PREVENTIVE CONSERVATION

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THEFT IN MUSEUMS IN THE NETHERLANDS – FACTS AND FIGURES TO SUPPORT COLLECTION RISK MANAGEMENT

ABSTRACT

This paper describes the results of a consultation of museum security experts in The Netherlands to collect data on probability and impact of museum theft and effectiveness of security measures.

RÉSUMÉ

Cet article décrit les résultats d'une consultation d'experts de la sécurité dans les musées aux Pays-Bas en vue de recueillir des données sur la probabilité et l'impact des vols dans les musées ainsi que l'efficacité des mesures de sécurité.

RESUMEN

Este artículo describe los resultados de una consulta realizada a expertos en seguridad de los museos en los Países Bajos, con el objetivo de recolectar datos sobre la probabilidad y el impacto de robos en los museos y la eficacia de las medidas de seguridad.

INTRODUCTION

Museums all over the world become victims of theft sometimes. As a result of globalisation, cultural heritage objects travel faster and further away, whilst tracking and tracing of stolen goods and criminals is becoming increasingly difficult. There will always be thieves and collections cannot simply be kept behind bars or in a safe. Museums have a responsibility to provide the public with optimal access to their collections. The dilemma of security versus accessibility is omnipresent.

To select appropriate security measures, the risks of theft to museum collections should be assessed. Yet there is very little knowledge available to assist risk analysis. How many incidents occur each year? Which objects are stolen and how many at a time? What are the motives? Which and how many objects are recovered after theft and how? Because of the lack of data, prevention of theft within institutions is often based on technical or financial feasibility instead of what is really relevant and effective.

Although this paper refers to the situation in Dutch museums, international literature, reports, websites and blogs were studied in search for available data on museum theft. Most sources concern descriptions of individual cases, qualitative studies on aspects of museum theft or anecdotal stories. There seems to be a lack of statistics and data on museum theft. Exceptions are a survey of Dutch museums in 1992 by the Ministry of Justice, which showed that museum theft should be considered a serious problem (Etman 1992), a report on crime prevention in Dutch museums for the Ministry of Culture (Intomart 2000), and a thorough study on cultural heritage crime in the Nordic countries (Korsell 2006).

In analogy to Tétreault's paper on the risk of fire in Canadian museums (Tétreault 2008), eleven museum security experts in The Netherlands were interviewed to obtain opinions about probability, impact, and effectiveness of security measures in relation to museum theft in the future, taking into account current and expected developments in both security technology and criminal interest. Some experts have many years of experience in museum security as consultants, heads of museum security or cultural heritage inspectors, others as criminologists, police officers or international insurance brokers, working in the field of cultural property or fine art. The results of the consultation are quantified as far as possible to support

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risk scenarios with data on probability and impact of theft in relation to the presence or lack of security measures. In 2011, the approximately 800 Dutch museums will receive an extensive questionnaire on theft incidents in the past five years. Expert predictions will then be combined with data on occurrence in the past. Together they should provide better insight into the risk of theft.

PROBABILITY – HOW OFTEN?

The experts estimate that theft incidents in museums in the Netherlands occur on average once to twice per year per individual museum (although some say once per seven years and five times per year). The probability of internal theft, by own staff, might be ten times as high as that of external theft. Probability of theft decreases rapidly from small objects (large probability), to medium size (can be carried by one person), to large objects (require a team, small probability). These numbers are higher than those from earlier studies which stated that 20 percent of 224 Dutch museums had one or two thefts from exhibitions in a five year period, 5 percent had 3–5 incidents and 2 percent had 6–10 incidents (Etman 1992). This averages to one incident every 1–5 year. The other Dutch study showed that 15 percent of 227 museums had thefts from exhibitions in one year, averaging to one incident per seven years per museum (Intomart 2000). Roughly 10 percent of Nordic museums and libraries had lost objects each year in the previous three years (Korsell 2006). It is believed that the higher numbers that experts provide are closer to the truth, as museums tend to be more hesitant to admit security failures.

Type of theft

Theft is used as a generic term for various intentional acts that lead to the loss of objects. For this study they were subdivided into eight types (see Table 1). Burglary is forced entry by outsiders into a building for the purpose of committing an offence (breaking and entering). Unauthorised access or intrusion is without force. Shut-in or lock-in is performed by entering during opening hours and staying behind until after closure. Internal theft refers to insiders, such as museum staff or volunteers with access to collections, committing theft. Opportunistic theft is an unpremeditated act by individuals who grab the opportunity to steal an object (opportunity makes the thief). Armed robbery (heist or hold-up) is a premeditated act that involves violence and fear. Hit and run is a bold entry and action with immediate exit to avoid capture. Silently planned refers to a theft that is carefully planned, involving several preparatory visits and executed during opening hours. Given the estimated average of 1–2 thefts per institution per year, the probability of each of these types is given in Table 1 as 'high', which means equal to the general average; 'medium', which will be once every two to five years; and 'low', which means less than once every five years. Internal theft is by far the most probable, followed by opportunistic theft. Shut-in is the least likely to occur.

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Types of objects at risk

Table 2 lists the probability of theft for different object categories. Books and archival material are considered to be highly vulnerable for theft. The main reason is that individuals have easy access to these works in reading rooms. Single pages or images in books or files are not registered and can easily be removed unnoticed. Once removed, they can easily be sold because it is difficult to identify and trace them. Precious materials and coins have a high probability because they can be melted and re-used. However, due to their high monetary value, they are usually protected above average. The Nordic study revealed that mostly historic everyday objects were stolen as they are small, not highly valued and left unguarded, making them an easy prey for opportunistic thieves (Korsell 2006, 68).

The general assumption is that there is a relationship between the value (monetary or cultural) of the object and the likelihood of premeditated theft; the higher the value, the more risk and effort one is willing to take to steal the object. Many experts see a preference for certain types of theft – object category combinations. Table 1 shows which object categories are most at risk for the various types of theft. Only the most mentioned combinations are listed. Opportunistic thieves prefer to take 'nice to haves' like small historic objects, books and archival materials. Focused and planned thefts are aimed at objects with high financial value.

Location

For the relationship between type of theft and location, the experts had to indicate which combination they thought to be the most likely. The locations to choose from were exhibition space, storage space, public area with collection, conservation/office/laboratory, during transport, and loading dock. Table 1 lists the most mentioned combinations.

The most likely combinations are internal theft from storage, where staff can operate unnoticed, and armed robbery during transport, when there are relatively few people on the scene. Burglary in exhibitions also scores high. Opportunistic theft of collection objects in public areas is expected, as these are often outside the secured area.

Time of day

Most experts generally estimate a higher probability of theft during weekends, when there is few qualified and responsible staff present whilst the number of visitors is large. Also at the moment of opening or closing the museum, when there are few visitors, staff is occupied elsewhere, there might be less supervision and some of the alarms may either not yet be engaged or may already be disengaged. Other moments of increased risk are during the mounting and dismounting of exhibitions and during the shift change of security officers. At that moment, staff may be taken hostage to gain access to the building. The Nordic study revealed that 64 percent of objects disappear at night against 29 percent during the day (Korsell 2006, 81).

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Table 1
Probability of museum theft according to type of theft, objects stolen, location of theft, motive and time of day

Type of theft	Probability	Stolen objects	Location	Motive	Time of day
1. Burglary	medium	Paint old (4) Precious mat (2) Weapons (2)	Exhibition (6) Storage (3) Public area (3)	Ransom (6) Sale (3) Collector (3)	weekend night (5) week night (4) day after hours (3)
2. Unauthorised access	low	Paint old (1) Precious mat (1) Weapons, coins (1)	Exhibition (5) Public area (5) Offices (3)	Ransom (2) Collector (2)	weekend closing time (3) week closing time (3)
3. Shut in	low	Paint old (1) Precious mat (1) Weapons, coins (1)	Exhibition (3) Storage (2)	Ransom (1) Collector (1)	weekend closing time (3) week closing time (3)
4. Internal theft	high	Book/archive (4) WOP (3) Coins (2)	Storage (8) Offices (3)	Own interest (4) Sale (2)	week closing time (2) week open (1)
5. Opportunistic	medium	Book/archive (3) Hist object (3) Coins, Archaeo (2)	Public area (5) Exhibition (3)	Own interest (2) Souvenir (2)	day open (5) closing time (2)
6. Armed robbery	low	Paint old (3) Precious mat (3) Paint modern (2)	Transport (8) Loading bay (4) Public area (2)	Ransom (4) Sale (3) Collector (2)	weekend opening time (4) week closing time (4) week opening time (3)
7. Hit and run	low	Precious mat (4) Paint old (1) Weapons, coins (1)	Exhibitions (4) Transport (2) Loading (2)	Ransom (1) Sale (1) Own interest (1)	day open (3) weekend opening time (2) week opening time (2)
8. Silently, planned and prepared	medium	Paint modern (3) Precious mat (2) Book/archive (2)	Exhibitions (5) Public area (3)	Ransom (2) Sale (2) Own interest (2)	weekend day (2)

High= equal to or above the general average of 1-2 incidents per museum per year; Medium= once every 2-5 years;
Low= less than once every 5 years
Numbers in brackets refer to number of experts that give the option a high probability

Table 1 lists the most mentioned type of theft/time of day combinations. Burglary is expected to take place mainly at night, during weekends and to a lesser extent on week nights. Burglars usually observe external conditions such as traffic, crowd, police surveillance, and escape routes. Opportunistic theft has a higher probability during opening hours, armed robbery during opening hours in weekends and at closing time during the week, when there are few visitors.

Motive

The Nordic study gives three main motives for theft: financial (sell, blackmail, collect, invest), status-seeking (souvenir hunting, collections, psychological), and political (blackmail) (Korsell 2006, 28). The experts see a relationship between the type of object stolen and the motive. Paintings have a high probability of being stolen for ransom. Famous artworks are difficult to sell, yet have a high financial, cultural and thus insurance value. Precious materials are mainly stolen for sales and profit. It is easier to melt or re-use them, which makes them difficult to trace and identify. Sculptures can be stolen for their bronze when the copper price is high.

Table 1 lists the most mentioned type of theft/motive combinations. Internal theft is often committed for the individual's own interest. Large or planned operations usually involve bigger and highly valuable objects where the loot covers the risk of being caught. Burglary, unauthorized entry and

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shut-in are often committed in assignment from collectors or for ransom. Political motives usually lead to vandalism rather than theft.

IMPACT – HOW BAD?

When asked for the effect of theft in terms of number of objects stolen, disregarding the financial or cultural value, the experts estimated on average 2–3 objects per incident. Burglary has the largest loss of objects per incident, averaging 4–5, and opportunistic theft the smallest, only one at the time. There is again a difference between internal theft, where on average 3–4 objects may disappear, and external theft with an average of 2–3 object per theft. Moreover, if internal theft stays unnoticed, numbers can accumulate over the years to reach hundreds. Especially books, pages from books, archival material, and works on paper are vulnerable to this type of theft.

The Dutch study amongst museums in 2000 revealed an average loss of 3–4 objects per museum per year (Intomart 2000). Most of these had hardly any monetary value, 16 percent had a value less than €2500 and only 10 percent had a value of more than €5000.

The worst case impact of theft is removal of the object, thus a total loss for the museum. When the chain of detection-alarm-response is faster than the thieves can act, they may damage objects in a hasty attempt to take them away. In the best case, the thieves are caught before loss or damage occurs. Still, in case of theft, the objects are not lost in absolute terms. They are transferred to a different caretaker who has an interest in keeping its value (monetary and cultural) and condition as high or good as possible. If not recovered within a reasonable time span, chances are that the objects will surface after a few decades or generations.

RECOVERY

The probability of recovery of stolen objects is generally estimated moderate by the experts. The term of limitation for art theft in The Netherlands is 20 years. After this period, thieves become legal owners of stolen objects, which means they may then emerge on the market.

There are several ways to increase the probability of recovery: report stolen or missing objects to authorities, register lost objects at an international database for stolen or missing art like the Art Loss Register (ALR), and make the incident public in the media. The experts consider a combination of these four measures the most effective to recover lost objects. Insured objects have a higher probability of recovery as insurance companies sometimes offer rewards for information leading to the thief or the stolen objects. Criminals sometimes demand ransom for the stolen objects. In both cases, insurance companies may attempt to retrieve the objects instead of paying out the reimbursement. However, paying the ransom or tip-off money means that theft is profitable, which encourages this criminal practice.

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International status, media coverage and registration in databases increase the probability of recovery for all object categories. Professional criminals are less sensitive to all this attention than opportunistic thieves; yet, the better known the object, the harder it is to sell. Object registration beforehand (at least object identification and high quality photos), including if possible specific identifiable characteristics to the description, is of great importance. When this information is at hand, police, as well as the Art Loss Register, for instance, can act immediately. Another way to increase recovery is stricter control over the arts trade. Objects that are fragile or in bad condition have a low probability of recovery.

Expert opinion is that the recovery of old master's paintings and works on paper is much higher than books and archival material because of their relatively good registration and documentation, whereas single pages and records are not described individually and difficult to trace. Although precious materials are well registered, their recovery is rather low because of the possibility to reshape them into unrecognisable objects; they are then easy to put on the market, which is exactly the reason why they are stolen in the first place. Weapons are often kept in private collections and are not immediately connected with museum theft when offered for sale.

Most experts see a relationship between probability of recovery and type of theft through related object categories. Table 2 lists the estimated recoverability. Burglary often concerns objects with high financial or cultural value. Consequently, the incident will usually receive media attention. There will be a police investigation and the stolen objects will be entered into a database. All of this results in a higher probability of recovery. Opportunistic thieves may get a bad conscience and return the stolen object. In case of internal theft, there is an increased probability of recovery as long as the object(s) are not sold, as the number of suspects is limited. On the other hand, both internal and opportunistic thieves may destroy stolen objects when the pressure gets too high instead of returning them. Coincidence, a perpetrator's desperate need for money,

Table 2

Types of objects, their probability for theft and the recoverability after theft

Types of objects	Probability of theft	Probability of recovery
Books and archival material	high	very low
Precious materials(precious metals, gems, jewellery)	high	very low – low
Works on paper(prints, drawings)	medium – high	low – medium
Coins	medium – high	very low – low
Paintings modern	medium – high	medium – high
Paintings old	low – medium	high
Archaeological objects	low – medium	very low
Weapons	low – medium	low
Historic objects	low	low
Sculpture	low	low – medium
Furniture	very low	low

High = equal to or more than the general average of once per museum per year; Medium = once every 2–5 years;
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and an incorrectly estimated market for the stolen objects also increase recoverability. Yet these factors are beyond the influence of museums.

RISK REDUCTION

Security measures can be implemented at organizational levels, as well as building and electronic levels (in Dutch the so-called OBE levels). Organizational measures are considered to be the most effective both for reducing probability and impact. Yet the experts seem to agree that probability can be reduced significantly, but impact only to a limited extent. For an overview of the various measures, their estimated reduction of probability and impact, and effectiveness against certain types of theft, see Table 3.

Table 3

Security measures, their effectiveness on reducing probability and impact of theft and type of theft for which they are especially effective

Implementation level	Reduction probability	Reduction impact	Effective against
Organisation(O)	*large*	*significant*	*all*
Staff procedures, screening	+		4
Integrity policy	+		4
Institution of criminal proceedings	+		4
Supervision of staff	significant	significant	4
Bag checks, interrogate		+	4, 6, 7
Awareness	+		4, 6, 7, 8
Training(recognition suspicious behaviour, response)	+	+	6, 7, 8
Professional security	large	+	6, 7, 8
Daily briefings			8
Co-operation collections and security	+		
Integrate security in exhibition planning	large	large	
Controlled access of all areas		+	2, 3, 4
Guards for exhibits and tours		+	2, 3, 5, 6, 7, 8
Supervision of transport	+	+	6
Closing round			2, 3
Visibility of monitoring	+		2, 5
Collection registration	significant	+	4
Weighing after use			5, 8
Location of objects		+	5, 6, 7
Restrictive routing			6, 7
Display replicas			1, 2, 3, 5, 6, 7, 8
Procedure for alarm response			6, 8
Procedures for recovery			8
Performing risk assessment	+		
Building(B)	*significant*	*limited*	
Securing/fixing objects	+	+	5, 7
Display cases	+	+	5, 7
Structural barriers, fence	+	+	1, 2, 6, 7
Compartmenting	+	+	
Electronic(E)	*significant*	*limited*	
Building and entry alarm			1, 2, 3
Electronic object alarm	+	+	
Detection gate			6, 7
Cameras and footage	+		7, 8
GPS, RFID			
Integrated OBE approach	*++*	*++*	
Overall	**large**	**limited**	

Numbers for effective against refer to type of theft in Table 1
+ mentioned by experts

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Some measures are better suited for particular types of objects than others. Fixing to wall or floor is especially effective for paintings, sculpture and archaeological objects, as is electronic motion detection and alarm, which is also mentioned for books and archives. For the latter, weighing before and after use is expected to reduce the probability of removing pages as well as more detailed registration (this goes also for works on paper). Guards during exhibitions and tours are effective for precious materials and archaeological objects. Radio Frequency Identification (RFID) and Global Positioning System (GPS) may be helpful in improving chances of recovery.

With their high probability of being stolen, small objects benefit most from display cases and fixing. Positioning them away from exits, spreading them out so that loss is more rapidly noticed, and creating distance between objects and visitors equally decreases probability. From the various security measures, some can be more effective in preventing certain types of theft than others. Staff procedures like screening, integrity policy, procedures for prosecution, controlled access to areas and bag checks are especially aimed at reducing the probability of internal theft. Training in the recognition of suspicious behaviour and response in case of emergency situations may help reduce planned thefts as perpetrators often visit in advance to study the situation. Display cases, fixing objects and visible security measures will discourage the opportunistic thieve and will delay burglars so that response time may be gained.

CONCLUSIONS

The numbers generated in this study may not suffice for quantitative analysis, but some qualitative conclusions can be drawn.

Averaged opinion of the experts is that a museum in the Netherlands is likely to have one or two theft incidents per year. This seems rather high compared to what reaches media coverage. Yet, only a small percentage of incidents is made public for various reasons. Of the different types, internal theft is the most likely to occur. Per incident only a few objects are lost (3–4), but if unnoticed, numbers can accumulate over the years to reach hundreds. Especially books, pages from books, archival material, and works on paper are vulnerable. Small historic and archaeological objects, books, documents and coins are at high risk for opportunistic theft. However, in the case of opportunistic theft only one object is stolen. Burglary has the largest loss of objects per incident, averaging 4 to 5.

The probability of recovery of stolen objects in general is estimated as moderate. Object registration, reporting losses to authorities, registration in databases, media attention and insurance increases the chance of recovery. The general rule that holds for all object categories is: the better known, the harder to hide or sell, the more chance of recovery.

Fire is a non-discriminating event and risk reduction measures have a general effect so that levels of control relating to probability and impact

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can be defined (Tétreault 2008). Theft is a discriminating event where motive of the perpetrator, vulnerability of the object, and modus operandi influence probability and impact in different ways. Different types of theft require different security measures. Therefore, definition of levels of control with associated ranges of probability and impact seems not possible, definitely not on the basis of this limited expert survey. Still the general trends and rough data generated by this study can be applied in collection risk management. Having a better insight in probability of particular types of theft in relation to the institution's type of objects, can assist in identifying appropriate OBE security measures and indicating strong and weak links in the chain of defence. These insights can be used for example in combination with the 'scenario maps' that help identify causes, pathways and OBE barriers to enable analysis of probability and impact of an incident (Peek 2009).

This round of expert interviews only sketches a half of the picture. The other half consists of the experiences from the museums in the recent past. A museum survey that is planned in 2011 will hopefully provide additional data that can be used to complement this current study.

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