers can further develop a set of "best practice" techniques that will optimize the ability of retail interiors to prevent crime.

APPENDIX A
SAMPLE OFFENDER INTERVIEW

Q: . . . As organized as I can. I realize we'll talk about various things. Sometimes we'll talk about something I may then come back and ask you a series of questions. This is Mike in Dania and it's June 23rd and we're here with Joe. And we're going to start through the survey. This is about the 6th one I've done. Have you taken any Gillette razors in the past 3 months, in the past year, I'm sorry.

A: It was probably August 2001 now.

Q: So this is only June of 02 now, right.

A: Yeah, almost a year.

Q: So that was the last time you took them, was in August, what about before that?

A: Before that absolutely. Yeah. I would take Gillette's. The reason being is because of the packaging itself. It's very small.

Q: We'll come back. Let me do a couple and just say, what type did you take? Did you take like this is the Mach III, Sensor?

A: Mach III.

Q: Mach III. No Venus?

A: Mach III.

Q: Mach III. About how many times in the past 12 or 15 months?

A: Oh, how many times, the Mach IIIs, man I used to, I would say over 20.

Q: A lot then.

A: A lot.

Q: More than once a month?

A: At least 2 or 3 times a week during that particular period.

Q: This you said you were doing to support. . .

A: Absolutely.

Q: What kind of packs did you take, the 4's, 8's, you know a particular kind?

A: 4.

Q: The 4 pack always? Always took the 4 pack. Why was that?

A: Smaller package.

Q: Okay. And when you go into take something on average, how many would you take?

A: 3.

Q: Just 3 at a time?

A: Reason being if you want to know specifically. . .

Q: No, I'll ask you more about that, if you can do it real quick. . .

A: The pants I would wear were very loose and you couldn't really see a bulk. You know what I mean? You couldn't really tell.

Q: Right. Okay, I'll come back and ask you some more about that.

A: And I never got caught.

Q: Was that usually what you were taking when you were taking things?

A: That amongst other things. Whatever I could get my hands on. The smaller the package and the more expensive the package is what I would go for.

Q: Okay. We'll come back. Again, I'm just kind of getting this. Did you take any other kinds of blades, Schick or anything? Any other kinds?

A: Um, Schick. Schick, Bic, I took a Bic a couple of times. They come in a bag.

Q: That's the portable?

A: they're much cheaper. Disposable, right. I would take the disposable sometimes, depending on the store itself. You know where it was and how the access was.

Q: This is your main one.

A: Absolutely because it was more expensive.

Q: Okay. ? more than Schick?

A: Yeah, I would return it. That's what I would do.

Q: Okay, I'm going to ask you that. That's actually my next question. Good. What a guy. This is great. What do you usually do with them is my next question.

A: I would return them. I would come in with a shirt and tie and return 3 or 4 of them amongst other things.

Q: so the other thing is you wouldn't have a receipt for them maybe? These you wouldn't have a receipt for.

A: No I wouldn't have a receipt for anything.

Q: And they would take it?

A: See appearances, the manager pretty much has control. And they can pretty much do whatever they want to to certain amounts. So I would come with a shirt and tie, clean cut, shaven, and it's psychology like everything else, you know. Appearance.

Q: And of course then you're getting 100% price as opposed to half or whatever you get on the street.

J; Yes. I wouldn't do it on the street. And I would also keep some to shave if I needed to.

Q: You didn't fence them, you didn't sell them to a fence, you know somebody who would then go and sell them. You didn't go to a mom and pop store?

A: Not me.

Q: You didn't sell them to individuals? You just would return them?

A: Exclusively.

Q: Did you worry about people recognizing you after awhile?

A: I would go to different stores. They wouldn't be the same store all the time. That would be foolish. I never got caught because of that. I own a vehicle and I would target, yeah, certain areas.

Q: You could travel.

A: Absolutely.

Q: We're going to come back to some of those questions. You would take them back and get a refund? Never a problem.

A: Well there were problems from time to time, where they would want to give me a store credit or something like that and if that was the case if I needed something, I would accept the store credit and get whatever I needed.

Q: Right.

A: Or not accept the store credit and go somewhere else.

Q: so it was a question of what you needed. If you needed cash, store credit wouldn't help you.

A: Right.

Q: If you didn't you would go and get whatever you needed.

A: Whatever I needed.

Q: And you would still save the money to some extent in doing that.

A: Right. It was free money.

Q: Okay. Now tell me about why you would take them. And there's a variety of different reasons, what kinds of reasons?

A: The packaging and how much it's worth.

Q: Okay.

A: You know, it's easy to take. They have them on a display, you take 3, you look around and see where the cameras are at and poof. In and out. And make your \$10, \$15. Whatever you need.

Q: Okay. And again you didn't have any trouble getting rid of them. Okay.

A: You know again, I would come back the next day. It wasn't something that I would do the same day. You know what I mean. I would come back in a tie.

Q: Right.

A: Brand new shoes, expensive \$100 shoes. And that's the way that I would do it. So it was pretty organized. I wasn't desperate. It wasn't a desperation. It was pretty organized.

Q: and you would have to go to maybe a couple of stores to resell them? What kind of stores, let me come back.

A: Eckerd if you want to know. Eckerd's Wal-Greens.

Q: I'm going to come back. I have a whole series of questions about that.

A: Okay.

Q: Remind me because I want to ask about, not so much where you take them but about the resale or the return I want to ask you about as well. How did you take them? What was your process of taking the blades?

A: Very simple. 2 or 3. The pants that I would wear were jogging pants. And I would have the, my underwear the elastic and I would wear them pretty tight so they would be pretty secure, 1, 2, 3. I would stick to about 3 so it wouldn't be bulky. I had a shirt to go over it.

Q: Just stuck them in and go out.

A: And go on my way.

Q: That's the way you always did it?

A: Well, yeah. That's the way I always did it. I wouldn't just get it and leave the store. Sometimes I would buy things. Then leave. Depending on the situation, how I felt, if I was paranoid. If I wasn't paranoid. But sometimes I would buy things. Sometimes I would just walk out. I would never just get it and leave. I would either walk around, if I didn't find the item I was looking for.

Q: Did you ever take them out of the packaging?

A: Never.

Q: Just cause you would resell and obviously. . .

A: Absolutely. I never did that.

Q: Okay. What other kinds of items would you take? Did you take?

A: Calculators if they were accessible. Because there were some stores that the calculators were out there and you're talking about a \$20 item.

Q: You would do the same things with these, return those?

A: Return them. Absolutely.

Q: Get \$20 back.

A: Condoms.

Q: they return those?

A: If it's unopened, of course. Sure. Aspirin. Basically things in smaller packages. The smaller the package. To give you an example, too big.

Q: Okay. Just hold that up.

A: Too big.

Q: anything else? CDs, DVDs, clothing?

A: clothing, I've done it, in the past. I used to have one of those, you know that they come with the little alarms, I used to have one of the things that take the alarms off. So go in the dressing room, again with the baggy pants, and put on pants and things like that and then put my pants over them. Take the thing out and go on my merry way. But that was a rarity. I didn't like to do that.

Q: Was that for your own use?

A: That was for my own use.

Q: You didn't resell those?

A: I didn't resell those cause most stores like that if you don't have a receipt they just give you a store credit.

Q: They don't take clothes. . .

A: Right. Yeah. But items like this on smaller amounts they'll give you the cash for it. You see, but once you go up to a certain amount they won't do it.

Q: Aspirin. What's the cost for it?

A: \$5 or \$6. But you know it adds up.

Q: Yeah. Okay. You going into a store. Do you kind of know what you're going to take before you go in there?

A: Yeah. Pretty much.

Q: What do you think? I'm going to go get the Mach IIIs, I'm going to get. . .

A: Yeah, because these are items that I knew the store, I knew the cameras, okay. Okay. And it's a small packet that I can get a good return on.

Q: Okay. So you pretty much know.

A: Easy access.

Q: What happens if you go to someplace and they're not there? They're not Gillette or something like that.

A: Then I would take it if it's small enough. Whatever.

Q: You'd take something else.

A: In other words, I'm not a Mach III thief. Or I wasn't a Mach III thief. But this is a package that again is small and you know.

Q: Is there a certain time of day that you work?

A: No.

Q: You'd go anytime?

A: Yeah.

Q: Do you usually work alone?

A: Alone.

Q: Always alone. Tell me a little about security. Let me start with this next question. Tell me about the kind of stores you take things from.

A: Eckerds, Walgreens,

Q: So drug stores.

A: Drug stores. Small what you would call ??? Vega, which is a latin store. I would, convenience store but in Latin neighborhoods.

Q: Are they a chain or individually owned?

A: No. Individually owned. Mom and pops where I'd say, listen I got the wrong ones. I don't have the receipt. I would say it in Spanish. They would give me my money right away.

Q: Did you take from them or return to them?

A: Return to them and say listen you know I got it here. As you can see, in Spanish, the product has not been opened. I got it for my father. He's very particular. These are not the ones that he wanted. I need my money back. 9 times out of 10 they will go for it.

Q: Tell me about taking and returning cause you do a lot of returning. Did you take from these stores?

A: I would take from those stores as well, yeah.

Q: So you wouldn't discriminate.

A: No. No. Wherever I saw that there was easy access. Now the smaller mom and pop convenience stores don't have the same type of security as the Walgreens or an Eckerd's, okay? So I didn't discriminate.

Q: Okay. So drug stores, little neighborhood convenience stores, what else? What about big. . .

A: Supermarkets.

Q: Supermarkets.

A: I've done supermarkets too.

Q: They carry all the stuff that you would take.

A: Absolutely. Publix, Winn Dixie, smaller supermarkets, there's Sudanos. There's discount stores like Navarro.

Q: What about the big like Wal-Mart, Target, K-Mart?

A: Too big. Too much security.

Q: As far as taking, but you may return things to them?

A: Right. But those people like to give you store credit.

Q: Oh, okay.

A: In my experience.

Q: sometimes you may, but typically they're less likely.

A: But I wouldn't take from them. Too much security. They've got 4, 5, 6 securities in those bigger stores. They're too big.

Q: Okay. Do you pick ones near your home? How big of an area do you work in?

A: I had Hialeah was big. Pretty much in the Hialeah area.

Q: Okay. I don't know where that's at.

A: Hialeah is a Latin area in Miami. It's a very big.

Q: What's the radius, diameter.

A: The radius. Wow! It's at least 20 miles. It's big. I would say it's the biggest city, which it's not literally a city, in Miami.

Q: Part of Miami.

A: It's part of Miami. They're trying to make it a city of its own. They've been fighting for it for a long time.

Q: Okay. So roughly in that area is where you worked.

A: Absolutely. In Hialeah, all there is are businesses. You know. A lot of small convenience stores. Not convenience stores, they're like pharmacies, and ??? where they sell everything. So they're everything. So those are easy targets.

Q: Pretty easy targets. And you're only picking up a couple of things at a time.

A: Yeah. I'm not, I didn't do a lot. You know. This is, the 8 is easy as well. You know it's a small package.

Q: Okay. And so about how many miles did you live from the stores you took merchandise from?

A: I lived in Kendall where I own a home. Which is approximately 20 miles. So I would leave my area.

Q: Ah, so you would not steal right around. You would go then into Hialeah.

A: Right, cause it was easier because again, there's a lot of mom and pop stores. You know and those are easier because the security system.

Q: and you're Hispanic.

A: Right. I'm Hispanic as well.

Q: But you could even do it or not.

A: I can speak the language and again I would go dressed in my attire. You know, so again it was organized. A system.

Q: A system. Did you usually purchase something when you went there?

A: Sometimes I would. Sometimes I wouldn't. Generally speaking I wouldn't.

Q: No, okay. Just go in and get what you take, walk around and go.

A: And go. Just depending on the situation, if I needed something I would buy it. If I felt uncomfortable for whatever reason, or being watched, sure I'd buy something. Whatever it may be. Small.

Q: But generally you would deal with the situation.

A: Depending on the situation.

Q: May be people suspicious or whatever.

A: Correct.

Q: Okay. Tell me about security. Now we'll get back to that. You go into a store. What kinds of security things are you looking for?

A: I'm looking for cameras. I'm looking for the amount of employees. Okay. I'm looking for people that are looking at me.

Q: Okay, so non-uniformed.

A: Non-uniformed. Absolutely.

Q: What about uniformed?

A: Uniformed even more so. You know. Cameras are the biggest thing. They've got the big ball sometimes, which can pretty much scan the whole radius of the store. So does the little cameras. The little cameras sometimes move so sometimes you have to time it.

Q: Okay.

A: If it's moving this way, this is a very small package. I can take 3 at a time and put them in my sweats, put my shirt over it, and if I buy something I buy it and I'm gone.

Q: What about the cameras that you can't see where they are? In the big dome thingees.

A: Well there I take my chances. Obviously because it's a dome, you know. I'd leave a little quicker.

Q: so it won't deter you from doing it?

A: Well, you need to understand that at the time you know it was more of a desperate act. You know, I haven't stolen in awhile. You know, cause I haven't done drugs in a long time. I went to rehab and I wasn't a drug addict. I'm not a drug addict. I was abusing it. You know and I didn't get literally hooked, but I was almost there. I almost crossed that imaginary line but I never did.

Q: But still it was pretty important that you get it.

A: But it was important that I get it. You know, at the time.

Q: So you would do it, but just. . .

A: I did it cause I needed the money. I wasn't working and I wanted to get high and that was an easy way to get high. Okay.

Q: Okay. What about employees paying attention to you?

A: Can you repeat the question again?

Q: Yeah, sure. Employees paying attention to you.

A: Again, you know people go by appearance a lot. You know. I was never high when I was doing it. And I was dressed fairly clean cut. I mean I didn't even have this you know? So I never really had a problem with that.

Q: Okay.

A: Me in particular.

Q: Okay. What about security employees either in uniform or non-uniformed.

A: Never had a problem, like I said before. I never got busted.

Q: Okay. Ever been arrested?

A: No. Appearances they really, you know we're in a society where you know appearance is just normal. You see a guy with ripped up clothes, sweating, dirty, they're going to follow them. I wasn't that type of thief. I just didn't get down to that level, so it was actually easier for me.

Q: But you didn't I mean you were paying attention. . .

A: Well there were a couple of occasions where they were looking because it was their job, but whether they had an idea that I was stealing I couldn't tell you, but I don't think so.

Q: Just because of your appearance?

A: Just because of the appearance.

Q: And you were kind of not doing anything.

A: And I didn't do anything that would make them think that I was. And if I had any idea in my mind I would get one of those little carrying things and put a couple of items in it that I probably needed. And purchased them.

Q: So you looked legit.

A: Yeah.

Q: So basically you've taken a couple of things and it wasn't that hard to get.

A: Wasn't that hard to get, right. But it added up as far as the money is concerned. Because you know you take a couple of these, 3 or 4 stores, you know you've got \$40 or \$50. You know what I mean. You go to 3 or 4 stores it adds up.

Q: So you can go out and do a couple and. . .

A: Oh yeah. Yeah. Amongst other items, not just that.

Q: But where the cameras were concerned you felt like needed to get around and some employees being sensitive, but it never really deterred you.

A: Never did.

Q: anything else? The electronics thing or. . .

A: Oh, good luck. There's a little plastic thing they put on there and I would rip it off if it had it.

Q: What about if you tried to sell that back? Was that an issue? They never bothered you at all?

A: Nah.

Q: No. Okay. So you're a male. What year were you born?

A: I was born in 1968.

M: Hispanic background.

A: Hispanic.

Q: You say you've never been arrested for shoplifting.

A: No.

Q: Employed, unemployed now?

J: I'm starting a new job tomorrow.

Q: Okay. What are you going to do?

A: Mortgage broker.

Q: Oh, good. That should be a good job. Education?

A: I have a Bachelors degree in Business Administration. I'm a finance major, business administration, branch manager for Washington Mutual Bank, Republic Bank. I have my mortgage brokers license. I have worked for a title company as a real estate closer, so my niche or my background are those.

Q: Like financial.

A: Right, financial, real estate.

Q: If we do more of these, I don't know if they are, but would you be willing to do more if we give a call up.

A: Absolutely. If I get paid for it sure.

Q: Yeah. They' pay.

A: Well you know right now, I was working at a company and I got laid off 2 weeks ago so I haven't worked for 2 weeks, and I finally landed a job which I start tomorrow and I've got 3 kids and a mortgage so this can help me.

Q: Yeah, it's expensive. I guess what we want to do now is switch over to the packaging. We'll kind of go from the standard stuff to go through and we have a series of questions are how easy is it to hide, well you don't open, so that's not a question, what about to resell or get rid of. And just kind of go over the deterrent effect of each of those packages as you go through. So you can take one and kind of hold it up to the camera so

we know what you're talking about, just start from right here and go over that way. That's just your regular old type.

A: This is my common package that I would steal. The reason being is because it's very small. I would take about 3 of these. Never any more. Okay. Put them in my sweats or other pants that are very baggy. Very simple.

Q: Now that's about the same. The next one is just a little heavier.

A: Just a little heavier. I would also take these, 3. These are another 4.

Q: Hold that up.

A: I'm sorry.

Q: They can't see.

A: I'm sorry. These were the 8's. Okay.

Q: Yeah, I don't think it's so much the size it's the nature of the package.

A: Yeah, the nature of the packaging itself, it's very simple. Now this plastic here I've never, this I've never seen.

Q: These are things that they're thinking about.

A: So I couldn't give you an answer for it.

Q: Hypothetically.

A: Hypothetically, I would stick it the same way.

Q: Okay, not much difference.

A: This either. But this is pretty simple too. It's even smaller and lighter.

Q: Yeah, I guess the only thing, we'll see when we get some of these, just pull it off.

A: Now this is tougher as far as my scenario is concerned. Why? I could probably maybe not even take this. Too thick. Too big. Absolutely not.

Q: That's pretty much what that one, one's a little heavier plastic. Now feel the other one.

A: Yeah. Both of these are out of the question. Okay. Too big. I mean it's so bulky, as far as my scenario is concerned, stick it in your pants and it will get a big bulge. It's not profitable.

Q: Now this is a thing and you can look at it with a traditional pack but also think in other ways, the idea here is if you can hold it up, is that you kind of have to, you can't just pull a bunch off at any one time, you have to work them off a little bit.

A: I don't understand your question, because I can rip this right off.

Q: Okay. And that wouldn't. . .

J; No.

Q: wouldn't effect it?

A: No, just rip it right off.

Q: but with some of these others with the things you can't rip right off, how would that effect it?

A: Okay, bottom line, if this is what you're getting at, these are hard. The way that I would steal as far as the pants are concerned, you're speaking to a male, a male doesn't carry a purse. Okay. Now if you're talking about a purse they're going to take it. If they can. Depending on the cameras and if they know what they're doing, but these 2 here is or are the packages that you may want to consider.

Q: What about this? This is another device that they have and the idea here is if you take it it pops up so you can't take a couple, you have to work it a little bit differently.

A: It's still being ripped off. Okay. This is all great, fine and dandy but this is cardboard.

Q: So it would have to be a harder top, something that you could pull them off with.

A: Again, this is where it's at, right here. As far as security.

Q: Another thing they're thinking of, and this may not effect you as much as sticker, kind of Wal-Mart Always, for people who are selling them to fences or neighborhoods, the idea is if you're not selling them to someplace that's not Wal-Mart people figure out well. . .

A: Well a sticker can be peeled off.

Q: What if it was part of the pack that couldn't be removed? But before you return them you would just take it back to Wal-Mart right? It wouldn't matter the way you operate.

A: Right the way I operate in particular. So why even take the sticker off? That would benefit me.

Q: Right. You could sell it, actually it would make it easier for you. . .

A: Absolutely.

Q: But Wal-Mart then, you said some of these stores are less likely to give you a refund, and more likely to give you a store credit.

A: Because they're the bigger stores which I didn't target. Generally speaking.

Q: So it may be a little of a deterrent in the sense that the way you operate you can't. . .

A: Because of their security. And that is a security measure.

Q: Let's say you wanted to take that but then you couldn't take that obviously back to. . .

A: Well yeah. Let's say I did steal it in Target. Take the sticker off and take it to the small convenience store in Hialeah.

Q: Right. You'd have to take the sticker off.

A: It doesn't matter.

Q: Okay, that's pretty much what we wanted to do.

APPENDIX B
SAMPLE OFFENDER INTERVIEW

Q: This is Mike, I'm Mike, but this is Mike also. We're interviewing here. He's a Braves fan apparently.

A: Not really. Just a comfortable fan.

Q: Just what you've got. All right, we're in Dania, Florida, Hollywood, just north of Miami, and it's the 23rd of June and we're going to go ahead and start the interview. Have you taken any Gillette razors, Mach IIIs, Senors. . .

A: Yeah I have.

Q: In the past 12 months?

A: Yeah.

Q: Ok. What types do you usually take?

A: The Mach III.

Q: All right. Have you taken Sensor, Venus?

A: No pretty much the Mach III.

Q: Just the Mach III. How many times say in the past 12 months?

A: I don't know. 10 or 12 times.

Q: Ok. So roughly once a month or something like that.

A: Yeah.

Q: and what kinds of packs do you take as far as. . .

A: You know the basic pack because it's easier to slide.

Q: How many, cause you know there's different sizes.

A: The 4's.

Q: 4,8

A: the 4 packs because of the size wise.

Q: So you'll generally take the smaller pack actually. About how many would you take at a time whenever you go?

A: A couple at a time.

Q: So 3, 4, 5, 6, something like that?

A: Yeah.

Q: Ok. Do you take any other kind of blades?

A: No.

Q: so when you take you just take the Gillette?

A: Yeah. I tried to by resale value.

Q: You get something out of it, right? So when you do take it how do you get rid of them? What do you do with them?

A: either take it back to another store.

Q: So you resell them. So you just keep your, how do you, do you get a receipt or something?

A: You don't even need a receipt. You just go back, look I got this, my wife picked it up.

Q: And they don't give you a hard time?

A: They don't give you a hard time about it.

Q: How do you avoid being recognized? Is that a problem?

A: No. No basically all you do is wrap, you know put a piece of aluminum foil over that..

Q: No I mean when you're reselling them.

A: No, go to different stores, they don't give you a hard time.

Q: They don't give you a hard time. When you do that you get the full value.

A: Yeah, the full value.

Q: So there's the benefit in that.

A: right.

Q: But you can only do so many at a time.

A: Right. Right.

Q: what other kinds of things would you do to get rid of them? Do you use them yourself?

A: No I don't really use that.

Q: Ok.

A: I'm not really a Gillette fan.

Q: Ok.

A: Just the high resale value on it.

Q: Ok. What else? Do you sell them to a store?

A: Stores, yeah, a lot of stores, you know, I'll take all of them that you can bring me and you'll get like $\frac{3}{4}$ of the money, 60 cents on the dollar.

Q: You can get that much?

A: Yeah.

Q: That's a pretty good return. What about a fence? Do you sell them to a fence?

A: No. No.

Q: Just you'll take them right to a store.

A: Yeah.

Q: Do you use the same stores?

A: Yeah.

Q: How do they pay you?

A: Cash.

Q: No I mean so much per piece?

A: Yeah. Well depending on how many you're bringing in , you know?

Q: Flea markets or things like that?

A: no. Too much work, too much involved. Take them to a corner store and say I've got 3 or 4 of these, you know.

Q: They worry about the packages being torn?

P; Well you don't tear the package.

Q: all right. That's actually, let me ask you this next question, well we'll get to some of that. Why do you choose to take Gillette?

A: Obviously it has a high resale value. Everybody knows it, it's a brand name, it's easy, it's easy to work with.

Q: Ok. What else about taking it that's easy, hard, you know?

A: It's very simple, you just wrap a piece of aluminum foil around it and boom, walk out the door with it.

Q: you only have a couple so it doesn't take that much.

A: Right. There's not much too it. It's not big and bulky.

Q: Ok. Ok.

P; Which you might want to change your packaging, you know.

Q: Well I guess that's one of the questions we have here, we're going to talk later. What kinds of packaging would make it a little bit more difficult?

A: Yeah. Something like this.

Q: That's the big pack.

A: Yeah. The big one.

Q: Just hold it up real quick.

A: I would say that this would be harder to take. And obviously something like that.

Q: We'll come back to that question at the end.

A: Ok..

Q: So basically, you get a pretty good buck for them, they're easy to take, easy to get rid of, things like that. So it's not rocket science.

A: Yeah, it's not rocket science. It's a high resale value, it's easy to take, it's in a part of the store, they're usually in a part of the store, you go into a Walgreens or something like that and they're in the back of the store, it's easy. It's easy to work.

Q: Ok. How do you take them? What do you do?

A: Basically you just walk up, as opposed to trying to take the label off, the labels off of it, you just wrap a piece of aluminum foil over the guard, over the pack.

Q: And then what?

A: Put it in your hand and just walk out. Put it in your pants, walk out the door.

Q: So put them in your clothing. . .

A: Yeah, put it in your clothing, put it in a bag.

M; so a variety of different things.

A: Right. Basically what you. . .

Q: so like a container, like a bag you've got. . .

A: yeah, like a shoulder bag, or stick it in your pants pocket. You wrap it with aluminum foil it's no problem. It's no big deal, walk out.

Q: Ok. All right. So it could be a container, did you buy something in the store or you just bring a bag in?

A: no let's say if you have a shopping bag or your shoulder bag or just a pants pocket.

Q: Stick them in and walk out.

P; Stick them in and walk out.

Q: Ok. All right. But you always leave them in the packaging or take them out of the packaging?

A: Obviously it's worth more in the package.

Q: all right. If it's not in the package you get how much?

A: less. Considerably less.

Q: Ok. Let me ask you if there's other things that you may take. Kind of the same series of questions. What other kinds of items do you usually take?

P; Pretty much that's it. You know I've taken some vitamins and things like that, but pretty much this is cause it's simple, it's easy, everybody has it.

Q: Ok. Just go in and grab them take a couple and pick up a couple of bucks.

A: Right.

Q: but you don't do CDs, DVDs?

A: No.

Q: Batteries, any electronics?

A: No.

Q: Ok. So whenever you go into a store you usually think you know what you're going to get before you go? Or do you just kind of go in and see it?

A: Just kind of go in and see.

Q: If it's there you'll grab some.

A: Yeah.

Q: If you go and say you're looking for Gillette, and none are there do you take anything, any other brands or anything like that?

A: not really. Cause like I said, these are easy to get rid of. You know any store in the world has them. You get something else, how knows?

Q: Ok

A: You get a bag of Bic or something, who knows.

Q: Never a problem with finding these?

A: Never a problem with finding it, exactly.

Q: Do you take things at a certain time of day, morning, evening, afternoon?

P; Afternoons.

Q: Not morning, or what is it about the afternoons?

A: I'm more free in the afternoons basically. There's no. . .

Q: nothing to do with the store.

A: No, nothing to do with the store, the hours that they work, I'm just free in the afternoons.

Q: You work on other things in the morning or something like that.

A: Right.

Q: Ok. Do you usually work alone?

A: Yeah.

Q: You just go in and do it.?

A: Right.

Q: Ok. What kinds of stores do you go?

P; Drug stores.

Q: Primarily you work drug stores?

A: Drug stores, Walgreens, Eckerds, things like that.

Q: but not Target or grocery stores or things like that?

A: no. No.

Q: And why do you take, what are some of the reasons you take, because lots of places have these.

A: Because there's lots of drug stores around my neighborhood. You know basically that's it.

Q: So around where you live. Let me ask you, that's another question, about how many miles do you kind of work?

A: A couple of miles.

Q: So relatively a small area.

A: Relatively a small area.

Q: And there's a lot of drug stores.

A: A lot of drug stores in my area.

M; Ok.

A: I think in 4 block area from where I live there's like 5 drug stores.

Q: Ok. Security in those stores?

P; Lax.

Q: Not that much. They pretty much have them.

A: they have them, it's lax. I mean you go through a little scanner at the front of the door and that's it.

Q: And if it's wrapped in tin foil that's not a big issue.

A: It's not a big issue.

Q: Ok. All right. You usually buy something when you go in?

A: yeah. I pick up a pack of gum or whatever, a candy bar. Pay for it.

Q: Grab it and go ahead and go on.

A: Sure.

Q: what kinds of security measures would you look for when you go into the store?

A: Well most of these stores really don't, they have these little scanner at the door and that's pretty much it.

Q: They don't have anything else?

A: they might have the sensor, but they don't watch every aisle.

M; That's cameras.

P; Security cameras thing.

Q: That's not an issue?

A: That's really not an issue.

M; what about personnel, or employees?

A: A lot, I don't think like, Walgreens, or big stores like that, you know like food chains would have them, but like a Walgreens or Eckerd's they don't.

Q: They don't have very much. Employees, anything?

A: and if they do they have a security guard that stands at the front by the buzzer in case the buzzer goes off.

Q: But you have the aluminum foil.

A: the buzzer doesn't go off.

Q: It hasn't been an issue for you.

A: right.

Q: Just get them, grab them and go ahead and go on out.

A: Right.

Q: Any other things you think of when you go in that you're looking for?

A: No. Pretty casual. It's very casual really. I mean it's really not a problem. Like you said it's light, it's easy.

Q: Ok. You're a male, white, non-Hispanic.

P; Non-Hispanic, white male.

Q: Have you ever been arrested for shoplifting?

A: Nope.

Q: Never have been. What's your employment situation?

A: Full-time.

Q: You're employed full-time. What do you do?

A: In sales.

Q: Sales. Sales for retail?

A: Yeah, retail sales.

Q: What's your education?

A: High school education.

Q: and if we did more of these would you be willing to do some more? They may do some follow-up kinds of things.

A: Depending on timing, sure.

Q: Ok. I guess I what I would like to do now is take these packages and have you go through the current packing all the way through. Let me as you how difficult it is to hide, to open, to resell. Easy to hard.

A: Okay. Again, I don't open them, so that's not.

Q: Opening isn't an issue.

A: Opening isn't an issue. I mean the worst thing you do is fold it like that and put a piece of aluminum foil around it.

Q: Okay, and that's not hard to sell even if it's bent like that? Hold it up to the camera just so they can see.

A: Fold it like that and then unfold it.

M; Ok.

P; It's no big deal.

Q: That way it doesn't take as much space.

P; Right.

Q: And you can wrap it up and things like that.

A: Right. And again this one the same thing. This one is obviously a little bigger, a little more bulky.

Q: A little harder.

A: A little harder. Obviously the smaller the package the easier it is. Again just boom. Wrap it with a heavy piece of aluminum foil. Now obviously this is more difficult. The bigger it is the more bulky it is the less you want to do it.

Q: Ok.

A: and I guess this is your new packaging.

Q: This is some new things that they're looking at. Actually they're a little different. Some are bigger than the others.

A: Right as I say obviously the bigger it is, it's kind of hard to put in your pants.

Q: Ok. So you would or wouldn't take it?

A: I wouldn't take it.

Q: You wouldn't take it.

A: I wouldn't take it. I would shy away from it.

Q: Of course you don't open any of the packages. You know some people open them.

A: Well especially if you start opening it up that brings for people looking at ya. You pick up a package like this off of the shelf and it's easy.

Q: Right.

A: You start opening something up obviously it's more difficult.

Q: Resell affects.

A: Resell affects. And obviously to me this is worth more but it would be harder to get.

Q: Right. And if you feel the plastic on that compared to the others it's even harder.

A: So I would tell you marketing wise to me this would be the hardest one that you would have to deal with.

Q: To deal with. All right. Now the other thing that we want to look at are some of these display things. And you can look at them too. The thing here is you have to wiggle it.

A: Right. Well again, the point of it is it's not really that hard to get off.

Q: Ok.

A: If you push down on this it slides right off.

Q: Ok.

A: That's not rocket science. To get on and off.

Q: So it would slow you a little bit, but it wouldn't be a big

A: Nah, that's not a major deterrent. I mean you could take 2 or 3 of these, put your finger down. . .

Q: And get them out of there pretty easily.

A: And get them out pretty quickly.

Q: Now part of the thinking is in combination with other things.

A: Obviously the harder it is the less people are going to do it.

Q: Ok. Now this one's a little bit different in the sense that, now I'll show you how it works, if you'll hold it up, to do it you kind of have to you know hold it down and you can't take multiples. You have to pinch, so it kind of takes 2 hands.

P; Right. Now that would be, again, the quicker, the simpler things are the more likely it is to do. Something like this obviously you've got to push this down, you've got to push this in.

Q: And you couldn't just pop that.

A: It's too involved. I would shy away from it.

Q: Ok.

A: When it's on a single rack like this where you can just pop off 2 or 3 of them, obviously that would be easy.

Q: Ok.

A: That's one of the things that makes that accessible.

Q: What about, and this is one of the things that they're looking at, which is this Wal-Mart Always sticker and the idea is if you go and resell that. . .

A: Well this you would have to bring back to another Wal-Mart.

M: What about selling that at another store?

A: Well you wouldn't sell that at another store. You'd have to bring that back to another Wal-mart.

Q: To resell?

A: To resell. Go hey, my wife bought a couple of packs of these. I really don't need them and return them. And they would look at them and say it's a Wal-mart brand and so 9 times out of 10 you would be able to talk somebody at Wal-Mart into taking the package back even without a receipt.

Q: What about if you were taking that to you know one of the corner stores?

A: Well I don't think, I don't know if the corner store would take it. Because again, it's labeled for a Wal-Mart.

Q: Ok. So it may discourage..

A: It might discourage from another source from buying it but it wouldn't stop someone from taking it because they could always go back to a Wal-Mart or an Eckerd or whatever that label might be.

Q: Ok. Do you have any other suggestions for them about packaging?

A: I like this rack. Obviously the harder, well I like it not for me, but for idea, the harder it is to get the thing off, that's this clip thing, the harder it would be to get off, the more time it takes, the less likely it is for somebody to use it, take it. And again the heavier plastic and the bigger packaging, the bulkier the package the less desirable it is.

Q: Ok. Well that's good. That's kind of what we wanted to get at. I appreciate it.

END OF TAPE

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BIOGRAPHICAL SKETCH

Caroline Cardone was born in Gloucester, Massachusetts. She received her Bachelor degree in English literature from Skidmore College in 1997, cum laude, with honors. Her minor concentrations were in studio art and art history. After spending five years in the publishing industry, Caroline began graduate work in interior design at the University of Florida in Gainesville, Florida. There, she joined the University's Loss Prevention Research Team as a writer, editor, and research assistant. Her work with the LPRT drove her interest in how physical spaces affect shoplifter behavior. In addition to her continued involvement with LPRT, Caroline is currently a full-time interior designer with Phinney Design Group, an architecture firm located in Saratoga Springs, New York.