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**CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN IN
SUPERMARKETS: A NEW PRODUCT OR PAST ITS SELL BY DATE?**

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**A thesis submitted to the University of Huddersfield in fulfilment of the requirements
for a Postgraduate Masters by Research Degree (MSc)**

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Abstract

Crime Prevention through Environmental Design (CPTED) is a crime reduction approach that aims to prevent crime through the design (pre-build) or manipulation (post-build) of the built environment. A staple food within the research pantry of academia and suggested as a main ingredient in the recipe to design out crime, yet rarely considered for the interior space of supermarkets and how the principles may deter shoplifters from committing crime.

A space or environment is predominantly designed with the end user in mind; home buyers, the driver of a car, employees within an office, those that are the benefactors of a process that makes the user feel comfortable in their surroundings and induced to continue to use them. This is largely the case for the retail environment. However, some shoplifting offenders are committing offences in the same space each day. So, who are the main benefactors and users of the design and layout of retail environments – the shopper or the shoplifter?

This research draws upon the experience of ex-shoplifters (n=5) in exploring their considerations, attractions and behaviour when committing theft from shop offences, specifically in supermarkets, in order to elicit how their decision-making is influenced by environmental design and physical cues. It also explores the principles utilised by the interior space designers of supermarkets (n=2), in order to identify where designing out crime currently features within the process of determining the layout of the supermarket environment.

The findings of the research suggest that the principles of CPTED are applicable within the supermarket environment and that the behaviour of offenders could be influenced by the effective implementation of these principles. However, there is also a need to dispel the haze of ambiguity encircling some of the components of CPTED to assist clarity of application, understanding amongst practitioners and to encourage their subsequent use.

Introduction

The Crime Prevention through Environmental Design (CPTED) principles of defensible space, activity support, image, access control, surveillance and target hardening are applied to the built environment (Armitage, 2013; Cozens, 2014), but are rarely, if at all, utilised in shaping the interior layouts of supermarkets and retail sites. The financial success of the Retail Sector is understandably based on sales, with design, as well product placement, within stores playing a major role in generating profit. However, surely equal importance should be placed on the protection of those assets that ultimately generate the profits through effective design of interior space.

The principles of CPTED, as outlined by Armitage (2013), should also be respectfully challenged, in order to ensure they are ‘fit for purpose’ in the current climate and within this less studied area of the supermarket environment. With offenders also being ‘customers’ of a supermarket, the perceptions and considerations directing their behaviour and movement are crucial in terms of maximising the potential for design in preventing crime. If we are to prevent we have to understand, and to understand we have to place ourselves in the mind of those committing the crime (Ekblom, 1997). Offenders see things differently to practitioners (Cardone, 2006), they immerse themselves into their ‘profession’ and without complication they conduct their business to various levels of success, a degree of which will be attributed to poor design and layout. Incorporating offender considerations into crime prevention practice is critical (Armitage 2013, 2016) and will be a key aspect of this exploratory research.

The impact of ‘theft from shop’ is much greater than simply a cost to the retail sector, it could be perceived as a ‘gateway’ crime, an easy hit that potentially introduces an offender to crime and associated pay-offs (Pease, 2001). What may begin as a dare whilst at school could

develop into a more serious addiction to the act of committing theft and the rewards associated with it by shoplifters. The propensity to commit theft could then begin to manifest into other forms of criminality and if so, designing out crime as a deterrent within the supermarket environment has a significant role to play in reducing the opportunity for that to happen.

The annual crime survey produced by the British Retail Consortium provides an overview of the biggest threats to the sector and those that are perceived to be of greatest concern over the following two years from publication. As well as covering customer theft, the survey addresses issues such as fraud, cyber security, insider threat and violence against staff. The results of the 2015 and 2016 surveys were based on samples accounting for over one million employees. The direct cost of crime suffered by the retail industry was £613 million for the period 2014-15, which was calculated as the equivalent of 50,224 jobs in the sector, based on gross annual salaries (British Retail Consortium, 2016). The direct financial cost of retail crime increased to £660 million for the 2015-16 period, £438 million of which was the total cost of customer theft affecting the industry, meaning theft remains the most common type of crime (British Retail Consortium, 2017).

The British Retail Consortium annual crime surveys raise some interesting points in relation to industry and the police response to the problem of shop theft, some of which would suggest a cultural change is required, in order to bring the respective agencies together to proactively address the issue in true collaboration. Relevant to this study from the most recent surveys include:

- Businesses stated that they would like to see better police collaboration for the investigation of crime that crosses police force borders (British Retail Consortium, 2016)

- The capability of law enforcement to respond to this kind of offending (customer theft) which crosses police force borders presents a significant challenge, but is one which must be met (British Retail Consortium, 2016)
- Businesses continue to lack confidence in the police to respond to customer theft (British Retail Consortium, 2016)
- 43 per cent (of survey respondents) felt police perform a poor to very poor job at tackling the crime they experience (British Retail Consortium, 2016)
- The continuing onward upward trend in theft is thought to relate to both the capacity of the UK police service to respond to this crime and the impact of international organised crime groups operating inside and outside the UK (British Retail Consortium, 2017)
- An inconsistent police response to even violence to staff means that deterrence is seen to be failing, as there is a growing sense that offenders are able to act with impunity (British Retail Consortium, 2017)

The findings demonstrate the cultural shift required in addressing shoplifting in the UK, as each of the findings focusses on post incident response, as opposed to pre incident prevention. Although the British Retail Consortium crime surveys detail the average spend per retailer on crime prevention per annum, £3.1 million (2015) and £6.7 million (2016), the surveys fail to make any reference to design and layout, and the impact that this could potentially have in reducing the opportunity for shoplifting to occur in the first place. The prevention of crime does feature, but only in general terms, making reference to the necessity to pursue in collaboration.

When 66% of the direct financial cost of retail crime is attributed to customer theft (British Retail Consortium, 2017), something has to change in the approach currently being taken to prevent it. Is CCTV an effective tool in preventing shoplifting or does it simply play a

supporting role in the investigation of a crime? Is Electronic Article Surveillance (EAS) equipment really a deterrent to the shoplifter? Are employees trained and utilised in the most effective manner? Would retailers have needed to spend an average of £6.7 million each on crime prevention in 2016 if CPTED principles had been integrated into the process for the interior planning of space?

The use of CPTED by practitioners in the retail sector, supported by additional opportunity reducing measures, would arguably not result in a conflict between delivering the primary objective of operational sales through an aesthetically pleasing environment and crime prevention (Crowe & Zahm, 1994). In fact, it could be argued that CPTED would add a welcome dimension in enhancing customer experience, whilst creating an environment that would not entice offenders into committing shoplifting by reducing their opportunities to do so. CPTED could be presented as a new opportunity to the designers of the interior space of supermarkets and may hold the potential to be the difference that is so obviously required? Conversely, is there a discharge of ambiguity and confusion radiating from CPTED principles, rendering it an unattractive proposition amongst those with the opportunity to apply them?

The aim of this study is to further explore the component parts of CPTED (Armitage, 2013; Cozens, 2014) in specific relation to the potential to their potential application within the design process of planning the interior space of supermarkets, which has yet to really be established. The research questions that will guide this study are: 1) Examine the current use of CPTED principles in the design of supermarket environments and identify what position they have in the design process?, 2) Elicit the perceptions of ex-shoplifting offenders on existing approaches to the design and layout of the supermarket environment, in order to establish the key facets of design that either deter or attract?, and 3) Identify the principles of

CPTED that deliver the most significant deterrent factor for shoplifters and how they could be integrated into the design process when planning the interior space of supermarkets?

The perceptions of ex-offenders on the deterrent factor of features of design and layout, as well as retrofit solutions, will assist in exploring which CPTED components may be more meaningful in reducing the opportunity for crime in supermarkets than others. Connecting the thoughts of ex-offenders, supermarket designers and findings yet to be explored by previous research will assist in furthering the debate of whether CPTED can make the transition from the built and exterior environments to interior space.

Literature Review

Designing Out Crime

The ability to anticipate features of design that may result in opportunities being presented to offenders in committing crime is a crucial element of crime prevention. Identifying how offenders may use aspects of design to their advantage requires a knowledge of their behavioural characteristics. The comprehension of offender behaviour should flow throughout the design stage, from the initial brief provided by the client to the designers and those tasked with completing the development (Erol, Press, Cooper & Thomas, 2002).

Identifying how features of design that are intended to shape an environment for legitimate users may also benefit offenders as abusers of the same space is highly important.

Addressing the unintended consequences of design during or after the creation of the environment can prove difficult to remedy (Ekblom, 1997). It is far better to have understood and prevented than to have misjudged and permitted. However, it could be deemed relatively easy to incorporate facets of design to reduce the opportunity for crime to occur before an environment becomes operationally active. Yet in the relation to supermarkets, do the users of the space change the dynamics of the design? Similar to a house thought securer by design

becoming vulnerable once inhabited, as a result of a degree of apathy displayed towards physical security measures by the homeowners.

The design of environments will always focus on the intended users of the space given that they will account for the majority of visitors to a site. The failure to interpret unintended use by the minority could result in the irreversible erosion of an environment. Designers, guided by a brief devoid of the consideration for crime-related matters, and little by way of supporting literature may unintentionally create a space that quickly falls into a state where the minority of abusers become the majority of users (Erol et al., 2002). The consideration of crime-related matters in the process of design should emanate from the commissioners of the brief, demonstrating a determination to alleviate the opportunity for crime to occur (Ekblom, 1997). This applies as much to the interior design of a supermarket as it does any other environments, but the motivation of the designer will be determined by the organisation, operational sales and customer experience (as referenced during interviews with planners to be discussed later). However, the importance of designing out crime in the supermarket environment goes beyond the act of purely preventing the offence. One of the priorities for supermarkets is the health and wellbeing of their staff, and crime has a significant impact on those affected by it. Reducing incidents of violence towards staff takes primacy for retailers (British Retail Consortium, 2017) and diminishing the opportunity for shoplifting may also reduce violence, if indeed committing theft from shop creates the additional opportunity for the violence to take place. Shoplifting is perceived by those who commit it as a victimless crime, a thought possibly directed towards the supermarket as a corporate organisation, as opposed to the shop floor staff who deal the offenders. Exposure to volatile offenders could create a feeling of vulnerability that in turn could lead to stress, anxiety and time off work for staff members, and impact on operational delivery to the supermarkets (Design & Technology Alliance Against Crime, 2011).

Lawrence (2004) makes some interesting statements in relation to designing out crime. One of the key points made relates to the actual application of designing out crime and that if processes are to be adapted to utilise underlying principles then the “*so what test*” (p. 573) needs to be passed. Lawrence (2004) questions the current approach to designing out crime and concludes: “*the resounding answer is that it simply is not working*” (p. 573). There could be a number of reasons presented as to why this might be the case; those commissioning the design have an apathy towards such concerns, the designers focus too much on the user and aesthetic features or that the designing out of crime stops once the environment becomes operational. Those charged with managing the environment, once operational, are as important in the continued designing out of crime, as the designers creating the original space. Environments are dynamic in nature, as are the offenders’ intent on shaping them for their own purposes, so the suggestion that something can simply be designed out fails to reflect this and undermines the theory of designing out crime (Lawrence, 2004).

One of the critical points that can be overlooked when discussing crime within the supermarket environment, or that of other retail settings, is what impact does the crime being committed have on the wider community? Felson & Clarke (1998) explore the theory that: “*one crime produces opportunities for another*” (p. 17). The loss of £30 of petrol via a make off without payment may not overly concern the forecourt operator in terms of loss, but if the vehicle is then used during an armed robbery or to traffic human beings then the impact on society is much more than the initial £30 of fuel. Similar could be said in relation to shoplifting; the loss of £30 worth of goods to a shoplifter may not be too much of an initial problem to a supermarket as long as it does not result in the acceptable percentage of loss being compromised. However, this could then provide the shoplifter with the opportunity to sell the stolen goods to purchase illegal drugs, creating demand within the drugs market, the

profit from sales could be driving more organised criminality, all of which could have a major impact on the wider community. Supermarkets conduct an amount of work within the immediate vicinity of their stores, demonstrating social responsibility in support of local communities. Yet it could be argued that this responsibility should start from the outset of designing the interior space of the supermarket and the designing out of the opportunities for crime to occur in it. Otherwise local communities may have to deal with a legacy of crime (Ekblom, 1997).

The Design & Technology Alliance Against Crime (2010) posed the question: *“What more can designers do?”* (p. 32). They go onto say: *“Difficult as the situation seems, the fact remains that if the problems, outlined here are anything, they are design problems, embedded as they are in relationships between people, the spaces they inhabit, the objects that they use, and technology. If problems are opportunities there are certainly design opportunities here”* (p. 32). Although there is rarely one organisation that can provide a complete solution in relation to the prevention of crime, ‘design’ certainly appears to be a common denominator; whether the initial planning of interior space of a supermarket, how loss prevention approach matters such as surveillance or indeed how the police develop and apply their response. The responsibility of design sits with a number of stakeholders, all of whom arrive at the table with sometimes insular concerns. However, only a true collaborative approach will assist the concept of designing out crime to realise the potential that it holds.

Criminological Theory

In attempting to understanding the characteristics of products that may make them a more attractive proposition for thieves Clarke (1999) presented the acronym CRAVED, summarised as: *“ hot products must be concealable, removable, available, valuable, enjoyable and disposable”* (p. vi). With the supermarket in mind, how useful is CRAVED in

an environment where product ranges are vast and items freely available to take from the shelves? Taking concealable as the initial component of CRAVED, there could be a misunderstanding that if a shoplifter cannot secret an item or items in their clothing or about themselves then it may be more difficult for them to steal the product in question (Clarke, 1999). However, surely something can also be concealed through deceit or distraction too, going beyond the necessity of a shoplifter having to put in a bag or inside clothing and rendering it fairly easy for them to conceal most items found within the supermarket environment.

Clarke (1999) also makes the point in reference to the removable element of CRAVED that: *“For instance, shoplifters are severely constrained in the number of bottles of whisky of packets of cigarettes they can steal without being noticed”* (p. 25). The severity of constraint may apply to the individual shoplifter on foot, but that does not account for the number of active shoplifters, those that use a trolley to remove goods, those that work in groups or those make a prompt exit through a fire door with a vehicle waiting outside. Unless a system is in place whereby customers ‘pay and collect’ for alcohol within a supermarket then every bottle of alcohol is arguably removable. Does the concept of CRAVED actually apply to goods sold in supermarkets?

Is it actually the shoplifter who determines which products are hot or not? The final component of CRAVED is important to a shoplifter, how and where are they going to dispose of the stolen goods and how much are they going to get for them? If offenders indeed could be viewed as illicit entrepreneurs (Ekblom, 1997) would an entrepreneur ‘stock or sell’ something that was not consumer driven? Whilst CRAVED may apply to other hot products, is a hybrid approach required when it comes to shoplifting that incorporates attributes relating both to the offender and the consumer? For instance how does CRAVED take into account the economic climate, levels of income and a change to the benefits system or unemployment

perhaps? None of these may apply to some shoplifters, but could apply to the consumers of their illicit entrepreneurship. So who is it that actually determines what goods are hot and those that are not? If the initial intention of CRAVED was to provide an indication of the inclinations of thieves, yet it could be argued that the buyer drives such preferences, has CRAVED omitted a key consideration (Smith & Clarke, 2018). The challenge for retailers is how do they protect CRAVED items within their store, when arguably every item could be perceived that way? Are they being let down by the products available to target harden goods? Or is that one of the issues raised by Ekblom (1997) in that: *“Designers have to undertake a major shift of perspective”* has yet to materialise over twenty years later in relation to the interior space of a supermarket?

Routine Activity Theory (RAT) (Cohen & Felson, 1979) could assist supermarkets in expanding their approach to product protection. RAT is used by crime prevention practitioners and problem solvers as the theory that assists in dealing with the key components that converge to enable the opportunity for crime to occur. The theory suggests that for any crime to occur there has to be a suitable target, a lack of a capable guardian and a motivated or likely offender. These components have to converge at the same time and in the same place for crime to occur, and the challenge to users is to remove one to reduce such opportunity. How could each of these components be viewed from the supermarkets perspective, what constitutes each of them within that environment? Designers and Loss Prevention staff could arguably use RAT in a layered approach in addressing issues of shop theft, working outward in to enable a more focussed and consistent approach. For instance, the supermarket itself could be a target, followed by particular areas within store and then at a micro level the products themselves, taking into account CRAVED.

Crime Prevention through Environmental Design (CPTED)

For the purposes of this research and to assist in attempting to help ensure the application of theory of research into practice and overcome what Reynald (2011) refers to as: “*inflexibility in practical translation*” (p. 70) of CPTED, the component parts of CPTED debated by Cozens et al. (2005), Ekblom (2011), Armitage (2013) and Cozens (2014) have been structured in a manner arguably more appropriate to the application in planning the interior space of supermarkets. Therefore, the structure is as follows: Image, Activity Support, Access Control, Defensible Space, Surveillance and Target Hardening. With much of the literature on CPTED focussed on housing and the application to exterior space, presenting the components in this manner assists in the preliminary transition of CPTED into an environment where application is largely untested or experimental at best.

Definition

Crowe & Zahm (1994) state that: “*Crime Prevention through Environmental Design has emerged worldwide as one of the most promising and currently effective approaches to reducing opportunities for crime*” (p.22). Cozens, Saville & Hillier (2005) reported that: “*CPTED is an increasingly fashionable approach and is being implemented on a global scale*” (p. 328). Crowe (2000) suggests: “*the goal of CPTED is to reduce opportunities for crime that may be inherent in the design of structures or in the design of neighbourhoods*”. Cozens (2014) redefined CPTED as: “*A process for analysing and assessing crime risks in order to guide the design, management and use of the built environment (and products) to reduce crime and the fear of crime and to promote public health, sustainability and quality of life*” (p. 11). The extension of the definition of CPTED to include the positive impact that application can have on issues such as health and quality of life is an important step forward in attempting to secure the position of CPTED amongst practitioners. Nevertheless, it could

be argued that there remains a haze of ambiguity encompassing the component parts, one that not only impedes the wider use of CPTED, but also the transition from academic research to becoming embedded within practice.

Despite the numerous definitions of CPTED (Crowe & Zahm, 1994; Cozens et al. 2005; Armitage, 2013; Cozens, 2014) what does it actually mean to those deemed responsible for its application or those with the capability to do so? Research, discussion, debate, challenge and deliberation are important facets in shaping CPTED, however, how often does this involve the end user and those benefitting from its application, or indeed misapplication? Bringing stakeholders into the design process (Design & Technology Alliance Against Crime, 2011) is a fundamental aspect of developing solutions, similar to the importance of partnership working in the public sector. However, how frequently have practitioners assisted in a collaborative approach to defining CPTED and its component parts? Could this be another reason why it has yet to establish itself as a key component in the designing of the interior space of supermarkets?

In his paper entitled 'reconstructing CPTED' Ekblom (2011) debates each component part, making an interest point in relation to target hardening that could actually assist in answering the question posed by Cozens et al. (2005) "*What is CPTED?*" (p. 329). The general definition of target hardening is making something more 'resistant to attack', but Ekblom (2011) explains that this appears "*too narrow a concept*", preferring the "*term manipulation*" (p. 14). It could be argued that in a supermarket environment if an offender is close enough to a target to be able to 'attack' or 'manipulate' it then is it not the case that the other component parts of CPTED failed? In relation to this discussion, it could be suggested that the foundation of CPTED as a whole is to actually make something more 'resistant to approach' in the first place, inhibiting offender behaviour prior to manipulation and attack of the target. The component elements of CPTED can then be restructured by the user in

alignment with what they are trying to resist approach to, whether houses on a residential estate, industrial units on commercial development, the play area of a recreational park or ultimately a product on the shelves of a supermarket. Therefore, for users/practitioners, the answer to the question posed by Cozens et al. (2005) and definition of CPTED could potentially be that it is: ‘A set of guiding principles that ultimately aim to make something more resistant to approach’. Bespoke definitions of each of the component parts can then be tailored to the environment being planned, adding clarity for specific application and overcoming uncertainty in routine use (Ekblom, 2011).

Translation

Crowe & Zahm (1994) stated that: *“It will not be long before more people recognise the need for Crime Prevention through Environmental Design in decision making...The greatest impediment to the widespread use of Crime Prevention through Environmental Design is ignorance”* (p. 27). Is the “ignorance” alluded to by Crowe & Zahm (1994) the real reason why CPTED has yet to really feature in the use of interior planning for supermarkets or is it how CPTED currently translates? Could this be in some part due to the debate presented on CPTED generally by Cozens et al. (2005) that: *“the evidence currently available is inconclusive and much criticised”* (p. 328). Ekblom (2011) goes a step further in his suggestion that: *“all six core concepts of CPTED are entangled and overlap”* (p. 5). Therefore, although presented in a positive manner, it could be argued that until the confusion, implied by Ekblom (2011), is addressed with the end user in mind then CPTED will not realise its potential in the planning of interior space or potentially provide the evidence required to overcome the inconclusive position referred to by Cozens et al. (2005). Reynald (2011) also looked at the translation of CPTED into action, specifically in relation to active guardianship, which will be referred to later in this thesis. However, the concept of

focussing on the transition from theory to practice is extremely important, in order to assist in overcoming some of the concerns relating to CPTED (Cozens et al., 2005; Ekblom, 2011). Reynald (2011) suggests: “*researchers have argued that the mixed findings regarding the effectiveness of CPTED can be blamed on its inflexibility in practical translation*” (p. 70). Is it the case that CPTED is inflexible in practical translation or has it traditionally been translated into a language that is simply not understood by practitioners? Crowe & Zahm (1994) touched on this in concluding: “*CPTED is a self-evident concept that has been used successfully for many years. Research and demonstration activities over the past 30 years have confirmed what many people think is just common sense*” (p. 27). If in 1994 CPTED was indeed “self-evident” and “just common sense” as Crowe & Zahm suggest, then why do others question the availability of evidence to truly evaluate it (Cozens et al., 2005), refer to an inflexibility in practical application (Reynald, 2011) and feel the need to have to deconstruct to reconstruct it (Ekblom, 2011)? There will always be a need to challenge and evolve any theory, but if on one hand a concept is “*common sense*” (Crowe & Zahm, 1994), but on the other it appears there is “*confusion in everyday usage*” (Ekblom, 2011) then will CPTED ever be viewed as a reliable option for planners, and more specifically those who are responsible for the design of interior space within supermarkets?

Components of CPTED

In terms of the component parts of CPTED, Cozens et al. (2005) state them as Territoriality, Surveillance, Access Control, Target Hardening, Image/Maintenance and Activity Support (p. 330); Armitage (2013) presents the components as Defensible Space, Territoriality, Access Control, Surveillance, Target Hardening, Image and Activity Support and Cozens (2014) adapts the components stated by Cozens et al. (2005) to include Geographical Juxtaposition, which: “*involves assessing the potential influence on crime levels, of proximal land-uses that may generate crime*” (p. 26). In reconstructing CPTED, Ekblom (2011)

focussed on Defence, Access Control, Hardening of Targets, Surveillance, Activity Support, Image and Management/Maintenance and Territoriality. Ekblom (2011) concluded that his research had: *“further highlighted some superficialities and confusions in the everyday usage of practitioners and researchers”* (p. 19) and stated that: *“I have not sought, here, to produce a final suite of formally-stated definitions, reserving that for a period of debate and reflection which I hope others will engage in”* (p. 20) - maybe here lies the problem? Without true engagement involving a range of stakeholders, will a universal definition of CPTED, underpinned by components that are ‘user friendly’ and stripped of complexity ever exist? Are the existing CPTED components designed for application to shape interior spaces or are they firmly ensconced in the design of exterior environments?

“It seems likely that the re-definition of CPTED will be a key element in its future development” (Reynald, 2011, p. 80).

It could be said that the confusion around CPTED alluded to by Ekblom (2011) partly emanates from a lack of definition and understanding in application generated from such, as opposed to the ignorance suggested by Crowe & Zahm (1994). Lawrence (2004) uses the example of the tomb of the Unknown Warrior in Westminster Abbey to differentiate between public and private space, in essence the defensible space/territoriality components of CPTED. The basic premise of defensible space is to provide clarity to users of a space who should and should not be in it, in an attempt to deter potential offenders from accessing an environment, whilst providing the guardians of the space with additional opportunities to manage and monitor it. The tomb in Westminster Abbey is surrounded by a wreath of poppies to which Lawrence refers to as *“a very powerful defensible barrier between the public Abbey floor and the private memorial slab”* (p. 575). The symbolic nature of the poppy will emotionally connect with the vast majority of visitors to that site. However, that same majority will not be intent on committing crime in that environment. Surely the intention of a ‘visitor’ to a site

has to be taken into consideration when developing ‘defensible space’ or any of the existing CPTED components, and arguably little, if any correlation, can be drawn between the intention of visitors to Westminster Abbey and shoplifters in a supermarket environment or burglars in residential areas – the intention of their presence is completely different. If an individual decided to visit the tomb of the Unknown Warrior with the intention of desecrating the memorial and thus being devoid of the emotive connection held by others, would the wreath of poppies described by Lawrence as a “*very powerful defensible barrier*” (p. 575) deter them?

Image

There could be a plausible case for each component of CPTED to be considered the most important, but the image that someone has of someone or something is arguably the starting point for many things in life. Perceptions of someone or something are then usually generated from the original image, whether they turn out to be correct or not is another matter. Beck (2016) commented on offender assessment, referencing several factors in their decision making process, one of which was: “*the perceived risk (how likely is it that I will be caught?)*” (p. 7). Shoplifters will begin to make this assessment from what they can see at the immediate entrance to the supermarket, the outer layer of the environment or the shell of the building. Their observations may include what security guards are on duty, are they in position at their podium, how busy, both in terms of shoppers and displays promoting the latest offers, is it and is there an opportunity created through inefficient practices. Gill (2007) suggests that the first decision offenders will make is: “*choosing the store*” (p. 12), based on several factors and perceptions such as how: “hardened” (p. 13) the store is or: “level of security” (p. 14). Cozens (2014) explained: “*Image management refers to designing and maintaining the appearance of a space to have positive emotionally-driven behavioural*

effects...it sends the visual statement that the space is managed and 'cared for' and certain behaviours are not tolerated" (p. 23).

It could also be argued that some shoplifters will begin to form an image of a supermarket prior to standing at the entrance of it, how many access or egress points are there, do any of these points provide an advantage in terms of their movement away from the site via footpaths, proximity to busy precinct where they can blend easier or perhaps adjacent to a transport hub. Such observations will contribute towards a shoplifter's image of a supermarket in terms of their propensity to commit crime. Designers should consider the environment in the immediate vicinity to the supermarket from a shoplifter's perspective, just as they do for the customers when conversely closeness to a busy precinct or transport hub would be seen as a positive aspect in terms of accessibility for legitimate users. Beck (2016) suggested that: "...retailers are certainly able to influence the degree to which an offender feels like they may be caught" (p. 7). Although a designer cannot do anything about the positioning of a transport hub, they can ensure that the main access and egress to the supermarket does not afford a straight run for the shoplifter. This will have an impact on the shoplifter's perception in relation to the overall image of the site.

Eklom (2011) deconstructs image management as a component part of CPTED, stating that image: "*could attract or repel particular kinds of people, with individual criminal disposition or collective subculture*" (p. 17) and that management: "*is a task which may affect all kinds of crime opportunity afforded by the environment*" (p. 17). The concept of image management raises the question what image does the current 'typical' supermarket initially portray to shoplifters – apathy, opportunity, ease? Cozens (2014) suggests that: "*Image management seeks to promote a positive image and transmit positive signals to all users*" (p. 23), but within the supermarket environment what 'positive' signals are directed to offenders to suggest that: "*certain behaviours are not tolerated*"? (Cozens, 2014, p. 23). The question

has to be asked: “*What makes the store attractive to potential thieves and how can it be made less conducive to theft?*” (Design & Technology Alliance Against Crime, 2011, p. 82).

Armitage (2013) explains that image is: “*The principle of creating buildings/spaces which are physically free from litter, graffiti, vandalism and damage but are also areas without stigma or a poor social reputation*” (p. 26). Dissecting this definition arguably demonstrates the necessity of the continuation of designing out crime once the environment becomes operational. In terms of a supermarket, the creation of the building and space is seen as the designer’s responsibility. Ensuring that the created space is physically free from negative indicators that may provide the shoplifter with opportunities is the responsibility of the security guards and staff working within the environment, which could also include the shoppers. If there is no synergy between the efforts of the designer and the guardians then the stigma and poor reputation (Armitage, 2013) of the site will develop amongst the shoplifting fraternity.

Image plays a crucial part in the process of designing the interior space of a supermarket from the customer point of view. First impressions count in terms of their perceptions and experience, it has to ‘look right’ to induce continued use. However, it could be argued that image management in terms of the prevention of crime and making a supermarket more ‘resistant to approach’ from an offenders point of view has yet to realise its full potential. ‘Looking right’ in the eyes of an offender also induces continued misuse.

Activity Support

In relation to shoplifting there has to be a balanced approach to activity support. Activity support for this thesis focusses on the role of shop floor staff and the legitimate users of the space (Armitage, 2013; Cozens, 2014). However, as Cozens (2014) alludes to: “*Activity support must be used with care because the increase in legitimate users might also actually*

encourage and provide additional potential targets for crime” (p. 25). Ekblom (2011) discusses legitimate users of space and: *“Once there, they act as crime preventers by virtue”* (p. 15) and that a role they can play is: *“...perhaps by simply crowding out the space for offenders and offending”* (p. 15). It could be argued that this is not the case in a supermarket environment given that ‘crowding out a space’ can present opportunities to shoplifters. Gill (2007) supported this further: *“As noted while people posed a threat they also provided cover for their activities”* (p. 14).

Supermarkets cannot, nor would they want to, control the number of legitimate users of their environment. However, arguably one of the key areas where activity support should be controlled as much as feasible within the supermarket is the immediate entrance area.

Supermarkets often have offers in such areas or racks of clothing on sale, which certainly increases use of the space by legitimate users, but this in turn provides the shoplifters with concealment opportunities in an area of the store that is crucial in the approach to preventing shoplifting. Sennewald & Christman (1992) argued that: *“good customer service.....is the simplest, and one of the most effective deterrents to shoplifting”*. Butler (1994) also suggested that: *“it was the factor of people that most concerns the shoplifter”*, with Palmer & Richardson (2009) stating: *“The most recognized theft deterrent in the retail industry is customer service”* (p. 19). There will however be a percentage of shoplifters that will not be deterred by a simple ‘Hello’ how are you? Is there anything I can help you with today?’ Is this approach more applicable within the intimacy of a smaller store or a corner shop perhaps, as opposed to a supermarket?

There are several key points in relation to the above findings; customer service can begin at the entrance to a supermarket, but only if the design of the area enables it to happen and the supermarket have the staffing to afford to do so. *“The presence of retail staff nearby”* (Gill, Bilby & Turbin, 1999, p. 35) differs from customer service at point of entry, as most shop

floor staff are primarily carrying out their core role within the organisation, as opposed to looking out for shoplifters. Gill (2007) alludes to this in that: *“At the retail ‘coal-face’, many non-security staff, including checkout assistants, sales staff and those responsible for stock replenishment remain unaware of security and loss prevention issues”* (p. 34). Gill went onto say: *“they did not appear especially motivated, by taking less interest in customers, they by association, take less interest in thieves”* (p. 34).

Despite some negativity existing regarding the role of staff in preventing shoplifting, Gill (2007) suggests that one of the key things that thieves rely on is the: *“Failure to support staff with training and procedures”* (p. 34). Security guards and shop floor staff are the guardians of the supermarket environment on a day to day basis. They need to be equipped with the right knowledge to proactively contribute to reducing the opportunities for shoplifters to commit theft, as well as having an unambiguous position on shoplifting from the organisation for which they work. Staff also need to feel that their opinions are valued in addressing shoplifting, as they are in the unenviable position of dealing with the frustrations that shoplifters can create. Without negating their responsibilities in carrying out the role they are employed to do, staff should have an understanding of the behavioural traits of shoplifters and be encouraged to ‘think thief’ (Ekblom, 1997) to prevent theft. Being seen is a major consideration for shoplifters and an informed workforce can greatly assist in amplifying such a risk (Beck, 2016).

Cozens (2014) references another example of activity support in: *“Keep certain land-uses open beyond their normal operating times by subsidising them – so they can provide activity support to vulnerable spaces at vulnerable times”* (p. 25). The supermarket chains that participated in this research mostly have a café/restaurant facility within them, but the majority of them will close prior to the actual store. Therefore, if the café/restaurant was 1) situated adjacent to the entrance/exit 2) designed in a way that promoted activity support

from legitimate users (shoppers) and 3) Was made available to local community groups to use after it closes, yet the store remains open, then this would add an additional layer of activity support in this key area of the environment in reducing the opportunity for crime to occur. As Beck (2016) alludes to: “*Numerous studies conclude that ‘people’ can play a very important role in amplifying risk*” (p. 45).

Access Control

If access control is an approach actively seeking to prevent people from gaining entry to an environment (Armitage, 2013) then it could be argued that on face value it would be difficult to apply this component of CPTED to a supermarket, given the objective of the instore planners is predominantly invite people in. Armitage (2013) goes on to explore the wider aims of this component of CPTED and probably the one most meaningful in the context of this paper is: “*to make it more difficult for offenders to navigate into, out of and within an area should they select it as a target*” (p. 25). Therefore, access control goes beyond the simple notion of keeping people out and should be utilised to guide the users of a space through the environment (Cozens, 2014). In basic crime prevention terms, access control is the practice of preventing unauthorised access to a space or environment, whether physical or virtual. The prevention of unauthorised access to online bank accounts through the use of anti-virus software and strong passwords can reduce the opportunity for fraudulent activity on the account. Reducing the opportunity for crime to occur is part of everyday life, which subconsciously the majority of people do through the act of locking the door to their home on leaving it unoccupied or going to bed for instance. If lessening the chance of crime occurring was not important then no one would take such precautions (Felson & Clarke, 1998). Therefore, if an element of access control is to diminish the prospects of offenders in committing crime through increasing their risk (Cozens, 2014) then this strongly suggests

that access control needs to be explored further by designers responsible for the interior space of a supermarkets.

Gill (2007) implies that the second phase of the 'Shop Thieves' Decision Circle' is 'Entering the Store', suggesting that: "*Getting away is a priority for offenders, so some assessment of the exit was commonly made*" (p.15). Arguably one of the main weaknesses in the design of some supermarkets is the provision of more than one access and egress point. Although this may be deemed as a positive aspect of design to assist the legitimate users of the space, it is also without doubt a positive attribute in the eyes of a shoplifter, even more so when they do not have to egress through the checkouts (Clarke & Petrossian, 2013). Risk is reduced for the shoplifter in supermarkets where there is more than one access and egress point, especially when these points are not supported through the presence of employees (Palmer & Richardson, 2009).

Access control within a supermarket environment could be perceived to be a problematic component of CPTED to realistically introduce. The supermarkets involved in this research have little by way of mechanical access control referred to by Cozens (2014) and are either completely open environments once immediately inside or in some cases have tokenistic barrier/gate combinations that provide little by way of directing movement or controlling behaviour (Geason & Wilson, 1992). One UK supermarket chain operate a 'one way in, one way out' system, but this is by exception as opposed to the norm. Their layout directs the customer through the entrance and around the store, having to then pass through the checkouts before exiting. Subtle transparent screening compliments the design, ensuring that the 'one way in, one way out' system is followed. Has this alternative to the open format that is seen in other supermarkets changed the customer experience to the detriment of operational sales? Apparently not, as the chain in question were the fastest growing supermarket in the UK in October 2017 (Featherstone, 2017).

Geason & Wilson (1992) found that in relation to crime within shopping malls: *“Thefts seem to occur in busy stores with easy access”* (p. 52), whilst emphasising that: *“Design influences people’s use of space, and in fact design is used to control behaviour”* both relating to the user and abuser (p. 52). Ekblom (2011) stated that: *“Controllability of access is a casual property which depends on the configuration and nature of barriers and enclosures, and entry portals”* (p. 13). In relation to access control as a CPTED component both Ekblom (2011) and Armitage (2013) make the case for it to incorporate egress, with Armitage (2013) concluding that: *“A more appropriate term might be ‘limitation’ of access, egress and through movement”* (p. 25). Therefore, given that abusers, and users, of a supermarket both traverse the interior environment to examine and inspect, there’s an argument to suggest that ‘perambulation management’ may be a more appropriate term than ‘access control’. ‘Perambulation management’ widens the use of this component of CPTED, encompasses the thoughts regarding general movement and egress (Gill, 2007; Ekblom 2011; Armitage, 2013 & Cozens, 2014), and addresses the presence of an offender during their time in an environment, as opposed to purely at specific access points.

Defensible Space

Arguably one of the key issues faced by supermarkets in relation to the defensible space component of CPTED is the actual size of the environment, some of which are simply too big to potentially defend as a whole. The supermarket environment is already designed on the principle of shops within a shop, with the floor space housing various different sections based around products and the associate sales link between them. Therefore, if this concept exists to increase operational sales through association, why could it not exist to protect products through disassociation in terms of the offender being able to access them so freely? Paying for items within a defensible shop within a shop would also prevent the shoplifter from removing the items from that area before attempting to conceal them elsewhere in the

supermarket or simply walking out without paying for them (Hayes, 1997a). This approach would have to be developed with the legitimate user in mind too, so as not to deter them from purchasing high loss items, but could arguably be achieved through considerate design, with the supplementary advantage of crime prevention.

Perhaps one of the most underutilised features of the interior space of the supermarket is the floor covering and how this could possibly assist in the creation of defensible space. Very rarely, if at all, does the floor covering in supermarkets change colour or texture. Subtle changes to either colour or texture could indicate an area of defensible space, assist staff in managing that space, whilst indicating to offenders that something has changed and breaking the familiarity of flow through an environment (Cozens, 2014). It could be argued that when most people shop they are either looking at the produce on the shelves or down at a shopping list in their hand or on a mobile phone. The same could be suggested for a shoplifter, as well as those offenders who simply move through a space avoiding eye contact and looking at the floor. Therefore, a change to the colour or texture of the floor covering could potentially be noticed by the majority or all users of the space. This is also a concept supported by the Design & Technology Alliance Against Crime (2011) when providing a specific example in relation to what they term “ATM Art”, stating that: *“One solution to increase cashpoint safety has been to paint yellow road-marking style boxes on the pavement in front of the ATM to create a ‘defensible space’ for the cashpoint user”* (p. 21). This begs the question could the interior space of a supermarket become more defensible if zoned, only where required, in the sympathetic manner alluded to by the Design & Technology Alliance Against Crime (2011) and Cozens (2014)?

Carmel-Gilfilen (2011) states that: *“CPTED theory, specifically natural territorial reinforcement, tells us that people are more likely to guard a space that has clear boundary definition”* (p. 34). Supermarkets currently achieve a form of space/boundary definition at

the moment through product placement. However, this is not designed to present the opportunity to defend space from a CPTED point of view. With Carmel-Gilfilen (2011) presenting the finding that: *“The present study found that nearly 80% of the shoplifters (with 100% of the experts) acknowledge the role of the interior space on their shoplifting decisions and behaviour”* (p.33) then surely, the potential ‘zoning’ of the interior space of a supermarket, through sympathetic means, should be explored further by those responsible for designing it?

Defensible space created through zoning could be supported by a focussed implementation of other CPTED components such as activity support. Staff working on the shop floor will already have their areas of responsibility, again this could be linked to product in some instances or the role that they actual carry out. Therefore, they will already be aware of the concept of zoning through existing practices. However, from a defensible point of view these areas are too large to provide staff with the opportunity to protect the space effectively and there will be no sense of ownership (Ekblom, 2011; Armitage, 2013; Cozens, 2014).

Supermarkets do have the opportunity to positively embrace this notion by the use of colour or texture to add or create definition to specific areas within the interior space. Perhaps if they embraced this concept it could also lead to a more bespoke and efficient method of implementing surveillance in a more focussed manner. *“Shoplifters provided several reasons for CCTV’s inability to deter them. One common line of reasoning is that most stores are too large for CCTV footage to be monitored effectively”* (Lasky, Fisher & Jacques, 2017, p. 781).

Surveillance

Achieving natural surveillance within a supermarket environment could be perceived as difficult, not necessarily from a design point of view, but once the site becomes operational. It could be argued that some supermarkets aim to achieve an element of natural surveillance

through the traditional straight line formatting of aisles. However, customers, staff replenishing the shelves and trollies full of stock soon remove the clear sight line created by the initial design. Obstructions generated through use of the site for the intended purpose of shopping is largely unavoidable in a supermarket. How supermarkets improve natural surveillance to encourage the informal surveillance opportunities for staff, and shoppers to an extent, is important in reducing the extent to which shoplifters can blend into an environment with relative ease. Clarke & Petrossian (2013) also support this in stating that: “*Store layout and displays must make it easier for staff to exercise effective surveillance*” (p. 25). They add that: “*Eliminating clutter and obstructions*” and: “*Creating clear sight lines in aisles and reducing the height of displays*” (p. 25) can also assist.

Concealment plays a significant part in offender behaviour and supermarkets could be perceived as harbouring a multitude of opportunities. The prospect of being seen is an important consideration for shoplifters, resulting in them having to potentially suspend their activities and leave a supermarket empty handed. This would be deemed by some shoplifters stealing to finance an addiction as catastrophic depending on their state when offending. In addition the formatting of aisles to enhance natural surveillance, a reduction in the height of shelving to prevent additional concealment opportunities may also assist (Cardone, 2006; Carmel-Gilfilen, 2011). Yet again, how feasible is this in the supermarket environment? Every inch of shelf space is sales space, reducing heights of fixtures has the potential to have a serious impact on profit and supermarkets, in an extremely competitive sector, will be extremely reluctant to approve such a change to design despite the benefits to natural surveillance it has.

Blind spots and that there is always a corner to be found in the supermarket environment is one of the foremost benefits for a shoplifter. Unless there was a seismic shift of epic proportions in the designing of supermarkets it will be difficult for those responsible for the

planning of interior space to ever eradicate concealment opportunities presented by corners. Therefore, it would be very unfair to suggest that the designers had paid insufficient attention to design from an offender point of view in this instance (Gill 2007). The design of the supermarket space around structural support such as columns can be taken into account though, as can the placement of banners and products that may inadvertently encourage the ghost like tendencies of some shoplifters in concealing themselves in an environment. Such examples of poor natural surveillance were also supported by Palmer & Richardson (2009) when they referenced that stores at greater risk include those with: “...displays that conceal boosters” and: “Blind areas that conceal boosters” (p. 9).

Closed circuit television (CCTV) is one of the main default positions for improving surveillance within supermarkets. CCTV is a popular technical approach to surveillance, used widely by Loss Prevention practitioners to cover areas that they perceive staff cannot. Described by Beck & Willis (1999) as a: “omnipresent, near-infallible robot eye in the sky” the reliance on CCTV has arguably reached the extent of alarming proportions within the supermarket environment, the majority of Loss Prevention resources being allocated to such technology (Design & Technology Alliance Against Crime, 2011).

Cardone & Hayes (2011) stated that CCTV assists retailers in: “providing ‘eyes’ into hidden spaces” (p. 29), but does it? There are arguably two consistently hidden spaces in larger stores, including supermarkets, that won’t be covered by CCTV; changing rooms and toilets, both of which may be accessible to shoplifters depending on the process management and presence of staff in relation to changing rooms, and the use of EAS at the entrances to the toilets. Concealment is ultimately one of the major considerations of any offender, but does CCTV actually remove such opportunities in a preventative manner in supermarkets or is it simply a reactive tool to assist with post incident processes? Gill et al. (1999) reported that: “our findings indicate that perceived risk associated with static CCTV cameras is low, with

33 (out of 38) respondents claiming that they would 'never' be deterred from shop theft if a store had cameras installed” (p. 33).

As will be highlighted later in this thesis there is a common belief amongst shoplifters that cameras are only as good as the person watching them and that some supermarkets are just too big in terms of size for CCTV to be used effectively and efficiently. It could be suggested that the almost blanket approach to covering a store with cameras has a negative impact in terms of the perceptions of shoplifting offenders in that it's impossible for fifty, sixty or seventy cameras to all be monitored effectively (Beck, 2016). Gill (2007) further supported this by stating: *“It is worth noting that some thieves believed that a lot of cameras in a store acted as a distraction to the loss prevention efforts as a camera operator could not possibly view all the cameras all of the time” (p. 27).*

The presence of CCTV is always supported by signage informing users of a supermarket that cameras are in operation. The placement of signage confirms cameras are in situ, but not necessarily that they are being monitored. From a shoplifters perspective the majority of them know that CCTV is feature of the security found within supermarkets, so ‘Smile Shoplifters you’re on camera’ and ‘Thieves we are watching you’ could all be perceived as wasted opportunities, meaning very little to some shoplifters. Everyone knows that CCTV is used in stores and that shoplifting is a crime, so why tell someone something they already know and that appears to mean little by way of deterrent? If there is a suggestion that cameras are being monitored it could arguably add to a sense of risk for the shoplifter (Cardone, 2006), but the risk will soon diminish if the activity of a shoplifter is not disrupted. It could actually be suggested that the camera does not watch, it simply captures and relays images for someone else to watch. Therefore, if the technical and human facets of surveillance do not combine then a sign suggesting: “CCTV monitoring in use” would potentially deliver little by way of the risk amplification discussed by Beck (2016).

Security guards are used as a principal deterrent in reducing the opportunity for shoplifters to commit crime. There may be occasions where a potential misconception among staff carrying out such roles is that they are more alive to a situation than the shoplifter that they are observing, or that the offender they are observing is the correct one to observe. Some shoplifters allude to their own levels of surveillance and understanding in relation to guards and covert store detectives, with their own knowledge covering shift patterns, where guards are usually placed throughout the store and behavioural characteristics of covert employees. The number of guards, placement of them and their ability to cover the access and egress points to a supermarket adequately are all important factors in assessing their effectiveness (Beck, 2016). Some supermarkets do not deploy guards throughout the opening hours of a store, preferring for duties to commence in alignment with perceived busy periods. However, the effectiveness of uniformed security guards has been challenged (Clarke & Petrossian, 2013) claiming that there is not enough evidence omitted by academic research. Clarke & Petrossian (2013) went on to assertively state that: *“Guard characteristics and behaviour are extremely important: poor guards have no effect on shoplifting”* (p. 38).

Despite criticism, guarding will also be a preferred option of the supermarkets. There is no doubt that apathetic characteristics demonstrated by anyone when conducting themselves in their professional capacity will result in ineffective outcomes, but are all guards to blame for this? Of course not and as with the technical aspect of surveillance provided by CCTV, guards are expected to cover a significant space in the interior of a supermarket. Do they remain static by the access and egress point, is there enough of them to cover multiple points, should they leave their position to be more mobile and is their role to prevent and deter or detect and detain? Gill (2007) states that: *“Security officers were a threat that many felt they could fairly easily manage”* (p. 28). This is an interesting statement and the offender quotes referenced by Gill (p. 28) both suggest that from the surveillance aspect of CPTED guards

can be effective in preventing crime, as the goods were put back on the shelf if the offenders were followed by them. Conversely, this does not suggest that the presence of the guards was a deterrent in the first place, as the offender had accessed the store, moved through it, picked up the target(s) and began their exit. So what does this suggest about the image portrayed by the guards to shoplifters? Perhaps Beck (2016) identifies one of the most salient points in relation to the effectiveness of staff and guarding in that: *“it is dependent upon store staff recognising and understanding the role they can play and for store guards in particular, understanding the importance of not being static in the store and engaging customers who may be acting suspiciously”* (p. 30). A key omission from this statement is that guards in particular need to be enabled to conduct the job they are employed to do.

An additional method of enhancing surveillance is through the installation of strategically placed mirrors in areas where the shelving height may restrict sight lines. The intention is to enable staff and other users of the space to identify and monitor suspicious behaviour (Armitage, 2013) by eliminating blind spots presented by the way the environment has been designed. The inherent issue with the positioning of mirrors is that all users, whether legitimate or not, can utilise them. Offenders looking to conceal items amongst higher shelving may find a mirror useful in their own surveillance activity to detect the approaching presence of security guards, staff or shoppers. Countersurveillance is an undesirable, yet unavoidable, by-product of the use of mirrors (Ekblom, 2011).

The use of mirrors in supermarkets in terms of enhancing surveillance, or indeed the countersurveillance alluded to by Ekblom (2011), continues to be a point for debate. Mirrors are relatively inexpensive compared to other crime prevention measures utilised in supermarkets and are used sparingly, in order to assist in observing areas of concern. It could be argued that they may be more effective in smaller retail spaces such as a local convenience store or post office for example. However, until further research has been undertaken

focusing on the effectiveness of mirrors in improving surveillance for the users, as opposed to the abusers, then those that debate the concept will remain unconvinced (Beck, 2016). Lasky et al. (2017) conclude that: *“Mirrors are considered, at best, to have fair potential as shoplifting deterrents, and, at worst, to facilitate shoplifting”* (p. 774).

Target Hardening

Target hardening in real terms within a supermarket environment relates primarily to the use of Electronic Article Surveillance (EAS) or in practitioner terms ‘tagging’. As with every other component of CPTED there are many examples of what target hardening is or is not, but in relation to this research it almost exclusively relates to the use of EAS. Arguably if an offender is stood within touching distance of an item that is tagged then the other component parts of CPTED have failed, as the tag could be perceived as the last chance to make an item ‘resistant to approach’, beyond which the manipulation and attack alluded to by Ekblom (2011) will take place.

Numerous EAS systems are available to the supermarkets to ‘protect’ key product lines, including spider tags, hard tags, keeper or safe boxes, bottle tags and ink tags. The principal concern with any retrofit product is that there will in time be someone who develops a way to overcome it (Ekblom, 1997). DiLonardo & Clarke (1996) reviewed the impact of ink tags in the retail environment and suggested that: *“In time, however, the most determined offenders can usually find ways to defeat any security system. Indeed, there is some recent evidence that ink tags are no exception”* (p. 13). The principal concern with any retrofit product is that there will in time be someone who develops a way to overcome it (Ekblom, 1997). Similar comparisons can be drawn with how burglars developed methods of breaching euro-cylinder locks set within domestic doors, resulting in a significant amount of them perceived as easy targets by the offending fraternity. Just as consumers may be enticed to purchase a new

product, before becoming indifferent to its novel value, shoplifters will go through the same process in relation to the deterrent factor presented by a tag. It may be the case that the initial introduction of a tag presents deters a proportion of shoplifters due to an unnerving lack of familiarity, but it won't be long before they discover a modus operandi that defeats it, resulting in the same indifference experienced by the consumers of new product (Gill et al., 1999).

The management of threat posed by EAS can develop and mature relatively quickly amongst shoplifters demonstrating a natural aptitude to overcome the challenges presented to them. Some may view it as a simple test, a sheer position of defiance that they cannot be beaten. Whereas others will do it out of necessity. One thing about the shoplifting community is that they do not stand still, they are always developing methods to counter those of the supermarkets, similar to a game of chess or cat and mouse. Tags are sometimes removed within the store using pliers, screwdrivers, magnets or even de-tagging equipment purchased online or from a connection in the retail sector. Foil lined bags, circumvention of EAS barriers that have been installed inadequately, a simple wave through from staff or no response whatsoever to alarm activation also feature in the shoplifters repertoire (Gill, 2007).

The effectiveness of EAS suffers hugely from a lack of consistent response within supermarkets, whether no response in relation to an alarm activation or the use of the tags across product ranges. It is a common sight to see shelves of the same product with some having been tagged and others not. Such apathy undermines the credibility of EAS, as the inconsistencies present opportunities to shoplifters. However, tagging may deter the proportion of shoplifters who simply want that extra bottle of wine, the opportunists who may commit theft infrequently (Beck, 2016). A slightly different view was taken by Lasky et al. (2017) as they reported: *“Our data reveals that Electronic Article Surveillance is effective in*

the sense that many shoplifters will avoid tagged products altogether, but ineffective in that they displace their offending to untagged products” (p. 787).

McNees, Egli, Marshall, Schnelle & Ridley (1976) explored an alternative approach to the protection of products, identifying items deemed at risk and were frequently lost. They specifically examined the use of signs and symbols to deter those who were removing the products from the shelves. The methodology involved the placement of ‘red stars’ mounted on the racks where target merchandise was stocked, accompanied by the placement of a sign stating: *“ATTENTION SHOPPERS & SHOPLIFTERS The items you see marked with a red star are items that shoplifters frequently take”* (McNees et al., 1976, p. 403). The outcomes from this distinctive approach were very positive, with significant reductions of the loss of at risk items recorded. McNees et al. (1976) concluded that: *“when merchandise was publicly identified as being frequently taken by shoplifters, shoplifting was virtually eliminated”* (p. 403). Similarities can be drawn from nature when changes in colouration of certain species send a warning to predators, ultimately deterring them from making a strike and assisting learning processes (Ekblom, 1997). McNees et al. (1976) adapted the changes of colouration seen in the natural world, in order to use a similar signalling effect within the retail environment as an alternative method to protect products from shoplifters.

Cozens (2014) makes an interesting point regarding the CPTED component of target hardening when referencing: *“gated communities”* and: *“fortressification”* (p. 26) in that: *“These factors work against other CPTED strategies because they reduce the self-policing capacity of community as a whole, and can undermine CPTED strategies such as surveillance, territoriality, image maintenance and the legitimate use of space”* (p. 26). This notion was also supported by Clarke & Petrossian (2013). It could be argued that the use of EAS has become the default response to target hardening within retail and supermarkets, partly because they are readily available and a rapid response mechanism. However, if the

bespoke and structured use of CPTED presented in this paper assists the practical translation of the component parts for application in supermarkets, then the emphasis should shift from target hardening, in order to enable the self-policing of community touched on by Cozens (2014) - an approach that encourages the other components of CPTED to take precedence over the final 'resistance to approach' tactic of using EAS.

Using Offender Perceptions in Research

Garnering the views of offenders is a vital element in understanding crime risk and consequently crime prevention, and several studies have done so in relation to retail crime (Gill et al., 1999; Gill, 2007; Carmel-Gilfilen, 2011; Cardone & Hayes, 2011). To truly understand the thought processes of shoplifters their expertise must be accessed and used to target crime prevention activity, a notion also supported by the Design & Technology Alliance Against Crime (2011) when addressing abuser-centred design. The insight obtained from such engagement with those committing the crime should be imparted on those attempting to design it out. The view of shoplifters held by the supermarkets will be adverse to say the least. However, if understanding is a fundamental element of designing out crime then supermarkets have to be amenable to involving the very people who challenge their environments on a daily basis. Only by doing that in an appropriate manner that's conducive in eliciting an awareness of offender behaviour will they be able to begin to know their offenders and think thief (Ekblom, 1997).

The perceptions of offenders are important in reducing the opportunity for crime to occur, as individuals they hold more information than police and retail intelligence systems in relation to behavioural considerations and attractions when committing crime. A point supported by Cardone (2006): "*A shoplifter views the retail store through an entirely different pair of eyes*" (p. 1). The information held on police intelligence systems regarding individual

shoplifters predominantly relates to their offending history, outcomes of arrest, when they were last incarcerated, know associates and personal details. This type of information supports investigation and offender management interventions, but provides nothing to support crime prevention practitioners or designers in their attempts to design out crime. The same applies to the information held by the supermarkets. Therefore, it could be argued that there is an absence of detail crucial to designers when deliberating how an environment could be manipulated by a shoplifter. If the detail is simply not available, or made available, then how can designers obtain the foresight of criminal opportunity inadvertently provided by their conceptions (Design & Technology Alliance Against Crime, 2011).

Experienced practitioners and retail managers will have a good knowledge of what may or may not be effective in relation to preventing and reducing crime incidents. Gill (2007) stated that: *“Retail experts clearly believe they understand shop theft, evidenced by stores’ ongoing investment in a range of security measures (which do not differ a great deal worldwide), yet shop thieves argue that stealing is easy. So how can this be?”* (p. 7).

However, experience does not always equal understanding and the vast majority of practitioners who are tasked with preventing crime have never committed the crime in question, so how do they know the thought process an offender actually goes through, how this drives their behaviour and how they view practitioner applied interventions aimed to deter them from committing crime? Offenders hold ‘black box’ information that others do not. As Gill et al. (1999) suggest: *“It is only by understanding how offenders’ perceive security, that effective strategies can be employed to deter shop thieves and to minimise the harm they cause, both to businesses and retail staff”* (p. 37).

In Carmel-Gilfilen (2011) Verbal Protocol Analysis (VPA) was utilised to collect data from 24 expert and novice shoplifters, in order to obtain their perceptions of a retail environment and identify potential deterrents to crime. Participants were deemed expert or novice based

on self-assessment of their shoplifting activity; 25 offences or more qualified you as an expert, 10 offences during the previous 12 months a novice. The research focussed on eliciting verbal reports of thought sequences, with results suggesting significant differences between expert and novice offenders. Although the suggestion of differences is of interest, it could be argued it holds little significance in terms of the practical application of CPTED due to retail environments having minimal control over the offenders who enter their sites – i.e. whether they are experienced shoplifters or not.

The approach taken by Carmel-Gilfilen (2011) had the opportunity to access the ‘black box’, but the credibility of the offenders in the sample is questionable, especially that of the experts. The method used to engage the shoplifters and non-shoplifters (novices) was an advert in the local newspaper, stating that individuals would be paid to participate in the study. Incentives to participate could result in individuals potentially saying what they think the researcher may want to hear. However, potentially the main flaw with the approach taken by Carmel-Gilfilen was that the background of the participants was not verified, so there was no confirmation that the experts were in fact experienced shoplifters or that the novices had not in fact committed several hundred offences, but did not want to divulge this.

Carmel-Gilfilen (2011) referred to previous research on this subject that had in fact targeted shoplifters that had been prosecuted, but suggested: “*the disadvantage is that these individuals were not successful with their crimes*” (p. 30) in that they were caught. What this statement fails to recognise is that the vast majority of offenders committing shoplifting are prosecuted in relation to a particular occurrence or a small series of occurrences. A shoplifter may get sentenced based on their last crime, but then others may get taken into consideration when their offending history is reviewed. However, depending on the offender in question they may have actually committed several times more offences than what they are prosecuted for, so to suggest that they are unsuccessful is remiss. The credibility of the prosecuted

offenders is arguably much greater than those who claim an offending past to obtain reward for their time.

Cardone & Hayes (2011) also commented on the reliability of prosecuted offenders, with the suggestion that prosecuted offenders are: *“perhaps incompetent”* (p. 32). There is surely an argument that incompetence cannot be measured on the strength of someone simply being prosecuted? Is a shoplifter who has committed such offences for ten years incompetent if they have been prosecuted for a handful of offences when they have committed hundreds that have gone unnoticed? If a burglar has broken into five hundred homes over a fifteen year period and they are serving time for five of those offences, are they incompetent? Kim Farry dubbed: *“Britain’s most shameless shoplifter”* (Aldridge & Wilson, 2015), claims to have: *“made £2million from stealing”*, with the article going on to report that Farry: *“has been jailed seven times on more than 50 charges of shoplifting, but she says those 50 charges account for less than 1% of the items she has nicked”* – is that the sign of an incompetent prosecuted shoplifter? On face value, Cardone & Hayes (2011) present a limited view, when in fact it could be argued that a significant proportion of shoplifting offenders demonstrate a level of intelligence and simple, yet effective, ingenuity when it comes to their ‘business’, something that should not be discounted on the back of prosecution.

A proportion of shoplifting fraternity demonstrate an ability to respond to measures designed to prevent them from committing theft. They display levels of intuition and an astute awareness of the environment in which they operate. To some shoplifters shoplifting is perceived as their profession; to others it is a means to an end. It could be argued that their dynamism in identifying methods to counter the moves of the supermarkets in reducing the opportunity of them to commit crime, is outweighed by their perceived necessity to do so if suffering from an addiction or financial circumstances affecting their family (Lasky et al., 2017). This challenges the suggested incompetence of shoplifters (Cardone & Hayes, 2011).

Designers have to improve their ability to ‘think thief’ (Ekblom, 1997), supported by the desire of the supermarkets and crime prevention practitioners to further engage those who can influence such thoughts due to their experience in committing shoplifting.

Purposive and snowball sampling was used to recruit active shoplifting offenders by Lasky et al. (2017), but the ‘pool’ from which they recruited from and the incentive provided potentially weakens some of the outcomes presented by them. The purposive sample consisted of college students who were offered \$75 to participate and a further \$40 for successfully recruiting an associate. Without generalising the student population, \$75 to suggest that you have committed shoplifting offences and to walk round a supermarket with an eye tracker on could be perceived by many as attractive. Payment may result in a performance beyond normal behaviour, and is the simulation of shoplifting offences under controlled circumstances going to replicate reality?

Methodology

This is a qualitative research project focussed primarily on the applicability of CPTED principles to the interior space of supermarkets. The outcomes of the literature review assisted in constructing the methodology framework.

Qualitative Research

The qualitative approach was applied to this research, in order to focus on understanding the behaviour of the participants when traversing through environments similar to those that they used to commit crime in; akin to a performer in the theatre playing out a scene. This provides the opportunity to capture descriptions of experiences in an environment that the participants are familiar with. For this study, semi-structured interviews and observational techniques were utilised, with the observational phase assisting to corroborate the data collected from the interviews. This then supported the exploration of which aspects of CPTED and

criminological theory could be utilised in deflecting offender behaviour and shaping design to reduce the opportunity for crime to occur. One of the weaknesses of qualitative research is the opportunity for bias that may distort the findings, opinions are always open to misinterpretation, something that could occur between the participants and researcher. However, this was minimised by implementing two phases to this research that engaged the ex-shoplifting offenders, in an attempt to clarify their thoughts and substantiate what they had stated in during the interviews.

The research comprised of three phases:

- Phase 1. - Semi-structured interviews with Store Interior Designers/Planners (n=2) from the two major supermarket chains. Interviews were fully transcribed and analysed using thematic analysis. Questions focused on design principles shaping interior space of supermarkets, how crime prevention currently features within their design process and their perceptions of aspects of their security that deters and attracts shoplifters.
- Phase 2. - Semi-structured interviews with ex-shoplifting offenders (n=5) invited to participate in the research via Integrated Offender Management (IOM) teams in West Yorkshire. Interviews were fully transcribed and analysed using thematic analysis, and comments were not attributed to individuals specifically, in order to retain a degree of anonymity. Questions focussed on their offending history, store selection, product selection, crime prevention and their thoughts on the design features within the retail sector.
- Phase 3. - Consisted of the ex-shoplifting offenders participating in 'walk rounds' (n=4) of a supermarket environment (utilising two different stores). One participant did not want to participate in this phase of the research. Those that completed

the walk rounds wore police Body Worn Cameras (BWC) and were asked to add narration to their 'journey', explaining their thought process and decision-making, whilst identifying both positive and negative facets of design or retrofit physical security devices. Participants were not prompted or asked structured questions. The narration was fully transcribed and analysed using thematic analysis, again retaining the anonymity of the ex-shoplifting offenders.

The research is also innovative in its methodological approach. Whilst the sample size is small in comparison to other research, it utilises novel data collection techniques. Ex-shoplifting offenders not only narrate their decision making verbally, but BWC captured their 'view' of the store, their 'journey' through the store and their identification of 'hot' and 'cold' products and spaces around the store. The audio captured assisted in undertaking the analysis, whilst the visual data collected by BWC sought to confirm exactly what participants were looking at, and where they were within the supermarket environment, when discussing the point in settings similar to when they were committing theft of shop offences.

Unlike both Carmel-Gilfilen (2011) and Lasky et al. (2017), the offending history of the ex-shoplifters was not simply accepted as a given or as a result of self-assessment. Each of the participants were verified as having prolific shoplifting pasts via the relevant IOM team, ensuring responses representative of five genuinely prolific ex-shoplifters.

Ethics

This research went through the process of obtaining ethical approval, ensuring the safeguarding of the participants, and the researcher, throughout the study. Each participant was provided with an information sheet outlining the research, why they had been approached, what would be required of them, their right to withdraw, anonymity and data

retention. The likelihood of psychological trauma caused as a result of participation was low, taking into consideration the crime type in question, the environments in which the semi-structured interviews and ‘walk rounds’ took place, and the circumstances and vulnerabilities of the ex-shoplifting offenders. However, in order to minimise risk further, the circumstances of each of the ex-shoplifting offenders were discussed with the IOM teams prior to engagement with study and each participant were provided with details of support services if required. Participants were also asked to sign a consent form to validate their understanding of the study and importantly reaffirm that their identity would be protected by use of pseudonym and that they has right to withdraw from the research; their names were not disclosed throughout the phases of research and they are referred to as ‘Participant X’ in this thesis. The same anonymity has been retained in relation to the supermarket designers, with a view to protecting operational practices in relation to their design processes or current interventions applying directly to their respective organisations; the supermarket designers are referred to as ‘Store X’ and ‘Store Z’ in this thesis. Any recordings made of the semi-structured interviews were deleted immediately after transcript, including the footage captured through the use of BWC.

Risks and Limitations

The risks associated with offender participation in research can include a fabrication of accounts, downplaying their offending or enhancing their story to overplay their expertise. In addition, genuine narrator inaccuracy can be influenced by factors such as drug use of the simple passing of time. However, the ex-offenders that participated were not drug users at the time of involvement, took part on a voluntary basis without incentive for their time and had nothing to gain from either downplaying or enhancing their stories. For these reasons it is thought that the accounts provided were as credible as they can be.

Focussing on prolific ex-offenders may also provide a different view on the associated risks of committing shoplifting offences to those who are less experienced. All five participants had at the time of offending suffered from dealing with addictions, committing shoplifting to support their substance misuse and at certain times been under the influence whilst doing so. This could have influenced their perceptions of risk.

Finally, from those convicted (thus detected) risks reporting on those that have been “*unsuccessful in their crime*” (Cardone & Hayes, 2011, p. 32). The researcher would argue that competence cannot be measured on detection. Is a shoplifter who has committed countless offences over a period of ten years considered as ‘unsuccessful’ as a result of being detected for one crime? The five ex-shoplifting offenders that participated with this research project demonstrated an extensive knowledge of risk factors and the retail environment. Each also committed extensive amounts of shoplifting offences before and between being prosecuted. Their knowledge cannot be discounted or undervalued.

Findings and Discussion

This section of the thesis focusses on the perceptions of the ex-shoplifting offenders on the design and layout of supermarkets and the extent to which they viewed this as a potential deterrent. The findings are taken from the semi-structured interviews with the ex-shoplifting offenders (n=5) and the narration of journey through a supermarket environment captured on body worn cameras (n=4). The thoughts of the supermarket designers (n=2), obtained from the semi-structured interviews conducted with them, are also presented. To retain anonymity the supermarkets will be referred to as ‘Store X’ and ‘Store Z’.

The focus of this thesis is not on offender profiles or characteristics, but before moving on to discuss the impact of design and layout on shoplifting, a brief overview of drivers and constraints will add some context to the key findings.

Offender background

Participants discussed five key factors that influenced their decision to commence (and continue) shoplifting. These were: the need to fund a *drug addiction*, *shorter sentences* (when compared to crimes that result similar financial gain), the need for *money* to pay for day-to-day necessities such as food, clothes and rent, the *ease* with which the offence can be committed (again compared to other crimes) and the *moral acceptability* of this offence.

Participant Two described shoplifting as a: '*daily occupation*' that funded their drug habit: "*Shoplifting came from when I had an addiction to Heroin and Crack Cocaine...it became a daily occupation*" (Participant Two). Participant Four reiterated this, referring to drugs as: "*a big driver*" and Participant One confirming that the money gained from shoplifting funded: "*cigarettes, Cannabis or whatever drugs I was getting into at that time*". Participant Five provided an insight into their upbringing, suggesting they: "*had a decent family, but not a rich family*" and that when they: "*got into drugs it (shoplifting) was out of necessity, not to gain anything*".

Every participant (n=5) referred to the attraction of much shorter sentences if caught and convicted. Rather than viewing this offence as a gateway crime, some had moved onto shoplifting from offences such as burglary as a direct consequence of the shorter sentences for this crime type.

"If you got caught shoplifting you went to jail for three weeks.

If you got caught for burglary you went to jail for three years. So

it definitely came down to consequences" (Participant One).

Participant Two described the same calculation regarding risk versus reward: "*They [offenders] know where they are with the shoplifting, they know what's coming. You know the maximum*

sentence you can get so it's kind of safe to them". Participant One suggesting that, should sentences for shoplifting increase, it would deter them from committing this offence: *"overnight"*.

As well as funding the purchase of drugs, others discussed how they started shoplifting to allow them to have access to products that their parents could not afford to buy: *"I think as a child it's more about getting things your parents won't let you have, or like mine couldn't afford to buy"* (Participant One). Participant Four provides a similar justification: *"Thank God for Mary who'd sell stolen biscuits or you'd have never had a biscuit. Or if she was selling washing powder, or else you'd never wash your clothes"* (Participant Four).

"...if we needed something like a new pair of jeans then we'd take the new pair of jeans...or if we needed something for school...we wouldn't go ask our Mam cos we knew she was skint, so it was just like that" (Participant Five).

Shoplifting was also referred to as an: *"easy crime"* (Participant One), a crime that takes very little effort for the financial reward. Participant Three explains: *"One day I was out with this kid. They had Hoovers outside a shop and he went: 'I'm having them' and I went: 'How can you have them'? He just walked into the shop, picked one up and walked out. Sold it, smoked it and I went: 'Fucking hell that's easy' cos prior to that I'd been into all sorts of things. I thought fucking hell, that's a piece of piss"*. As well as being easy, offenders also described shoplifting as morally acceptable, the loss making very little financial impact on these major supermarket chains: *"A lot of people look at big stores and think they've got insurance and a lot might have the misconception that they might not know something has been stolen"* (Participant One). The thoughts of Participant Five demonstrated the unsympathetic view held by most shoplifters, but one that had changed with hindsight: *"I used to hit shops and think it*

was a victimless crime...but that's bullshit, I know now it's bullshit...there's a victim of every crime".

What makes a suitable target?

Suitable store

The stores targeted by the sample of participants were varied and largely indiscriminate. These included high street retailers, supermarkets and specialist stores selling electronics. One of the high street retailers was referenced on several occasions for two specific reasons. The first being that CDs and DVDs were left in the case (as opposed to being stored behind the counter) and the store was set out on two levels, the upper level containing, CDs/DVDs, being less surveyed. The different levels also allowed the offenders to move products around the store prior to simply walk out of the doors without paying.

"Places like Boots, they had different levels, so you could pick stuff up upstairs, take it downstairs, make out like you were gonna pay for it, pick up a few more bits and then walk out of a different door" (Participant One).

Participant Five did not focus on the design and layout of a store in terms of an attraction, rather the size: *"...we'd target the big supermarkets...when that became a big supermarket, massive market, that was easier"*.

Suitable products

When entering the stores, participants were split regarding the products they targeted first. Half of participants went straight to the CDs/DVDs and gaming products and half went straight to clothing. The second choice was split between: phone accessories, electronics and alcohol and

the third: clothing, toiletries (including make-up) and household cleaning products. Fourth and fifth included electronics, food, toiletries and medicines (including vitamins and supplements). Participants explained their justification for product selection according to three key themes. These were: products were low priced, thus increasing the ease with which they could be sold on (many people cannot afford higher priced products); products were priced just below the threshold considered a requirement for EAS (they were priced high enough to make the crime worthwhile but too low to require security measures); products were a day-to-day necessity thus in demand, and finally, products were expensive and could be sold on at a high price – making the crime financially worthwhile in relation to the risk involved.

Participant One explains the first rationale:

“People aren’t stealing expensive stuff anymore cos the people they want to sell to can’t afford expensive stuff. Shoplifting and selling stuff used to be a way for poorer people to get stuff they couldn’t afford – now it’s not so much like that” (Participant One).

Participant Three explained how certain desirable and disposable products, such as spirits, would be attractive, but that these are largely all security tagged. However, alcoholic products that are slightly less expensive, yet just as desirable, somehow miss that tagging threshold making them an attractive product to target.

“Bottles of Prosecco, no security tags” (Participant Three).

Participant One explained how packs of eight razors would be security tagged, yet packs of four would not. His solution being to simply take twice as many packs of four and leave the tagged eights on the shelves.

“You wouldn’t bother with the eights, you’d just take the four packs,

*you'd take the whole rail. There would be no point going for the
eights" (Participant One).*

Products that were classed as a necessity such as food, batteries or washing powder were also popular targets.

*"I think food is becoming one of the biggest things that gets stolen.
It's becoming one of the products that people can't afford to buy unless
they can find it a cheaper way. I know a lot of people that pretty
much wouldn't eat meat at all if they didn't buy it from
shoplifters" (Participant One).*

The final justification for product selection was high value - several participants expressing the view that the reward must be worthy of the risk and that, if you are going to risk getting caught, it needs to be financially worthwhile. Participant Five explained that: *"it's better to get hung for a fucking sheep than it is for a lamb"*.

*"... if I'm going to get caught for summat then I'm going to get
caught for summat. I don't see point of doing it for £10 worth, I may
as well get £300-400 worth" (Participant Two).*

Ineffective deterrents

The absence of effective security measures, or the presence of, what participants classed as ineffective security measures, also affected target choice. Security measures classed as largely ineffective included CCTV, EAS and measures to emulate security guard surveillance – for example, cardboard cut-out police officers. Participants were not deterred by CCTV, claiming that the presence of cameras does not equate to actual surveillance – you can have cameras in

store, but is anything actually watching them in real time. As will be discussed below, all participants spoke about the deterrent impact of immediate detection. Security measures that risked detection post-offence did not deter because the primary priority was getting out of the store, selling the goods and funding their drugs, food or other important requirements.

“CCTV wouldn’t deter you cos you know someone isn’t sat on it all of the time” (Participant Two).

The use of EAS was viewed as ineffective. Participants described the ease with which these tags could be removed. They also discussed the inconsistency in product tagging – many of the items at the front of the shelves being tagged, yet those behind, or on the higher shelves were not.

“Look at these £30 each you’d cut that tag off, it’s only a piece of cardboard. You’d just pull that top layer of the wrapping off” (Participant One).

Participant Three demonstrated the inconsistency with which products were tagged: *“No point going for any with a tag on when there’s so many without ‘em. No consistency is there”*.

Figures One and Two demonstrate the extent to which tagging of the same products can be highly inconsistent. Bottles of alcohol, one at the front tagged and one to the rear untagged. Packets of batteries displayed next to each other on the same shelving unit, again demonstrating a somewhat lax corporate approach to the use of tags.

Figure One: Image of inconsistent use of tagging



Figure Two: Image of inconsistent use of tagging



Finally, cardboard cut-out police officers were met with contempt: *“Yeah, they do look real though don’t they...after 12 pints! They’re a fucking joke aren’t they”* (Participant Three). Participant Two describing them as: *“Hideous...I don’t even think they’d put a child off?! I think it’s a waste of time”*.

What makes an unsuitable target?

Unsuitable store

When describing stores that they would avoid, two participants referred to the same music store. Their justification appeared to relate largely to the design and layout of the store – with cash desks at the entrance to the shop, requiring you to pass when exiting.

“I think it was how they had their shop set up really... you had to walk past the desk to get into the shop – whereas a couple of other high street retailers, the desk is nowhere near the door, so I think it was to do with the shop layout” (Participant One).

Participant Five explained that the: *“Posh shops were a lot harder...they had it knuckled down with like cameras...I’d rather go on the one next door, they’ve got no security guards, no cameras, there’s a woman behind the till who won’t say owt anyway, so let’s go there”*, suggesting that a convergence of measures would act as a deterrent.

Unsuitable product

Participants made very little reference to products that they would avoid, preferring to focus on what they would steal. Of the few references to unsuitable products, these appeared to fall into two categories – the product is too big, making it difficult to carry and conceal: *“I can’t be arsed with meat, because it’s too bulky” (Participant Four)*. Or, the product will not reap sufficient financial rewards.

“You’ve gotta think in terms of like how much am I gonna get for each thing, so you know, I’m not gonna be arsed to take 15 of them [bottles of conditioner], cos I’m only gonna get £1 each for them,

so £15 it's not worth it" (Participant Four).

Effective deterrent

Participants described several effective deterrents, however, for each measure, participants remained sceptical regarding the effectiveness in practice. Security measures considered to be a deterrent were: store detectives (as long as they are moved around different stores making it difficult for shoplifters to get to know them); CCTV that is constantly monitored; security guards at the entrance/exit to the store; internal tagging of products at source, and floor to ceiling alarm barriers at all exists.

Store detectives did appear to deter, but participants made clear that once you become aware of who the store detectives are, you can avoid them within the store or avoid the times that they work: *"Store detectives are great, but they also have to hang around a lot and we know that – you can tell who they are straight away"* (Participant One). In terms of conducting their own surveillance to identify the store detectives, Participant Four explained: *"I always used to think of it from their point of view to help me think how they did it"*. Participant One described the communication between shoplifters as well as local beggars/homeless people, describing how they would ensure that information regarding store detectives/security guards was shared: *"...the multitude of beggars they have round here, they are perfectly positioned to watch what's going on. Shoplifters can talk to them – how many security guards have they got on today? The whole criminal fraternity talks to each other"* (Participant One).

CCTV was described as a deterrent, but only if continuously monitored, as opposed to simply recording: *"If you have people monitoring it then CCTV can be a big deterrent"* (Participant One). Participant Five supported this by simply suggesting: *"Cameras can be a deterrent, they really can...if they are used right"*. A common theme running through all interviews and walk rounds was the fear of being apprehended whilst in store, as opposed to days/weeks after.

Participants stated clearly that should a security measure risk an immediate detection, they would be deterred from offending in that store.

“...the biggest consequence is getting caught isn't it and not being able to score that day” (Participant One).

“A the end of the day, you're not bothered about getting caught later, you're just bothered about getting away that day” (Participant Two).

Participants also described methods by which EAS could be improved. These included internally tagging products at source: *“...if the meat is getting tagged at source and it's inside the meat you're not gonna want to open meat and take tags out” (Participant Three).* They also described ensuring that alarm barriers at all store exits are floor to ceiling (so that you cannot lift the product above your head), and that the barriers are flush to the side walls – so that you cannot squeeze behind them: *“If they changed it all round by the door, floor to ceiling alarm barriers, or at least above average height, cut out that gap where you can get in at the sides and the maybe they might stand a chance” (Participant Three).*

Figure Three: Image of alarm barriers presenting the opportunity to circumvent



Specific principles of Crime Prevention through Environmental Design (CPTED)

Awareness of CPTED

Neither of the supermarkets had heard of CPTED, but when the component parts were explained there was an indication that elements of them were considered as part of the holistic approach and crime prevention is: *“kind of baked into the pack”* (Store Z) when it comes to the design process. Both ‘Store X’ and ‘Store Z’ made it abundantly clear that their primary objective when considering design and layout was the customer: *“Customer first, absolutely...we’d never make something difficult for a customer”* (Store Z) and *“...the customer is obviously key to everything”* (Store X).

Several participants made clear reference to the design and layout of supermarkets: *“I think this layout makes it very easy for shoplifting”* (Participant One) and the positioning of products within the store: *“I do think sometimes with the layout of a shop – why would you put that there?”* (Participant Two).

Surveillance

Discussion with the supermarkets produced little by way of reference to the importance of designing out the number of blind spots within the interior space. However, ‘Store Z’ did reference the fact that some features would be designed out where feasible: *“There’s some obvious ones that we’d avoid...if there’s alcoves in smaller stores...we’ve kind of taken out of the model now, we’d never open another store with one of those”*. Although suggested in relation to the ease of which customers can see the offers presented by the supermarket, as opposed to enhancing surveillance reduce concealment for shoplifters, ‘Store Z’ referred to the importance of sight lines and that the environment: *“...can’t be cluttered”*.

The possibility of being seen by staff or legitimate shoppers was a clear deterrent for all participants. Offenders spoke about seeking out blind spots, corners or areas of the store where

they would be hidden from view: *“Anywhere there’s a corner it gives you an opportunity. If it’s in the middle you’re open to view. Everything tends to be in a corner or up, or down, or in a blind spot”* (Participant Two). Figure Three shows how the building structure and layout of products can create hiding places for offenders.

Figure Four: Image of store design that limits surveillance and creates blind spots



CCTV was thought to be a key deterrent to shoplifters by both supermarkets, but with the caveat of: *“...to an extent”* added by ‘Store X’. In a slightly contradictory manner it also appeared that the installation of CCTV was free from restrictions: *“Loss Prevention and I have many conversations regarding CCTV and I say you can put as many as you like in”* (Store X).

Measures that enhanced the likelihood of being observed were viewed as a clear deterrent. Whilst participants were unprompted regarding any specific security measure, participants referred to several elements that they perceived as risking (or not) the possibility of observation and detection. There was some doubt regarding the effectiveness of CCTV – if there was a possibility of it being monitored in live time, participants felt that this would be a deterrent. However, many factors led them to express the view that CCTV would not be monitored

constantly and any risk would be delayed – with apprehension after the offence: *“The store is quite large isn’t it, it must have a lot of cameras. That says to me that they’re not watching all the cameras”* (Participant One). The level of distain towards the effectiveness of CCTV in terms of a deterrent was succinctly purveyed by Participant Five: *“I can tell you that a camera isn’t crime prevention”*. There is definitely a disconnect between how the ex-offender participants and the supermarkets viewed the impact and use of CCTV, one that considering the significant investments made in it by the supermarkets could be cause for review. A more appropriate interpretation of the feelings towards CCTV is that it has the potential to feature as a prominent deterrent, but not in the way it is currently being utilised.

Mirrors were seen as ineffective as a method of enhancing surveillance, one participant expressing the view that they could be effective in smaller stores, but that in larger stores they enable offenders to check who is watching them, as opposed to enhancing the threat of surveillance from staff and legitimate shoppers. Participant One stated: *“I think it’s definitely an outdated model of trying to catch someone shoplifting and yeah...they (shoplifters) do use them definitely”*.

*“That poxy mirror is no good to nobody, they’re a favour to you
cos you can see who’s watching you”* (Participant Three).

The use of mirrors was also criticised by ‘Store Z’: *“I hate them too...my theory is that thieves use them far more than what we do to see who’s watching them”*.

All of the participants referenced the height of the shelving units and the cover that they were perceived to provide. Participant Two felt that the design of the units, in addition to their perception that it is also the quietist area of the supermarket, would buy an offender time to *“do a bulk and absolutely get loads”*. This was supported by Participant Three in suggesting *“See these aisles are ideal for putting stuff in bags”*.

“It’s a stealers paradise...the shelving is really high isn’t it”

(Participant One).

Using the actual environment of a supermarket to conduct the research also provided the opportunity to demonstrate the ease of concealment. Participant Four spent several minutes in the clothing area validating their thoughts through movement in and around the section, concluding: *“so here no one can see us doing anything”*. The actual type of fixtures and fittings were also presented an opportunity for them:

“I used to hide inside those circular clothes rails, like kids do, and fill the bin liner from the inside, as nobody could see you inside the rail” (Participant Four).

Figure Five: Image of high shelving units



The height of shelving did not feature in too much depth during the discussions with the supermarkets. However, when discussing the integration of a clothing range into the environment ‘Store X’ stated: *“...it does create a very, very tempting and desirable area for out thieves, not only to nick clothing, but to go and conceal the items”*.

Every participant that engaged in the store walk round phase of the research commented on the positioning of products at the immediate entrance/exit to the supermarkets (as shown in Figure

Six). Products within this area of the store are usually part of a promotion and stacked high in anticipation of high volume sales. Depending on the design of this area of the supermarkets such promotions can often obstruct the view of the security guards if they have a podium adjacent to it, which was the case in the supermarkets visited. The placement of product to invite sales was referred to by 'Store X': "...we have some guiding principles of what we want as you enter the store, what we want to offer the customer and what we want the customer to see". This was supported by 'Store Z' in that: "...customers have got to be able to see the offers". Interestingly, 'Store Z' discussed a change in their approach to guarding, that may in fact be undermined by promotional products obstructing their view: "...five or six years ago we moved them (security guards) all out of security offices and onto a podium, more visible, what we call 'front and first', stop them coming in before they cause us an issue".

Participants were surprised by placement of products when considering from a surveillance perspective, given that the products clearly obstructed surveillance and assisting them in their offending.

"If we start here [entrance to shop by sliding glass doors] you see the Budweiser boxes are quite high up, when you get here you are beyond eye level for those security guards. That's quite nice because realistically he can't see you" (Participant Two).

Figure Six: Image of products positioned to obstruct security guards



One area that proved an attractive opportunity to evade surveillance were the changing room facilities in one of the supermarkets. Participants were fully aware that CCTV was not an option within the actual changing rooms, which presented an ideal opportunity to remove security tags and conceal the stolen goods. Participant Two made the observation: *“Your fitting rooms aren’t alarmed are they...see that would be my favourite place cos it allows you time, there’s nobody here manning it, so you can just come in”*. The availability of the changing rooms as a space to circumvent surveillance arguably undermined all other surveillance techniques applied by the store, such as security guards, CCTV or the chance of being seen by a member of the shop floor staff or legitimate shoppers. When discussing the potential to steal packs of meat, Participant Three stated: *“...pick as many as them as you can, put them in your basket, changing rooms, in your bag”*. They also went onto to say: *“...if I needed a quiet place to do it in, there isn’t a better one is there?”* (Participant Three).

Some participants discussed the worst days of the week for shoplifting, relating it to how busy stores are and the ease of which they felt they could or could not blend in, utilising the volume of shoppers to assist in their concealment. The term ‘suicide Sunday’ was referenced by two

of the participants, with others supporting this by deriding the same day as: *“Sundays wasn’t easy to blend in”* (Participant Five).

“Sunday is the worst day...they call it ‘Suicide Sunday’ ...you have less people in shops that made it more difficult cos shops weren’t as busy. Your best day is when the shops are heaving. They’re too busy to be actually noticing you nipping in and nipping out” (Participant Two).

Conversely, there was also a feeling that crowded places increased the risk of being seen due to the number of legitimate users of the space present. Participant Three explained: *“...crowded places, that’s what brings you on top cos you always get a ‘Nosey Norah’ that’ll be I’ve just seen them do this”*.

Access Control

Access to the store, through movement and egress were discussed to varying degrees by both the participants and supermarkets alike. The ‘customer journey’ is a key factor to the supermarkets in designing of interior space, planning fixtures and placing product to guide customers a certain way around the store. ‘Store X’ explained that: *“...we pretty much look at everything, so the whole customer journey as they enter our sites from a holistic point of view”*. This was equally supported by ‘Store Z’ when discussing customer experience: *“They can get in and around, get there easily, that’s first and foremost”*. Despite the emphasis on this for the customer, there was no indication from the supermarkets that they also ‘think thief’ when progressing through the planning process.

One of the issues that caused both loss prevention and the designers an issue in ‘Store X’ was the presence of two entrance and exit points to the supermarket. Finding a facet of design that challenges those in sales and those in security is an infrequent event, albeit for very different

reasons. Whereas secondary entrance and exits prove difficult in monitoring the movement of shoplifters for security, they provide a different matter for designers: “...*from everyone’s point of view stores with multiple entrances and exits are always a challenge...how do you meet the needs of our customers...you can’t have fruit and veg in two places!*” (Store X).

Shoplifters thrive on ease of access and egress to a supermarket, multiple exits provides them with opportunities if one route is perceived to amplify risk more than another. One exit point may also be preferable due to the close proximity to a footpath, transport hub or busy shopping area, enabling shoplifters to ‘disappear’ with ease.

“...there were two doors...there were a door on this side of it and a door on this side of it, but this door went straight, well 50 yards into a subway. Once you got down that subway you could go that way, that way or that way, so it were a piece of piss” (Participant Three).

‘Unofficial exits’ were also discussed by several of the participants, referring to the opportunity provided by fire exits around the supermarket. Although not a thought for the legitimate customer, fire exits multiply the number of options for shoplifters. The advantage of fire exits is that they are also a distance away from the main entrance and exit to the store, enabling shoplifters to potentially egress the store away from security guards and staff. Some fire exits also lead into the main car park to the supermarket permitting a shoplifter to park a vehicle adjacent to it and move away from the site quickly after committing the offence. “*I’d hit the back door, the fire exit...security guard wouldn’t leave his platform cos you’d be halfway across the fucking field before he got there*” (Participant Five). However, ‘Store X’ had a different view: “*I think going out of a fire exit is only a short term method of nicking something, once someone has done it once you know they’ve done it...so at that point you’re on alert and your alert level goes up*”. There is an opportunity to influence the placement of fire exits

though to try to reduce the opportunities for offenders, whilst obviously ensuring the safety of all users of the site: “...in new stores we get involved in positioning of doors, fire exits” (Store Z).

The ability to move in, through and out of a store unrestricted was a factor discussed by several participants. The positioning of products close to exits (for example, in Figures Six and Seven) attracted offenders, Participant One summarising that: “*The closer you was to the door, the easier it was to escape*”; Participant Two confirming the attraction of goods placed near to entry and exit points: “*If people were putting stuff on display at the front nearer the till then it’s easier for people to get out*”. Participant Five spoke about the ease of movement in and out of a supermarket without obstruction. They proceeded to provide an example of the way a certain store was designed that actually deterred them from shoplifting there: “...in some shops there’s like blockades that you walk through and you can’t come back through them...you go through one bit and you have to go all the way round the shop to get back out” (Participant Five). Participant Five went onto say that the one way system was one of the best things they had seen, providing the following rationale:

“Cos you’d walk in and once you’re in the shop you’d be thinking fucking hell if I get chased now there’s no way out that way. It’s like the automatic doors, one way automatic doors, you walk through and then have to walk all the way round and then go through the tills and then out, so it’s a good idea really” (Participant Five)

In anticipation of the potential response from a supermarket in suggesting that this may impact on the customer, Participant Five concluded: “*It’s no drama for the law-abiding citizen to go round the shop, do you know what I mean? It’s only a drama for the shoplifters and people who want to rob off them*”.

Target Hardening

Target hardening within the supermarket environment predominantly refers to the use of EAS and the application of tags, along with the installation of alarm barriers situated at the entrance and exits of the stores, as well as prior to accessing toilet facilities. Despite the popularity of EAS and extensive use of a range of tags, it was only referenced once during the interviews with the supermarkets: *“One of the principles we accept and work on that tagging is only there to deter the opportunist, we know professional and proficient thieves won’t be bothered in the slightest”* (Store Z). The only reference to physical security was by ‘Store X’ who felt that: *“locking things behind cupboards”* would be one of the top three deterrents to a shoplifter.

In contrast to the supermarkets, the participants spoke extensively about EAS, highlighting both deficiencies and how this intervention type could be improved. Participants discussed many ways in which different tags could be overcome, and these ranged from simply peeling sticker tags off to cutting wires with clippers, carried by many of the shoplifters. The walk rounds revealed many weaknesses in the design and application of different tags. For many products, these were attached to part of the packaging which would not compromise the quality of the goods if cut/pulled off (see Figure Eight).

“Those peel off ones, they’re like next to nothing really. The plastic cases, which were easy – screwdriver, pop it open. Your dye ones, you can just walk out with them, so it’s just putting a bin liner in between the bit and the dye falls into it. Spider tags, not all of them are connected. With any kind of tag there’s always a device to eliminate it” (Participant Two).

Participants demonstrated how simple it was to pull spider tags off (see Figure Nine), with no requirement to cut or compromise the wires: *“...cos it’s cardboard you can bend it and slide it*

off, that's all you're doing, you're just forcing it out of it – cos it won't go off then cos you're not breaking any of the wires, you're literally taking it out” (Participant Two). Tags that could not be removed were overcome by placing the product in a foil-lined bag, as Participant Three alluded to: “Even if you can't get the tags off you only need a foil lined bag don't you”.

Figure Eight: Image of tagging that can be easily removed



Figure Nine: Image of tagging that can be easily removed



The EAS detection barriers are designed to be the pinch point in the system, the connection that actually alerts the security guard or staff to the fact that an active tag has moved through them and is possibly attached to a stolen item. Barriers are placed in a vertical position adjacent to the exit of the supermarket and are usually around 1695mm (5ft 5") in height. However, as with the tags, participants observed weaknesses in them: *"All you had to do was that (participant put their arms in the air to holding the goods above the barrier), walk out above the thing, the alarm wouldn't sound"* (Participant Three).

"Opportunists are looking for that gap next to the alarm barrier...you're walking round it instead of through it. People are opportunists, so if you're not covering every element they are gonna find a way through it" (Participant Two).

The final and arguably most crucial element of EAS technology is the human response to an active tag being detected. An apathetic and inconsistent response from security guards or shop floor staff erodes the whole approach to EAS, generating the 'so what' perception amongst shoplifters, as explained by Participant Two: *"Alarm went off and there were three of them (staff) round the camera system, but didn't even bat an eyelid, and that's what happens a lot of the time"*. This observation was also supported by Participant Three: *"It's alright the alarm going off, but there's got to be someone who actually fucking does something.....you know what I mean?!"* (Participant Three)

One participant made an interesting comment regarding their approach on activating the alarm, based on the behaviour of legitimate shoppers in the same predicament:

"We'd head towards the exit, we knew the alarm would go off, but the trick is don't be too smart and just act like normal people would.....you'd pause, look at the person you're with and then look

back to see if anyone was coming towards you. That's what we always did, the guard would wave you through or staff would – the last thing you do if you're a decent shoplifter is bolt if the alarm goes off” (Participant Four).

As with any physical security device, the correct fitting and user response is extremely important. Tags that are fit incorrectly and inconsistently present an offender of any experience with a chance to remove in situ with very little effort.

“You've got someone coming along whose job it is to do all of these (tag products), we all get complacent, can't be arsed.....some of them get put on that crap that you can take them off anyway and sometimes you'll find bottles that haven't got them on at all” (Participant Four).

Participants also discussed how they adapted their modus operandi to circumvent the introduction of new approaches developed by manufacturers and implemented by the supermarkets. Participant One summed this up by saying: “...they bring out new technologies to stop them shoplifting, they (the shoplifters) bring out new technologies straight away, so they can still do it”. The other participants all discussed counter manoeuvres to enable them to overcome the presence of a tag; some would remove at shelf side, others would move products to areas of the store they considered ‘blind spots’. “I'd do stuff in the changing rooms.....took 2 items in, de-tagged them, did it that way and then put the clothes on” (Participant Two).

Defensible space

Using design to create defensible space, through either enclosures or spaces within the supermarket environment, in order to deter shoplifters from committing theft was not discussed

by either 'Store X' or 'Store Z'. However, space planning was explained at length by 'Store X' and provided some reassurance that the creation of defensible space could be feasible through their current design processes. There is a significant caveat though, in that: "...we're in a customer facing industry" (Store Z), so the 'customer shopping mission' will always come first.

The interior space of a supermarket is designed based on a number of factors, including obviously shape, size, storage facilities and service counters. Some decisions on the interior design will be corporate in determining the position of key departments and refrigeration for instance. However, there is also a position of flexibility within each store: "*ambient fixtures are versatile, they can go pretty much anywhere*" (Store X). Amongst the list of the product areas that fall within the ambient category provided by 'Store X' were 'wines and spirits' and 'health and beauty', both of which attracted particular attention from the participants in the walk rounds. 'Store X' also stated that: "...so we've designed stores previously with statements like *shops within shops*".

Perhaps not surprisingly given the depth of discussion regarding defensible space with the supermarkets, the participants gave little indication that defensible space or measures to enhance it, had any impact on their decision-making process. Signage had little impact on participants, many efforts being met with disdain. When discussing thoughts towards signage stating 'CCTV in Operation', Participant Two responded: "*Bullshit, that's what you'd think*". Participant One commented on a sign stating 'Thieves...we are watching you' with a back drop of a pair of eyes: "*So what, we don't care, as it's what the average intelligent shoplifter already knows*".

During the store walk round Participant Four managed to access the warehouse area of the supermarket by claiming to do a fire risk inspection. Participant Four stated: "*No one's gonna*

think 'what are they doing'? cos you approach them before they even think that. So that's why when we gone in there then I spoke to them first. Most people would start panicking". Rather alarmingly 'Store X' suggested: "...you could walk into any leading supermarket and do that, it's about confidence".

The findings present a number of opportunities to further explore the development of CPTED in reducing the opportunity for crime to occur within the supermarket environment, highlighting which of the component parts may be more of a deterrent than others and how these could be developed further. In addition to design and layout, the perceptions of the ex-shoplifting offenders relating to the effectiveness of security measures provides practical guidance for the supermarket designers, and loss prevention staff, on where improvements can be made reasonably quickly. The outcomes of the semi-structured interviews with the supermarket designers highlight the need to enhance the connection between theory and practice, as well as providing optimism that this can be achieved, in a complimentary manner towards their existing processes, whilst retaining the policy of the customer always comes first.

Discussion

One of the key considerations of this research was to examine the current use of CPTED principles in the design of the interior space of supermarkets, as well as identifying the components of CPTED that deliver the most significant deterrent factor to shoplifters. However, this research also identifies more fundamental issues with CPTED relating to the clarity of some of the component parts and the haze of ambiguity restricting vision to support use. The question posed by Cozens et al. (2005) in "*What is CPTED?*" (p. 329) remains a valid question thirteen years later.

The importance of answering Cozens et al. (2005) is vital in attempting to introduce CPTED into the design process for the interior space of supermarkets. The main objective of CPTED is to prevent someone from entering a space and committing a crime; quite a basic and understandable premise. The component parts of: Access Control, Defensible Space, Target Hardening, Surveillance, Image and Activity Support (Armitage, 2013; Cozens, 2014) are in essence methods to resist the approach of an offender who may be inclined to enter the space to commit the crime. Again, an understandable notion in reducing the opportunity for crime by deflecting the attention of an offender, or more specifically in the case of this research, a shoplifter. Cozens (2014) extended the scope of CPTED through redefining it to demonstrate the wider impact application can have on: *“the fear of crime and to promote public health, sustainability and quality of life”* (p. 11). Notwithstanding that these issues are extremely plausible and intrinsically linked to crime, has the extension of definition moved away from the initial notion of CPTED in that by title it prevents crime? The point being that if confusion exists in the use of CPTED (Ekblom 2011) will added emphasis on fear of crime, health, sustainability and quality of life add to the bewilderment of what CPTED is all about amongst practitioners? Is CPTED being shaped to cast a wider net, when in simply preventing crime it has yet to really establish itself? Neither ‘Store X’ nor ‘Store Z’ had heard of CPTED.

There is a real danger that CPTED could become a panacea from the past if the mire of theoretic complexities associated with some of the component parts are not ‘mopped up’. Failure to do so would result in the loss of a worthy set of tools in assisting to prevent crime in exterior and interior environments. However, at the moment it could be said that CPTED is akin to having a box full of tools, yet not knowing which one to use to repair a leak, which to assist in rewiring a plug and which will assist to put up a shelf, or could each of those tools be used for each of those jobs? Image has facets of access control and surveillance;

Surveillance has aspects of activity support and defensible space; and Target Hardening features elements of access control and surveillance: “...all six components of CPTED are entangled and overlap” (Ekblom, 2011, p. 5).

In practical terms, and with the supermarkets in mind, the key question regarding CPTED components would be which does what and when and where do I use them? Unfortunately, the answer would arguably be complex and full of possibilities instead of a defined framework for designers to work with. Most practitioners adapt out of necessity, responding to the requirements of clients, similar to shoplifters who commit crime out of necessity, stealing goods wanted by their buyers. Therefore, to present CPTED and its component parts to designers responsible for planning the interior space of supermarkets in its current form may prove futile due to the perceived: “*inflexibility in practical translation*” (Reynald, 2011, p. 70).

This research has demonstrated that supermarkets place a significant emphasis on the shaping of space, ensuring that the customer can move throughout the store without impediment in accessing goods that they desire. Similar to the activity of a shoplifter. Surveillance, access control and target hardening are components of CPTED that the supermarkets inadvertently already use, investing heavily into CCTV, EAS and crime prevention (British Retail Consortium, 2017). However, strictly speaking these are physical products, as opposed to using design to shape the space that enhances the capacity for surveillance or access control. That said, at the very least this provides a platform from which to explore the use of CPTED further within the supermarket environment. Defensible space is a component that has the opportunity to be utilised more within supermarkets. Participants know that the supermarket space as a whole is too big to effectively monitor it. The creation of enclosures (Armitage, 2013) using symbolic barriers or changes in colouration or texture to the floor space (Cozens,

2014) would provide the supermarkets with an opportunity to embrace the concept of defensible space without impacting on the ‘customer shopping mission’.

Access control should be reassessed as a CPTED component, by way of definition, as opposed to inclusion, due to the strong suggestion that it applies specifically to an entrance or how someone moves into a space. The nature of the title may also focus the attention of the user too much in one area, at the entrance of a supermarket in relation to this research. This presents a missed opportunity from a crime prevention point of view in shaping the movement of a shoplifter if they chose to enter and move through the supermarket. The supermarkets take into account the whole customer journey, how product placement provides natural synergy and how the customer shops every area of the store prior to leaving through the checkouts. They do not just consider how the customer enters the store. There is a need to widen the scope provided by access control (Ekblom, 2011; Armitage, 2013). The term ‘Perambulation Management’ has been used in this thesis, which would focus the user on the entire shoplifter journey, just as the supermarkets consider the whole customer journey. By way of design, supermarkets are not intended to: “*actively keep people out*” (Armitage, 2013, p. 25), but they could use perambulation management to guide a shoplifter, as they do now to guide the legitimate users of the space.

In addition to dispersing the haze of ambiguity lingering around the CPTED components, it is important that users, whether supermarkets or planners of exterior space, are provided with the opportunity to utilise in a more bespoke fashion. This will partly be reliant on ensuring clear definition of each component to answer the: ‘Which does what and when and where do I use them?’ question. Considering the component of image in relation to a supermarket; this could be used throughout the store, and will be in relation to the legitimate shopper, but more from a maintenance point of view. However, it could be argued that in terms of crime prevention and the very ethos of what CPTED suggests it does, then image can deter

someone from approaching and entering the store in the first place. The same could be suggested in relation to a residential estate, the image that a burglar has of an area will assist in their decision-making process as to whether they commit crime there or not. There also has to be a framework for the application of CPTED components, much as there is when conducting a security review on a site, in that the reviewer will consider the preparation, environment, perimeter, shell and interior of the site, so in essence working outward in.

The flow chart in Figure Ten suggests how this could work for a supermarket and in comparison a residential estate.

Figure Ten: Application of CPTED components: Perimeter to Interior



Naturally the application in Figure Ten also follows the offender journey. Image comes first for both sites, the perception provided to an offender and as the initial resister to approach. Activity Support for the supermarket would relate to the immediate environment inside the entrance, how the area has been designed to enhance opportunities provided to security guards, staff and customers in natural and informal surveillance. Perambulation Management would assist in guiding and restricting shoplifter movement if they chose to enter the supermarket, for instance a 'one way in, one way out' approach. The supermarket could be zoned to create areas of defensible space containing high loss products, with focussed surveillance on these areas, and target hardening through the use of EAS being the final component in resisting approach before any manipulation or attack of the target.

The change in sequence for the residential estate demonstrates the need to use CPTED in a bespoke manner, specific to the space or environment and the dynamics within it. Figure Ten shows perambulation management after image for the residential estate, relating to facets of design such as footpaths and ensuring they do not assist offender movement. Moving into the estate, defensible space could relate to the street layout and use of cul-de-sacs; surveillance may be enhanced through the positioning of the houses on the streets and street lights; target hardening could be the physical security on the homes and finally activity support relates to the use of space by the homeowners and residents to build a sense of community, which in the case of the estate will then naturally link back to the initial image.

The image in Figure Ten has been provided to demonstrate that CPTED principles could apply to the interior space of supermarkets and how a bespoke approach in using them will be necessary depending on the site. Some designers may suggest one aspect of CPTED should come before another; but the premise of working from the perimeter of a site to the interior core should underpin the overlaying of CPTED principles in an order suitable to prevent crime or enhance 'resistance to approach' from an offender. CPTED has demonstrated an

ability to adapt and reduce crime in retail environments (Casteel & Peek-Asa, 2000; Casteel, Peek-Asa, Howard & Kraus, 2004), indicating a flexibility that could suggest application to the supermarket environment is achievable. This research and discussion also demonstrates the requirement for stakeholders to come together to refine CPTED and ensure that the haze of ambiguity is dispelled and that practitioners can pick up the tool box knowing what each of the tools does and where and when to use them. Practitioners should be involved in refining CPTED; being active in doing, as opposed to passive in being done to may just assist to alleviate the ignorance referred to by Crowe & Zahm (1994).

Criminological theory definitely has a role in supporting supermarkets and practitioners to deliver at a local level. It could be suggested that some are more open to the use of such theory than others, but the key issue is that the concept has to add value to what could already be theory saturated process. CRAVED (Clarke, 1999) could arguably be obsolescent within the supermarket environment, as the vast majority of products they sell align to each component of the theory, thus it being debatable what value it adds. There will be some items such as pharmaceuticals that by their very nature are controlled, but beyond that it will depend very much on the supermarket. This research has found that shoplifters are more than capable of concealing products, whether upon their person or through deceit and sometimes distraction. Products are removable and available, in order to support the needs of the customer, and everything from meat to health and beauty products, and alcohol to electronics are of value to a shoplifter. Supermarkets understand what high loss items are, but are more often than not constrained by the customer comes first principle that drives their business model. Protecting products by process or physically locking them in a display unit is usually a last resort for the supermarkets.

Disposal is everything to the shoplifter committing theft to then sell the goods to support an addiction or lifestyle, it is the driving factor with offenders looking to move the stolen goods

on, and quickly. There are many potential disposal routes for shoplifters, including the local pub, online, second hand markets, to other businesses or direct to the 'customer' who has placed the order. So if demand is directing supply, then CRAVED plays little part in understanding the characteristics of products that make them attractive to thieves, as it is not they who crave them (Smith & Clarke, 2018). The supermarkets view technology as a potential way forward in preventing crime, the advancement in smart shelf technology or the opening of Amazon Go in the United States may provide the traditional supermarket space with new concepts to protect products. What this research demonstrates though is that an over reliance on technology can result in a level of disregard from shoplifters if there are no negative outcomes on their offending activity through its presence, which is most definitely the case in relation to CCTV. However, the convergence of effective design, physical security interventions and technological advancements in product display could have a significant impact on the suitability of a target; either in the choosing of the store in the first place or the products within them.

Offender based research has been used previously to elicit views from those that have actually committed the crime (Cardone, 2006; Carmel-Gilfilen, 2011; Cardone & Hayes; 2011; Lasky et al., 2017). Accessing the 'black box' should always be a consideration for any research project, and in relation to shoplifting there are no better informed to discuss attractions, considerations and deterrents when committing theft than shoplifters. Some may suggest a risk of truth amplification, whilst others embrace the opportunity to understand offenders to enable an invaluable insight into their world (Ekblom, 1997; Gill et al., 1999). One issue that needs to be examined in future research is the verification of the offending history of those participating in the study. Incentivising participation (Lasky et al., 2017) or inviting participation through media advert without substantiating the claims of the offenders in relation to their experience (Carmel-Gilfilen, 2011) potentially undermines the research.

Engaging those offenders in research that have previously been prosecuted for their crimes has also received a degree of pessimism. To suggest those prosecuted have been unsuccessful in their crimes and lack competence is somewhat imprudent (Carmel-Gilfilen, 2011; Cardone & Hayes, 2011). Prosecution ultimately means a lack of success in relation to the crime you have been prosecuted for. However, in relation to shoplifting this would be an imbalanced view given that some shoplifters are offending on a daily basis and do not get caught for a significant amount of the theft they are committing. The advantage of engaging ex-shoplifting offenders who have overcome their addictions and turned their lives around is that they engage for the right reasons, they have nothing to prove. Fortunately, for the purposes of research, they have a wealth of experience and an extensive knowledge of deceit and distraction techniques to circumvent much of the security found in the supermarket environment. One point that could be raised in relation to the participation of ex-offenders in research is that their opinions could be dated. However, when their thoughts are corroborated with the findings of other research (Gill, 2007; Beck, 2016) it quickly becomes apparent whether their thoughts are indeed outdated. The perceptions of the ex-shoplifting offenders participating in this research were as valid in 2017 as they were almost twenty years ago in relation to the contempt for CCTV (Gill et al., 1999).

A positive aspect of engaging offenders in research is that it can result in an elevated level of interest from those that they have offended against, which was certainly the case in relation to the supermarkets engaging with this study. The thoughts of offenders hold intrigue that those of a practitioner discussing physical security standards and products simply does not.

Offenders think like normal people, but it could be argued that normal people do not think like them, so their involvement provides an insight unobtainable anywhere else (Cardone, 2006). If the designers of interior space within supermarkets are to reduce the opportunities

for shoplifters to commit theft, they have to be supported in ‘thinking thief’ (Ekblom, 1997) and research attempting to understand the offender will assist them in achieving this.

An interesting, yet alarming, disconnect identified through this study is that between academic research and the end user. The supermarkets had no knowledge of CRAVED (Clarke, 1999) or the Routine Activity Theory (Cohen & Felson, 1979), yet felt there was merit in exploring how such concepts could assist them in planning interior space to reduce opportunities for shoplifting to occur. McNees et al. (1976) provided detail on a cost-effective method that almost eradicated shoplifting; Ekblom (1997) encouraged designers to understand their thieves and ‘think thief’; Gill (2007) provided a valuable insight into the behaviour of shoplifters; Beck (2016) explored the amplification of risk in retail environments, four key pieces of research over a forty year period, yet little appears to have changed in relation to some of the findings. Research has the opportunity to inform and assist in the prevention of shoplifting in a multitude of ways whether manufacturing processes, addressing inefficiencies in EAS; designers tasked with planning the interior spaces of supermarkets; staff training programmes or how behavioural sciences (Sharma, 2015) could enhance the signage that meant nothing to the participants in this study.

There has to be a new approach to the prevention of shoplifting. Stores are experiencing increasing levels of loss from customer theft (British Retail Consortium, 2017), the supermarkets are aware of the limitations of existing physical security and there is no shortage of willing shoplifters to peruse the stores for the latest in demand products, at the expense of very little risk or consequences. The supermarkets are also rightly exasperated by the repetitive and somewhat unimaginative call of the ‘crime prevention warbler’ to “move that stuff away from the door mate”, as well as the claim from some quarters that they do nothing to prevent shoplifting, when in fact they invest millions of pounds per annum (British Retail Consortium, 2017). Shoplifting will never be eradicated, but a refined CPTED, with a

bespoke set of tools with clear instructions for those charged with using them, could provide a way forward if designing out crime is a more sustainable approach (Design & Technology Alliance Against Crime, 2011).

Conclusion

The primary aim of this research was to explore the applicability of CPTED principles to a retail environment, specifically supermarkets, whilst eliciting the perceptions of ex-shoplifting offenders and supermarket designers on design, layout and other elements of their respective decision-making processes. When explaining what constituted a suitable target, participants referenced the design and layout of a store and the availability of what they perceived to be attractive products, combined with the absence of effective deterrents. The participants indicated that the products of most appeal were those that were in demand that people required out of necessity, low priced items, products that, due to price, appeared to fall outside the scope of EAS and also higher priced items that resulted in reward being commensurate to the risk.

Security measures that were deemed ineffective and met with a level of disregard included EAS and CCTV; EAS due to inconsistencies in the initial application of the tag and the ease of removal; CCTV due to ineffective monitoring and a belief that it did not impact on their behaviour whilst committing the act of theft, or indeed that cameras were effective in preventing crime. Conversely, participants suggested that targets deemed unsuitable were stores where the design and layout enhanced opportunities for surveillance, specifically where the service counter or checkouts were adjacent to the entrance and exit to the store, and also in stores where their through movement was managed by the layout. Participants primarily explained that products with a smaller financial return were not worth their

attention, as they would have to steal higher volumes and risk detection. There was also an indication that products could be an unattractive proposition based on their size.

The perceived effectiveness of physical security interventions also influenced the selection of targets, especially where there was a convergence of measures. CCTV that was monitored live time, tagging of products at source and alarm barriers that prevented the opportunity to circumvent were all deemed effective physical deterrents. Security guards situated at the entrance and exit of the store were also seen as effective deterrents, but only if they were utilised consistently, solely for the purpose of guarding and had the perceived aptitude and enthusiasm for doing the job.

During the store walk round phase of the research, participants were not prompted in relation to focussing on the design and layout of the supermarket, in order to ensure their observations were based on their own narration of the journey through the interior space. It became apparent that some of the key components of CPTED could present deterrents if implemented effectively in the supermarket. Surveillance was the principal and consistent concern, with every participant explaining the need to conceal their intentions to vary degrees from security guards, shop floor staff and legitimate users of the store and CCTV to an extent. Participants also provided thoughts on how surveillance could be enhanced throughout the supermarkets, including that: CCTV is monitored live time, promotional offers do not obstruct the views of security guards, blind spots are designed out, shelving units are lowered and changing rooms are staffed at all times. Target hardening was perceived to be a deterrent, but to a lesser extent due to inconsistencies in the application of tags. The key weaknesses in EAS tagging were that tags were loose, applied on packaging that could be removed, in a position where they could be cut off, that alarm barriers could be circumvented and an apathetic response from staff if the alarm was activated. Access control, in the wider sense of movement throughout the store was

also a factor in influencing store and product selection. However, some participants also spoke about the ease of moving products within the store to make it easy to conceal them.

The interviews with the supermarket designers provided an insight into existing principles utilised when designing the interior environment. The customer without doubt comes first; what they see on entering the store, the aesthetics of the environment, promotional offers and how they move with ease throughout the store are all leading considerations. The design process for the interior environment involves a number of teams, including those who have the responsibility for space planning, formatting and compliance with health and safety legislation. Security and loss prevention do feature, but not necessarily explicitly, with considerations taken into account at various stages. There is the opportunity to review design facets that may facilitate the opportunity for crime, but a commercial view and the customer will also come first.

Although CPTED did not feature within the design process for the supermarkets, some of the key components are already utilised. Surveillance was referenced during the interviews with the supermarket designers, primarily through the use of CCTV. However, a specific feature providing concealment opportunities had been designed out and clear sight lines were important on entering stores. Target hardening in the form of EAS was alluded to, but supermarkets knew the limitations of this approach. Access Control and the movement through the interior space was important from a customer point of view, but not in relation to the offender. Conversely, multiple entrance points caused concern for both loss prevention and the planner. Defensible space did not feature in the discussions with the supermarkets, yet it is definitely a component of CPTED worthy of further exploration in terms of integration into the supermarket planning process. One of the supermarkets referred to how certain fixtures are versatile in where they are placed within the layout of the store, thus giving scope to the creation of spaces that are defensible in CPTED terms. The caveat being that any such facet

of design should be customer focussed, whilst featuring the advantage of reducing the opportunity for crime to occur.

The findings of this research indicate that a refined CPTED could be used within the planning process for the interior environments of supermarkets. Sympathetic changes could arguably be made to the interior space of supermarkets to make them more 'resistant to approach' from offenders, without compromising the experience of the legitimate user.

Future research relating to the use of CPTED in shaping the interior space of supermarkets holds some stimulating and innovative opportunities. An assemblage of ex-shoplifting offenders and supermarket designers would provide an opportunity to converge the antithesis of opinions in what may constitute the effective designing out of crime. This would enable the findings of this research to be explored further, in collaboration with a wider sample of ex-shoplifting offenders over a sustained period of time, resulting in a corroboration of the initial indications that CPTED can be adapted for use when designing the interior space of supermarkets. The materialisation of plans shaped by both the user and abuser journeys would be a major step forward in reducing the opportunity for crime to occur within the supermarket environment.

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