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EFFICACY OF PROPERTY MARKING: POLICE IDENTIFICATION OF STOLEN PROPERTY

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Abstract

Property marking, as a situational crime prevention technique, has found to be largely ineffectual in the reduction of property theft, although past studies have not considered the role property marking as an aid to the return of stolen or lost property. However, automotive identification and some studies have found that in some cases property marking is effective. Furthermore, many crime prevention groups focus on property marking as a means to reduce crime and the fear of crime.

Therefore, the study investigated the processes of lost, stolen and seized goods by law enforcement personnel. The study undertook a qualitative analysis of law enforcement property identification process, including a documentary analysis of procedures and practitioner interviews for content-thematic analysis.

The study found that the use of manufacturer serial numbers was the initial line of investigative enquiry. Limiting factors were technical capability to find and use covert property markings. The successful implementation of a code of best practice or standardisation in the recording of serial numbers, and the availability of the community to quickly and easily record their property may have a significant effect in the reduction of property crimes; due to the perceived increase of risk and potential reduction of reward to the offender.

Key words

Property marking, situational crime prevention, investigation, stolen property, identification

INTRODUCTION

The efficacy of property marking, as a primary situational crime prevention technique, has been largely ineffectual in the reduction of property theft (Knutsson, 1984; Laycock, 1985). However, there has been studies (Brooks, Coole, & Corkill, 2014 unpublished; Laycock, 1984) that has shown that when applied at saturation levels, property marking is effective. Furthermore, the success of identification as a method of reducing theft and enhancing the rate of return of property to the legitimate owners in the vehicle industry may be further evidence that property marking can be effective if applied appropriately (Rhodes, Johnston, & McMullen, 1999; Rhodes and King, 2003).

Many crime prevention groups promote property marking as an effective method to reduce burglary and property theft. For many of these crime prevention groups, property marking is a core strategy, with little evidence to support the efficacy with returned goods. Therefore, the aim of this study was to examine how state law enforcement agencies use property marking as a method of establishing ownership of lost, seized or stolen property.

Research Questions

The Research Question addressed by the study was “Does a state law enforcement agency have the necessary systems in place to use property marking as a means of identifying rightful owners of lost, stolen or seized property?”

BACKGROUND

Property theft through burglary and stealing is a continuing concern for many residents and law enforcement agencies. These concerns are well founded, as during the first eight weeks of 2014 there were over 4400 reported cases of burglaries throughout the greater Perth Metropolitan area (Western Australian Police, 2014). The financial burden of burglaries extends past the initial loss of property for the victim and extends to

resources that must be engaged to rectify the theft of property (Brand, Price, & Britain, 2000). Furthermore, the social cost of burglary can significantly impact on the psychological health, wellbeing and perceived safety of victims and the community (Thornton, Walker & Erol, 2003).

To mitigate the impact of property crimes, such as burglary, individuals may transfer the risk through paid services such as insurance. However, whilst the cost of risk transfer is passed onto the consumer through their insurance premiums, law enforcement agencies must sustain the cost as both economic and social burdens. The cost for law enforcement is an increasing burden that cannot be transferred and impedes the availability of assets in other areas.

Law enforcement agencies around the globe establish and instigate many forms of situational crime prevention methods to limit the opportunity of crime or its reward (Cromwell and McElrath, 1994). Property marking, as a situational crime prevention technique, focus on reducing the resale of the item for financial gain (Clarke and British Government, 1999; Cromwell and McElrath, 1994; Eck and Weisburd, 1995; Mawby, 2001). Nevertheless, the use of property marking as a primary situational crime prevention technique has limited positive results (Cromwell and McElrath, 1994; Marlow, 2011). Therefore, this study examined the use of property marking through understanding how stolen property is currently handled by state law enforcement agencies.

UNDERLYING THEORY

The study considered the efficacious nature of property marking through the theory of situational crime prevention. The basis of many criminological understandings of crime and criminality are embedded in the psycho-social origins that influence the individual. However, these consider the potential offender only and ignore the situational variables interacting with the actor at the time of an offence. Situational crime prevention is different, as it is concerned with the anticipation of criminal incidents by removing opportunities (Johnson and Bowers, 2003; Tilley, 2005).

Situational crime prevention theories focus on the modification of the immediate conditions in which crimes are committed. Clarke (1995) purports that situational crime prevention comprises of measures that reduce the opportunity of criminal activity which are; directed at specific forms of crime; involve the management, design, or manipulation of the immediate environment in a pragmatic and permanent manner as practicable; negatively affect the offenders personal risk analysis by increasing the risk and difficulty, or reducing the reward (Tilley, 2009).

The effective use of property marking does not directly affect the predisposition of an individual to display deviant behaviour. However, it may indirectly affect the willingness of an individual to steal an item due to the risk of not being able to sell the item which is marked. Property marking may also act as a passive extension of guardianship, as the permanent marking represents ownership which may increase the risk to the offender if caught in possession, or attempting to resell the property (Boba and Santos, 2008; Wilcox, Madensen, & Skubak-Tillyer, 2007).

The study drew on situational crime prevention by considering how property marking is used by law enforcement to return the property to legitimate owners. The ability to map the efficacious nature of property marking, beyond the theft/disposal cycle, provides a significant understanding of the holistic manner in better understanding situational crime techniques.

LITERATURE REVIEW

A number of studies have addressed property marking as a situational crime prevention technique; all with the intent to measure the effectiveness of property marking as a method of reducing the reward to the offender. For example, Gill, Kolde and Schimerman (1975) examined the results of a property marking program, with a primary objective was to reduce incidents of burglary. The results of the study indicated that the extent of burglary deterrent effect was dependant on the availability and implementation of other crime prevention techniques. There was no significant increase in the return of stolen property; however, consideration was not given to the increase of difficulty that offenders were able to sell the property; the increased ability to convict; and the increased ability to return the property to the legitimate owners.

Knutsson (1984) analysed the effectiveness of a property marking campaign for the deterrence of burglary in a significantly more controlled environment than in the Gill et al. (1975) study. Results indicated that there was neither significant decrease in burglaries nor any significant increase in the ability to return stolen property (Clarke, 1995; Takala, 2005).

A further study conducted by Laycock (1984) examined property marking, which established the ineffectual nature of property marking in the ability to return stolen property. There was no marked property returned at all; however, it should be acknowledged that there is a small sample base for this data. These findings are in contrast to a recent study (Brooks, et al., 2014 unpublished) that have found when property marking is applied in saturation, it appeared effective in reducing property crime.

The automotive industry has introduced the widespread use of unique identification numbers as a method of decreasing the sale of stolen parts and increasing the ability to identify. Vehicle identification numbers (VIN) were first introduced into the automotive industry in 1954 (NHTSA, 2013); however, these early VINs were largely ineffectual as a preventative measure as there was no standardisation of numbering systems between manufacturers or countries. Hence, in 1981, the United States National Highway Traffic Safety Administration (NHTSA) set the standards for VINs (Harris and Clarke, 1991). A global standard was established by the International Organisation for Standardization (ISO 3779:2009) as a requirement in the production of vehicles, referred to in the Australia Design Rules (ADR 61/2).

The examination of the literature on property marking as a situational crime prevention technique emphasises that there are concerns with the efficacy of property marking as a method of reducing the likelihood of theft. However, this highlights that there is a dearth of supporting literature that pertains to mapping the law enforcement process used to identify and return stolen property.

METHODOLOGY

The study design included a two stage process (Figure 1), with stage 1 being a documentary analysis followed by stage 2, interviews with thematic analysis. The documentary analysis reviewed the state law enforcement procedures of identifying lost, stolen or seized property. Stage 2 was a content-thematic analysis of interviews with participants' to establish the cultural procedures and themes (Appleton and Cowley, 1997; Fitzgerald, 2007). The participants were a purposive sample drawn from the state law enforcement (Glaser and Strauss, 2009).

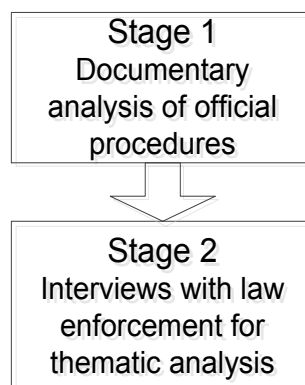


Figure: 1 Study Design

Documentary analysis was used to review the state law enforcement agency procedures in identifying lost, stolen and seized property, to develop a flow model of the official systems.

The semi-structured interviews were subject to content-thematic analysis to establish commonality or dissimilarities in the interviews (Braun and Clarke, 2006). The interview process allowed the interviewer to engage in a manner that was beneficial in establishing motivational, behavioural and procedural considerations of the subject (Fylan, 2005). In these interviews, it was essential that the questioning was neither too narrow in focus nor leading, as this would reduce the impact provided by the initial sample population (Parasuraman, Berry, & Zeithaml, 1991). The data collected attitudes to property marking, behavioural conformity to policy and factual procedural activity.

STAGE 1 DOCUMENT ANALYSIS

The necessity to conduct an analysis of the law enforcement agency official procedural documentation was required to gain a greater understanding of sanctioned work practices, not to address concerns of authenticity or soundness of authorships (Fitzgerald, 2007; Scott, 1990). The themes that were recognized within the documents were compared to the cultural procedures of the investigative officers to establish that procedural

requirements were understood and applied. This review also emphasised any disparity in processes. As suggested by Shaw, Elston and Abbot (2004), official documents are likely to be subjective or cursory, and representative of objectives rather than realities.

This stage developed the official law enforcement agency procedures (Figure 2) in their handling of lost, stolen and seized property. The chart demonstrates that the agency delineate the process into three main categories; being receipt, processing, and disposal.

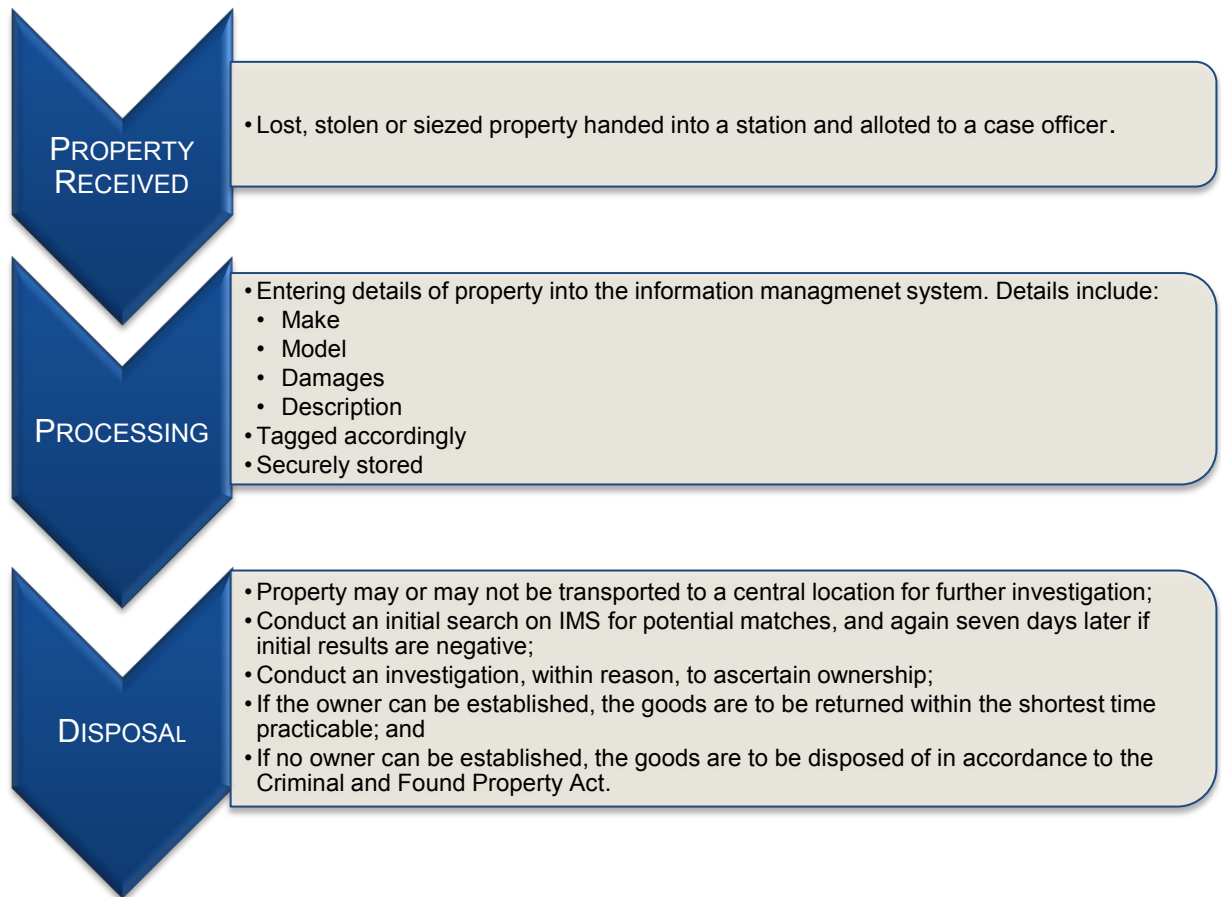


Figure 2: State law enforcement agency lost property procedures

Through the following interview process, it was evident that the participants were aware and adhered to the procedures. Nevertheless, participants displayed a significant inclination towards the investigation of the property with the intent to return property. They all acknowledged and discussed, in verbatim, official procedural requirements. This factor suggested that cultural expectation and procedures are enacted as an augmentation to the official procedures and not a barrier.

STAGE 2 THEMATIC ANALYSES

The themes identified through the content-thematic analysis of the interviews provide a greater understanding of the cultural, technological and process factors that were encountered by participants who investigate and process lost, stolen, and seized property. Primary extracted themes included the use of serial numbers, conformance to procedures, lack of covert marking investigation and limited use of property marking technology.

Serial Numbers

The most significant theme that is consistent throughout the expert interviews is the concentration on the use of manufacturer serial numbers as an investigative technique. The participants purported that after receiving property, their initial enquiry involved the investigation of the manufacturer’s serial number and if this has been recorded. The majority of items that are considered high theft risks are portable electronic devices, which do

have manufacturer serial numbers. However other high theft risk property, such as jewellery, is not able to be serialised due to size or aesthetic reason.

It may be argued that the recording of serial numbers is not an effective marking technique as the serial numbers are located on removable stickers. However the success of a form of serial number recording has been evident in the vehicle industry for a number of years.

Conforming to Procedures

All participants stated that a significant barrier to the use of serial numbers is non-conformance or non-standardisation in recording the property details. The global standardisation of VIN's, by the International Organisation for Standardization (ISO 3779:2009), is an example of how effective control of recording assist in the investigative process.

Covert Marking

The use of Ultra Violet marking is arguably the most common property marking technique; however, this factor was not evident in the interviews. A theme that was congruent within the interviews was that covert marking techniques were not immediately considered as an investigative option.

Furthermore, the use of covert marking as identification was not considered unless prompted. The participants explored a number of avenues of investigation that may be considered less time effective, such as searching for the appropriate charger for an electronic item and the accessing of stored data, before establishing the existence or no-existence of covert marking.

Technical

The most significant barrier for covert property marking being non-effective was the lack of technical availability. There are a significant number of techniques in covert marking, and within each method there are a number of discovery techniques.

From an investigative aspect, this becomes a technical barrier to be able to access the range of illumination devices to fluoresce. The availability of the correct illumination device existed; however, the ability to locate and access the item greatly increases the time and difficulty to investigate. These barriers extend beyond ultra violet marking and can be extended to all forms of covert property marking, such as data dots, chemical marking or DNA tagging.

Overt Marking

A common theme identified in the interviews was the effectiveness of overt property marking; such as engraving or stickers. However, it was also established that there appears to be a non-willingness or apathy of the owners to overtly mark their property. In addition, it was discussed that overt marking of high theft items such as appliances, bicycles, and electrical goods is effective; yet diminutive items such as jewellery is often difficult or not ascetically desirable to the legitimate owner apply overt marking techniques.

INTERPRETATION

The study investigated the efficacy of property marking in the facilitation of the return of lost, stolen or seized property. The Research Questions addressed the ability of a state law enforcement agency to use property marking as an investigative tool by understanding official procedures, how they were adopted and what barriers may exist.

It has been established that the enforcement agency have systems in place to facilitate the return of stolen, seized or lost property; which the investigative officers are familiar with. The investigative officers were aware and apply the documented procedures. Nevertheless, the official procedures displayed a significant skew towards the disposal of the property versus the facilitation of the return of property. However, the cultural procedures tended towards the investigation of property with the intent to facilitate the return of the property to the legitimate owners.

General property marking was not an effective tool to facilitate return of stolen or lost property due to a number of barriers. A significant theme was the use of covert property marking techniques being not efficacious in assisting with the return of property. However, the use of overt marking techniques, such as engraving or stickers, significantly increased the likelihood of assisting return. The most significant investigative tool used to identify larger property and electrical items was the unique manufacturers' serial number.

Significant barriers exist, which reduce the practicability of using a number of property marking techniques. Barriers were identified as technological constraints, the unwillingness of the public to mark or record of their property, and apathy towards the potential of the return of property.

Such findings are congruent with those reported in a number of case studies (Gill, et al., 1975; Knutsson, 1984). Although these studies focused predominantly on the effect of overt marking as a situational crime prevention technique to reduce theft, these suggested that overt marking was able to establish the legitimate owner. In contrast, the use of covert marking was found to be ineffectual in the reduction in theft and that markings were also less likely to be found by investigative officers due to technical barriers.

Limitations

The most significant limitations were the limited the number of participants to meet purposive prerequisites and time constraints. Therefore, recommendations are based on the strength of consistent themes from a small sample. A further limitation was the inability to observe actual processing of property, although this was not considered to be problematic.

RECOMMENDATIONS

Based on the evidence established though the study, the following recommendations were developed:

The most significant finding was the extensive use of manufacturers' serial numbers in establishing the legitimate owner of property. However, there is limited propagation in the use of serial numbers in crime prevention strategies. In contrast, ineffectual covert techniques such as ultra violet marking and engraving receive prominent note.

The use of covert marking techniques has proven to be ineffectual as a tool to facilitate the return of property due to time, technical and resource barriers. The use of overt marking has been disadvantaged due to the lack of willingness of the legitimate owners to participate.

Community engagement program or insurance companies should establish a register of serial numbers in an uncomplicated and unobtrusive manner. Techniques such as a secure online user modified database to record serial numbers would provide a low cost, low risk, flexible solution. An expansion of this concept may include the ability to attach photographic evidence for property that is not serialised, such as jewellery and artwork.

Finally, development of a code of best practice or standardisation in the recording of property marking should be undertaken. The significance of this approach can be seen in the automotive industry.

CONCLUSION

The majority of existing studies and literature question the efficacy of property marking as a primary situational crime prevention technique, only examining the rate in which property marking effects the crime rates. In many of these studies it is suggested that property marking has being largely ineffectual in the reduction of property theft (Knutsson, 1984; Laycock, 1985). However studies (Brooks, et al., 2014 unpublished; Laycock, 1984) have shown that at saturation, property marking is effective in reducing property crime. Furthermore, the success of reducing theft and enhancing property return in the vehicle industry may be evidence that property marking can be effective if managed adequately (Rhodes, et al., 1999; Rhodes and King, 2003).

The study gained a more profound understanding of how property marking is utilised by local law enforcement agencies as a tool to facilitate the return of property; not to re-examine the effectiveness of property marking as a primary or secondary crime prevention technique. By doing this, the study established that property marking, as it exists, provides negligible assistance in the facilitation of the return of lost, stolen or seized property.

Official procedures regarding the handling, investigation and disposal of property are adhered to by law enforcement officers. Their cultural procedures exceed what was required in their daily duties; however, technical, time, conformity and participation barriers exist that reduce the rate property is successfully returned.

The most significant finding was the use of manufacturer serial numbers as the initial line of investigative enquiry, which could be compared to the successful use of serial numbers used in the automotive industry. This factor suggests that the existence of a cultural procedure which, if supported by official procedure and community participation, may produce similar positive results.

The successful implementation of a code of best practice or standardisation in the recording of serial numbers and the availability of the community to quickly and easily record their property, may have a significant effect in property crimes and return; due in part to the perceived increase of risk and potential reduction of reward to offenders. The instigation of this form of community program may also have the consequential effect of the reduction in cost to local law enforcement agencies with an efficiency property investigations and insurance premiums.

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