THE PROBLEM OF AUTO THEFT

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1.1 INTRODUCTION

An old proverb states that "Money is the root of all evil," and some suggest that greed is an inherent human condition. Thieves have always been a scourge upon a civilized society, and the theft of means of transportation has been a problem throughout history. Passenger cars were stolen as soon as their production started. Starting in 1906, criminals such as Bonnot in France and Dillinger or Bonnie and Clyde in the United States stole vehicles to commit their misdeeds [1]. Vehicle theft has evolved from people simply stealing from another for their own personal use to a highly complex criminal endeavor. Generally, there is a clear distinction between property crime and violent crime. Vehicle theft is obviously a property crime, but it is more appropriate to recognize it as an economic crime and acknowledge that it becomes a hybrid crime when violence is used, such as in the case of carjacking.

Vehicle theft and its related criminal activities are epidemic throughout the world. They account for significant economic loss and affect the overall quality of life in communities. Vehicle theft is more than just a nuisance crime or about a piece of property. The real impact is the victimization that it causes to the modern and mobile society. A vehicle is no longer considered a luxury but a necessity for many people. Personal vehicles have become an integral component of everyday life and economic survival. The high cost of vehicles, insurance, and deductibles and the potential waiting periods for insurance settlements create a significant financial hardship for many victims. In some places, insurance is not mandatory or only liability coverage is required. These victims suffer the total loss if their vehicle is not recovered or is recovered but with severe damage. Thus, auto theft leaves countless victims without transportation, financially burdened, and feeling violated. In some cases, such as with carjacking, victims face direct confrontation with perpetrators, leaving them terrified, injured, or even dead.

This crime not only affects the quality of life of innocent citizens, but adversely impacts legitimate businesses, insurance companies, and governments. Legitimate businesses lose their clientele when organized crime groups sell similar but less expensive vehicles to unsuspecting clients. Car manufacturers must constantly increase security features and equip their vehicles with more expensive and more reliable anti-theft systems. Insurance companies have to handle a great amount of auto thefts, which decreases their productivity

and increases their premiums. Police forces have to handle a great volume of reported stolen vehicles, which increases their already charged caseloads. Auto theft is a real burden to the modern society, and its fight requires serious preventive, investigative, and repressive measures.

1.2 OVERVIEW

1.2.1 Motives

Fundamentally, vehicles are stolen either for profit or for convenience. The high profit potential with minimal risks is particularly attractive for professional thieves. Organized criminal groups have diversified and consider vehicle theft, insurance fraud, and other similar activities very lucrative. Vehicles are sold either as a whole or in separate parts. Other criminals steal vehicles to commit other crimes, thus for convenience.

A/ Insurance Fraud

Historically, during economic downturns, crime rates, including vehicle thefts, increase. Insurance fraud has become a component of the monetary benefit of vehicle theft. As the cost of new vehicles increases, some owners overextend their finances or otherwise decide to dispose of their vehicles. Once disposed, a fraudulent theft report is filed with the police, and a fraudulent claim is filed with the insurance company. This scheme is often encountered in Europe, where it is easy for an owner to bring his or her vehicle to another country, sell it, and then declare the theft. The vehicle is almost never retrieved in such instances, and the owner obtains monetary gain from both the sale and the insurance settlement (see Chapter 19).

B/ Resale and Export

The theft of vehicles for domestic resale or for resale after export is a very lucrative activity, largely controlled by organized crime groups (see Chapters 17 and 18). Exportation of stolen vehicles is not readily resolved, because investigations are hindered by inadequate or nonexistent communications between law enforcement agencies in different countries. Border guards and police officers share a similar problem in encountering suspicious vehicles and having limited or no access to needed databases to determine whether or not a vehicle is stolen. Interpol, the premiere international police organization, states the following [2]: "Illicit trafficking of vehicles is a form of organized crime, which generates large profits for the perpetrators (estimated at 19 Billion USD which disappears into a parallel economy) and a feeling of insecurity that affects the public particularly due to the increased use of violence. A key aspect of this form of crime is the need to legalize stolen vehicles in order for the criminal to achieve a monetary gain".

Thieves also attempt to legalize or conceal the identity of stolen vehicles by vehicle identification number (VIN) switching (also called re-VINing or ringing) with wrecked or

salvaged vehicles in order to sell them to unsuspecting buyers. The VIN is unique to a single vehicle (see Chapter 6). A phenomenon referred to as "cloning" has become extremely problematic. This occurs when the VIN is copied from a donor vehicle and then replicated and applied to a similar make and model of a stolen vehicle. Utilizing counterfeit documents, the stolen vehicle assumes the identity of the original vehicle. Many times, multiple stolen vehicles use the VIN from the same donor. These vehicles are then distributed to different states, provinces, or countries and legitimized with new documents.

Figure 1-1 shows a common scenario involving the purchase at an auction of a severely damaged vehicle, generally considered a total loss by the insurance industry. This particular vehicle is a 2000 Lincoln Navigator that was damaged (burned) beyond repair. The legitimate reason behind this purchase is to salvage undamaged component parts and then ultimately dispose of the remainder of the vehicle at a recycling plant. Enterprising criminals often purchase these vehicles to simply obtain their VIN, other identifying serial numbers, and ownership documents for fraudulent purposes.

Figure 1-2 shows how the identity of a salvaged vehicle is reapplied to a stolen vehicle of similar make, model, and year, which results in the "rebirth" of the total-loss vehicle. This vehicle is a stolen 2000 Lincoln Navigator that has assumed the identity of the burned vehicle in Figure 1-1.

Criminals capitalize on the inadequate and ineffective communication systems between registration and titling agencies and jurisdictions. In one case, a VIN on a new vehicle at a dealership in Ontario, Canada was copied, replicated, and applied to at least four other stolen Canadian vehicles. Fraudulent documents were produced, and then the cloned stolen vehicles were taken into several different states in the United States.

Vehicle theft has become a high-tech crime. Criminals have also become more technologically literate. It is common to find sophisticated computers, metal presses, and other devices used to produce VIN plates and fraudulent documents within a thief's "toolkit" (see Chapter 15). At this time, luxury vehicles stolen in Europe are exported to the Eastern bloc, West Africa, and the Middle East. Less expensive vehicles are exported to North Africa, but this trend is changing. These vehicles mainly transit through the harbors of Marseille (France), Genoa (Italy), and Antwerp (Belgium).

C/ Resale and Export of Vehicle Parts

It is often more profitable for professional thieves to steal vehicles and to sell the parts separately. It is estimated that the net value of component parts, particularly on older vehicles, is often two to three times greater than the value of the whole vehicle. To sell parts, these professional thieves operate "chop shops" where vehicles are stripped and their component parts sold to unsuspecting buyers or unscrupulous auto repair shops (see Chapter 18). Nevertheless, modern vehicles are equipped with ever-increasing expensive electronic equipment such as navigation systems and entertainment systems. These devices, along with

a   b

Figure 1-1

View of the 2000 Lincoln Navigator that was a total loss after fire damage.

Figure 1-2

View of a stolen 2000 Lincoln Navigator to which the VIN of the vehicle in Figure 1-1 was applied.

expensive parts such as airbags, are also highly attractive to professional thieves and result in the targeting of some specific vehicles.

D/ Commuter Theft or Joyriding

Vehicles are also stolen simply as a means of temporary transportation, often referred to as commuter theft, or joyriding. Suspects abandon the vehicle when they get to the intended destination and/or when they feel that they may get caught. They may steal another vehicle to get to the next destination, and this cycle continues as long as transportation is needed. Many teenagers, even without a driver's license, commit this type of theft. Also, in Europe there are many organized crime groups of burglars originating from the former Soviet bloc who are very active in this type of theft. These thieves come illegally into a country and steal one or more vehicles. Then they move very rapidly, most at nighttime, and regularly change vehicles.

E/ Commission of Another Crime

Criminals often steal vehicles to facilitate other more egregious crimes, such as burglaries, armed robberies, drive-by shootings, kidnapping, smuggling activities, and so forth. Also, some criminals use heavy and powerful vehicles, sometimes with a reinforced trunk, to ram into luxury shops, such as jewelry stores, in order to commit burglary (see Figures 4-29 and 4-30). Again, many of these organized crime groups originate from the former Soviet bloc. An added danger with vehicle theft is the propensity for high-risk behavior by suspects fleeing from the police. Attention to this problem is addressed in a Canadian program referred to as Project 6116 [3].

The government of Canada and a coalition of public and private sector organizations support Project 6116, the National Committee to Reduce Auto Theft. The tragic death of a Sudbury, Ontario police officer in a traffic collision caused by a juvenile driving a stolen vehicle was the catalyst for action in the formation of this committee. The initiative was named Project 6116 in honor of Sergeant Rick McDonald's badge number.

The unfortunate event mobilized the slain police officer's sister, Marlene Viau, and other Canadians to seek solutions to the problem of vehicle theft, especially in the area of prevention and deterrence of young people from getting involved in this criminal activity. Ms. Viau commented that "auto theft robs citizens of the right to feel safe and secure in their own communities," and that "innocent people like my brother lose their lives or are seriously injured each day in Canada as a result of this crime" [3].

Drug involvement and vehicle theft are also closely associated. Because drug users have difficulty maintaining employment, they find it necessary to steal to meet personal and addictive needs. In the United States, it is estimated that 50% of those arrested in possession of stolen vehicles are involved in drug activity. A disturbing trend has also developed where vehicles are stolen and used by terrorists to deliver weapons of mass destruction (see Chapter 17).

1.2.2 Modus Operandi

The modus operandi of car thieves has dramatically changed over the last several years. In the early 1990s, a thief would simply break into a parked car, hotwire it, and leave. The old method of hotwiring the vehicle is no longer applicable because of current ignition with anti-theft and computer-controlled systems. Therefore, criminals have become diversified (and violent) in their methodology.

More sophisticated criminals take advantage of inadequate internal controls at authorized automotive dealerships by obtaining keys simply by recording a VIN and purchasing a replacement key. In many cases, co-conspirators working at dealerships facilitate the theft of vehicles. It is anticipated that this modality will continue to be more common as anti-theft systems improve.

Carjacking is a violent method of choice used by criminals. Carjacking is stealing a vehicle by forcing it to stop and pulling the owners out of the vehicle by use of threat,

weapons, knives, sprays, and possibly force or violence. In this manner, thieves can take possession of the vehicle directly with the original keys, without having to worry about anti-theft systems. Vehicles most often targeted are luxury powerful cars such as the Audi RS4 and the BMWs. Because these cars are usually equipped with the latest technology regarding electronic anti-theft systems, they are almost impossible to steal without the ignition key. This type of theft is relatively recent in Europe, with the first reported cases starting in 2000. Carjacking is also frequently encountered in the United States, particularly in Florida, where a number of tourists, unaware of the danger, have been attacked. Carjacking has been reported in increasing numbers in Belgium, Spain, and France in the past few years [4, 5]. In Europe, many victims were famous stars of show business or sports, making these thefts important media events. Along with carjacking, residential burglaries and, in some cases, home invasions are being perpetrated for the purpose of taking keys to steal luxury vehicles. This method is called homejacking and is also spreading rapidly throughout Europe. Carjacking and homejacking are emerging trends partially due to enhanced anti-theft applications present in vehicles.

In Italy, as in some other countries, a trend of "highwaymen" purposely crashing into vehicles emerged a few years ago [5]. Once the driver comes out of the vehicle to assess the damage, an accomplice jumps into it and drives away, leaving the owner on the street. In the United States in 2000, a study determined that about 35% of vehicles are stolen while parked at home, about 23% while in a parking lot or garage, and about 18% while on a road or highway [6].

1.2.3 Perpetrators

Juveniles are disproportionately responsible for auto thefts. Many jurisdictions report that juveniles (age varies between jurisdictions but generally considered under the age of 18) account for nearly 50% of all arrests in auto thefts. Vehicle theft is considered a "gateway" crime, which refers to the first serious crime engaged in by young offenders. Vehicles are stolen by juveniles for various reasons and then abandoned or often destroyed entirely for entertainment. In the United States in 2004, 26.5% of all arrests for motor vehicle theft were of juveniles (under age 18) and 59.9% of the arrestees were younger than 25 years old [7].

1.3 STATISTICAL DATA AND INTERNATIONAL PERSPECTIVE

1.3.1 Global Picture

To comprehend the magnitude of the global problem, consider that approximately four million vehicles are stolen annually worldwide, at an estimated economic loss in excess of USD 50 billion [8]. According to the 2004 Uniform Crime Report, one motor vehicle is

stolen every 25.5 seconds in the United States [7]. This leads to a total of 1,237,114 vehicles stolen (and reported to the Federal Bureau of Investigation) for the year 2004, or 421.3 vehicles stolen per 100,000 inhabitants. Although this figure is slightly lower than that in the previous year, it remains quite impressive.

While all these figures initially appear astronomical, it is interesting to break down these numbers according to different parameters and to study the phenomenon from different perspectives. For example, the following questions can be answered with data and statistics: "How do auto theft rates vary from one country to another?" "Which vehicles are the most often stolen?" "Was auto theft more prominent 10 years ago?" The auto theft investigator will find some background figures regarding stolen vehicles pertinent to know.

1.3.2 Evolution in Number of Stolen Vehicles with Time

Figure 21-1 (see Chapter 21) shows the number of stolen vehicles per 100,000 inhabitants in the United States between 1983 and 2004. Interestingly, there is almost as much auto theft today as there was 20 years ago. The year 1991 was the most intense year for auto theft within this range. Because the theft rate continued to increase and because it became a very serious problem, Congress enacted the Anti Car Theft Act of 1992 based upon the recommendations of the Department of Transportation [9]. Several measures were taken, in addition to the measures already in place under the 1984 Act (which issued the Federal Motor Vehicle Theft Prevention Standard), and a report on the progress and efficiency of both standards was issued. The theft rates plateaued after 1991 and began dropping consistently until 2001, when a slight increase was noted. The implementation of marking parts and installing anti-theft devices played important roles in this decrease.

In Europe, a similar trend in the number of auto thefts started in 1990. Between 1990 and 1991, auto theft progressed 30.8% in Germany, 28.3% in Belgium, 20.0% in Italy, and 17.8% in Great Britain [1]. The most commonly cited explanation for this sudden rise is the opening of Eastern Europe and the subsequent freedom to move people and merchandise. The rise in auto theft was so important that insurance companies throughout Europe placed pressure on automobile manufacturers to develop and include anti-theft systems, known as transponders, in their vehicles (see Chapter 8). This, combined with other measures, successfully reduced the number of auto thefts throughout Europe.

It is important to remember that Figure 21-1, as in most auto theft statistics, is based upon the number of people rather than the number of vehicles. When the number of stolen vehicles is compared per 100,000 vehicles rather than 100,000 inhabitants, the resulting rate is higher. For example, in 2003 there were 1,261,226 motor vehicle thefts reported in the United States [7]. This corresponds to a rate of 433.7 thefts per 100,000 inhabitants. As there were 236,760,033 vehicles registered, the

same number of motor vehicle thefts would correspond to a rate of 533 thefts per 100,000 vehicles [10].

Thus, to compare values from 1983 and 2002, it is assumed that the number of vehicles per inhabitant is constant. However, the number of vehicles per inhabitant in the United States increased slightly from about 740 to 780 vehicles per 1,000 inhabitants between the years 1983 and 2002. This means that for the same auto theft rate in those years, the total number of stolen vehicles is higher in 2002 than in 1983. Although the approximation is still feasible, one must use caution when comparing statistics over a longer period of time or across countries; the number of vehicles per inhabitant must be taken into account.

1.3.3 Comparison Between Countries

Figure 1-3 shows the number of stolen vehicles reported to Interpol in 2003 for the 20 countries with the greatest number of stolen vehicles [8]. This graph shows the United States ahead of all other countries, with well over 3 times more stolen vehicles than the next group of countries, the United Kingdom.

Although these statistics are impressive, they are also misleading. They do not take into account that some countries have more vehicles than others. The United States, with more than 215 million vehicles, is likely to have more vehicles stolen than Switzerland, where there are only 3.5 million vehicles. These data do not discern whether a vehicle in the United States is more likely to be stolen than a vehicle in Switzerland or Mexico. It is possible to attempt to calculate rates rather than absolute numbers. If the number of stolen vehicles is expressed per 100,000 vehicles, the classification from Figure 1-3 radically changes, as shown in Figure 1-4.

From this perspective, Israel leads with the greatest proportion of stolen vehicles with approximately 2,000 vehicles stolen per 100,000 vehicles in the population. Switzerland is just behind with about 1,800 vehicles stolen, and the United States falls to 17th position, with about 540 vehicles stolen per 100,000 vehicles. Japan, which exhibits approximately the same total number of stolen vehicles as Switzerland, appears to be much safer, because less than 100 vehicles per 100,000 vehicles are actually stolen. It is critical to take these values with a grain of salt. As a matter of fact, it is not certain if the data provided by Switzerland to Interpol is limited to the stolen motor vehicles; it is possible that this data includes the theft of bicycles. In such instances, the rate provided in Figure 1-4 would be skewed and highly exaggerated. Enormous differences between the classification in the number of stolen vehicles and in the rate such as with Israel, Switzerland, and Malaysia deserve a much more detailed investigation as to the exact cause, which is outside the scope of this chapter. Figure 1-4 is a perfect example of how difficult it is to perform cross country comparison of crime statistics. Each country records crime in a different manner, which is sometimes not compatible. While looking at rates rather than absolute numbers of stolen vehicles is better for understanding the intensity of auto theft between countries, such a cross comparison is not always feasible.
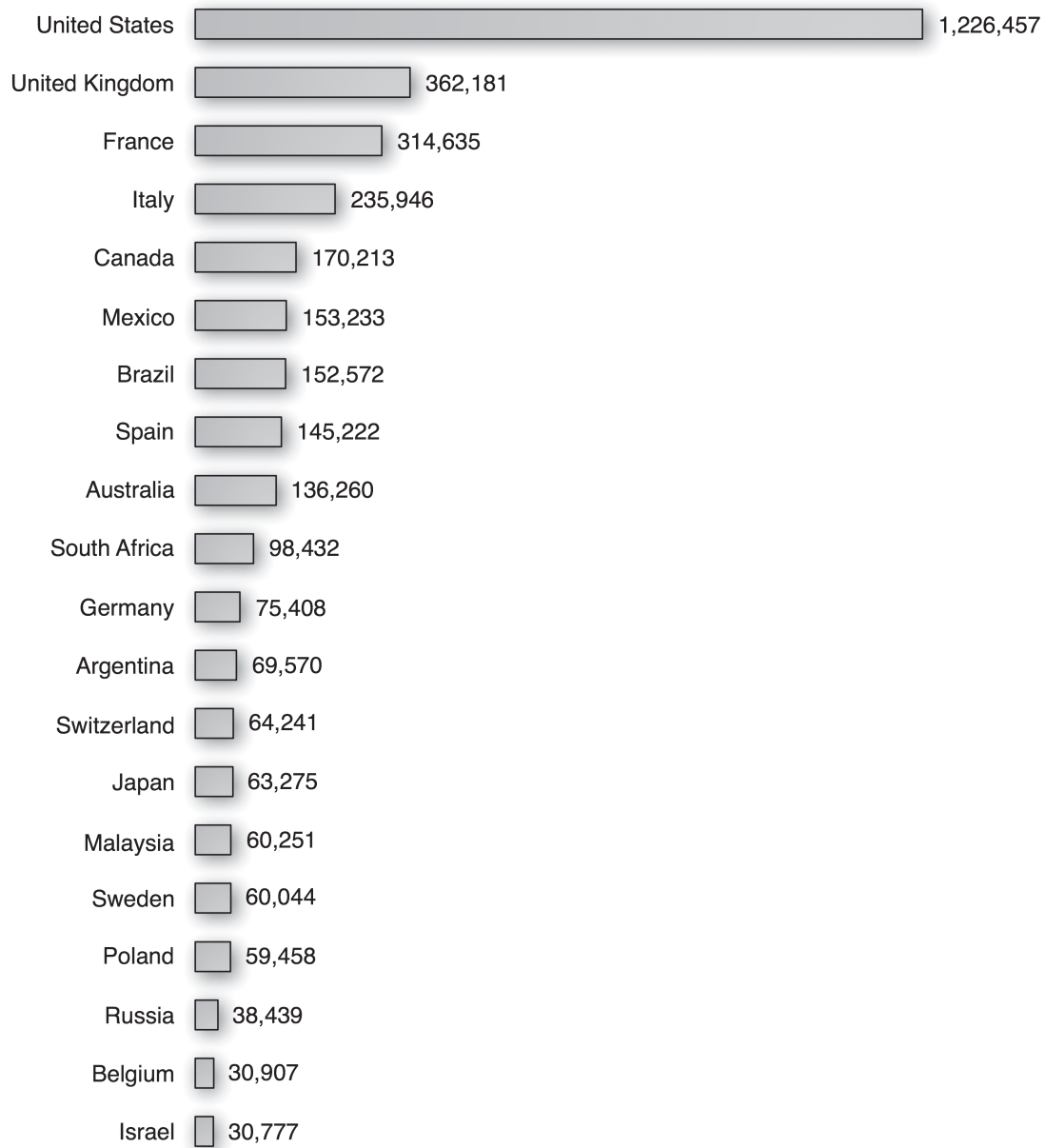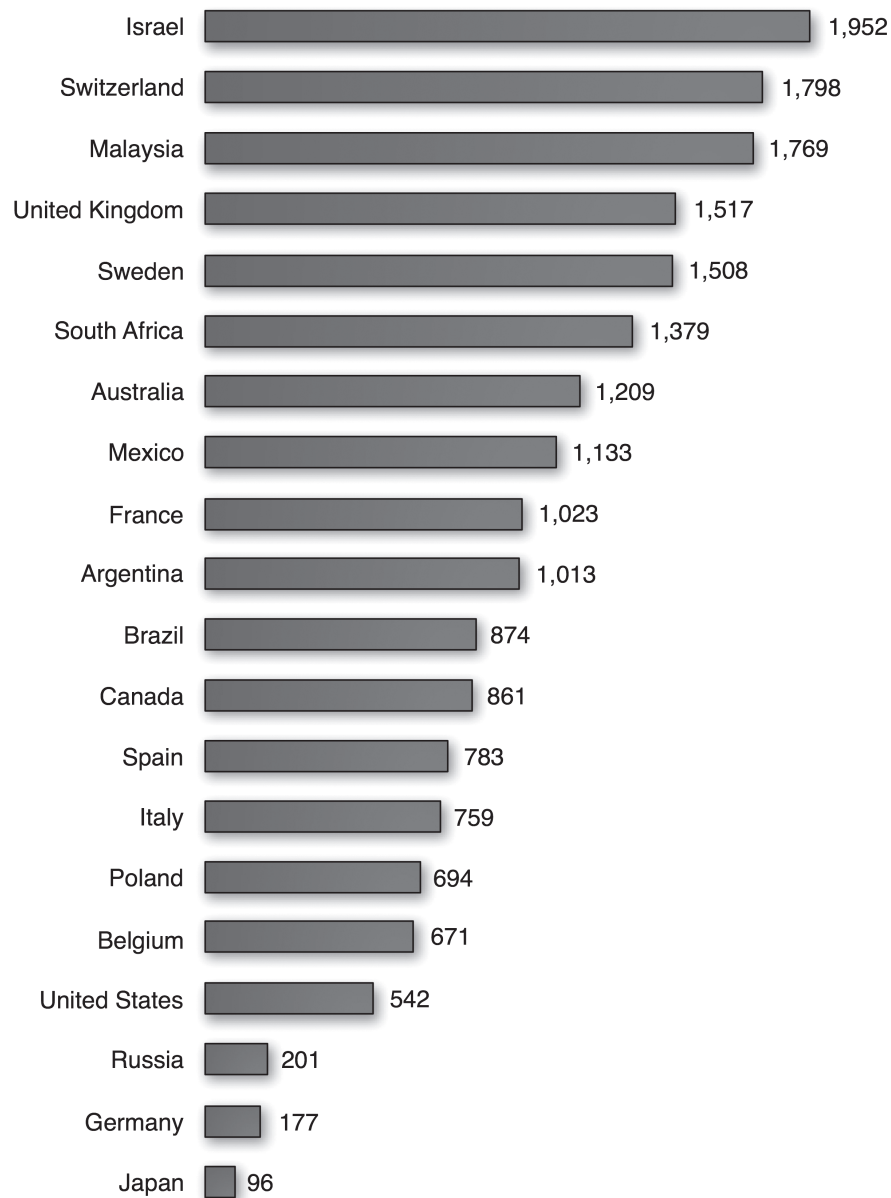
Country	Stolen Vehicles
United States	1,226,457
United Kingdom	362,181
France	314,635
Italy	235,946
Canada	170,213
Mexico	153,233
Brazil	152,572
Spain	145,222
Australia	136,260
South Africa	98,432
Germany	75,408
Argentina	69,570
Switzerland	64,241
Japan	63,275
Malaysia	60,251
Sweden	60,044
Poland	59,458
Russia	38,439
Belgium	30,907
Israel	30,777

Figure 1-3

The 20 countries with the most stolen vehicles in 2003 according to Interpol [8].

1.3.4 US Geographical Statistics

A/ Ranking by States

Table 1-1 shows the disaggregation of the number of stolen vehicles per state (including the District of Columbia and Puerto Rico) in the United States for 2004 and the corresponding

Country	Rate
Israel	1,952
Switzerland	1,798
Malaysia	1,769
United Kingdom	1,517
Sweden	1,508
South Africa	1,379
Australia	1,209
Mexico	1,133
France	1,023
Argentina	1,013
Brazil	874
Canada	861
Spain	783
Italy	759
Poland	694
Belgium	671
United States	542
Russia	201
Germany	177
Japan	96

Figure 1-4

Rates of stolen vehicles per 100,000 vehicles for the same 20 countries as in Figure 1-3.

rate [7]. Unfortunately, these rates are based upon 100,000 inhabitants, since the rates based upon 100,000 vehicles are not published. California is the state with the greatest number of stolen vehicles (252,604), but ranks only fourth with regard to the rate. District of Columbia had only 8,408 vehicles stolen in 2004 but ranks first with 1,519 vehicles stolen per 100,000 inhabitants. Maine and Vermont close the ranking with rates just below 100.

Table 1-1

Number of stolen vehicles and rate (number of stolen vehicles per 100,000 inhabitants) for the 50 states of United States, plus the District of Columbia and Puerto Rico in 2004 [7].

Rank	State	Stolen vehicles	Rate
1	District of Columbia	8,408	1,519.0
2	Nevada	22,635	969.5
3	Arizona	55,306	962.9
4	California	252,604	703.8
5	Washington	43,233	696.9
6	Hawaii	8,620	682.6
7	Maryland	35,858	645.2
8	Colorado	24,063	522.9
9	Oregon	18,535	515.6
10	Georgia	44,238	501.0
11	Michigan	50,555	499.9
12	Florida	78,325	450.2
13	Missouri	25,893	450.0
14	Louisiana	19,714	436.6
15	Tennessee	24,749	419.4
16	Texas	94,077	418.3
17	New Mexico	7,902	415.2
18	Rhode Island	4,078	377.4
19	South Carolina	15,637	372.5
20	Oklahoma	12,957	367.7
21	Ohio	40,853	356.5
22	New Jersey	30,306	348.4
23	Massachusetts	22,053	343.7
24	Alaska	2,240	341.8
25	Indiana	21,091	338.1
26	Utah	7,651	320.3
27	Illinois	40,355	317.4
28	North Carolina	26,988	316.0
29	Connecticut	11,025	314.7
30	Alabama	14,024	309.6
31	Kansas	8,435	308.4
32	Nebraska	5,287	302.6
33	Mississippi	7,879	271.4
34	Minnesota	13,518	265.0
35	Puerto Rico	10,128	260.0
36	Delaware	2,147	258.6
37	Pennsylvania	30,969	249.6
38	Arkansas	6,491	235.8
39	Virginia	17,411	233.4
40	New York	41,002	213.3

Table 1-1

Continued.

Rank	State	Stolen vehicles	Rate
41	Kentucky	8,772	211.6
42	Wisconsin	11,374	206.5
43	West Virginia	3,739	206.0
44	Idaho	2,724	195.5
45	Iowa	5,404	182.9
46	Montana	1,618	174.6
47	Wyoming	799	157.7
48	New Hampshire	1,942	149.4
49	North Dakota	906	142.8
50	South Dakota	846	109.7
51	Maine	1,303	98.9
52	Vermont	575	92.5

Table 1-2

The 10 cities in the United States presenting the highest rate (number of stolen vehicles per 100,000 inhabitants) of stolen vehicles.

Rank	Metropolitan	Stolen vehicles	Rate
1	Modesto, California	7,024	1,571
2	Stockton-Lodi, California	8,163	1,448
3	Las Vegas, Nevada	19,794	1,266
4	Phoenix-Mesa, Arizona	40,371	1,241
5	Sacramento, California	18,747	1,151
6	Oakland, California	24,855	1,039
7	Visalia-Tulare-Porterville, California	3,800	1,033
8	San Diego, California	27,396	974
9	Fresno, California	8,770	951
10	Seattle-Bellevue-Everett, Washington	22,807	945

B/ Ranking by Cities

Table 1-2 shows the 10 cities in the United States that present the highest rates of auto theft. Note that 7 of 10 cities are in California and that 8 of 10 are located on the West Coast.

1.3.5 Most Commonly Stolen Vehicles in the United States

Statistics vary from year to year regarding the most often stolen vehicles in the United States. Also, there are different means by which the most often stolen vehicles are evaluated.

For 2004 in United States, CCC Information Services offer the classification shown in Table 1-3 [11].

This list is based upon the rate of theft as a percentage of the total number of registered vehicles of the same year and model. These data of stolen vehicles were obtained from more than 350 insurance companies. There are many different factors that influence the type of vehicles stolen. One factor cited is that some manufacturers keep the same parts on a given model for several years, which is the case with the Acura Integra. This makes it appealing for thieves to steal these cars for parts. In addition, it appears that powerful vehicles, such as the BMW M Roadster and the Audi S4, are becoming more and more targeted by thieves.

Another study from the National Insurance Crime Bureau (NICB) does not take into account the number of vehicles available on the road. Thus, Table 1-4 reports the 10 most often stolen vehicles in the United States based on the absolute numbers of vehicles stolen.

Table 1-3

The 25 most stolen vehicles in 2004 in the United States according to CCC Information Services [11].

Classification	Vehicle description
1	1999 Acura Integra
2	2002 BMW M Roadster
3	1998 Acura Integra
4	1991 GMC V2500
5	2002 Audi S4
6	1996 Acura Integra
7	1995 Acura Integra
8	2004 Mercury Marauder
9	1997 Acura Integra
10	1992 Mercedes-Benz 600
11	2001 Acura Integra
12	1989 Chevrolet R25
13	1993 Cadillac Fleetwood
14	1994 Acura Integra
15	1996 Lexus GS
16	2000 Acura Integra
17	1999 Mercedes-Benz CL
18	1996 Lexus SC
19	2004 Cadillac Escalade
20	1996 BMW 750
21	1996 Land Rover Range
22	1994 Audi Cabriolet
23	2001 BMW M Roadster
24	2003 Cadillac Escalade
25	2000 Honda Civic

Table 1-4

The 10 most stolen vehicles in 2004 in the United States according to the NICB.

Classification	Vehicle description
1	2000 Honda Civic
2	1989 Toyota Camry
3	1991 Honda Accord
4	1994 Chevrolet C/K 1500
5	1994 Dodge Caravan
6	1997 Ford F-150
7	1986 Toyota Pickup
8	1995 Acura Integra
9	1987 Nissan Sentra
10	1986 Oldsmobile Cutlass

1.3.6 Recovery Rates and Other Parameters

One significant indicator of the changing criminality of this offense is the decreasing recovery rate of stolen vehicles in many jurisdictions. For example, 20 years ago the typical recovery rate was in excess of 80% in the United States, yet now it is common to experience recovery rates in the range of 60% or less. This disturbing trend is common worldwide and signifies that up to 40% of stolen vehicles disappear and are never returned to their lawful owners.

Experience indicates that vehicles stolen by opportunist criminals, such as for temporary use to facilitate other crimes or by juveniles, are generally recovered within 24 to 48 hours. A discussion is warranted to explore what happens to stolen vehicles that are never recovered in whole or in parts. Although the crime of vehicle theft originates in one political jurisdiction, the suspects often come from another jurisdiction, and the proceeds of the crime may go to yet another jurisdiction.

According to the Uniform Crime Report of the Federal Bureau of Investigation, passenger cars account for 72.8% of all vehicles stolen in United States in 2004 [7]. Also, only 13% of these cases were cleared by law enforcement agencies, and 16% of them involved juveniles.

1.3.7 International Trafficking

Some vehicles are stolen and smuggled to other countries. With our global economy, communication networks, and transportation capabilities, vehicle theft is no longer just a local crime problem. The elimination of or reduction in border control between many countries has benefited transnational commerce and has eased traveling. Organized criminal groups

have also capitalized on this opportunity. Vehicles stolen in one country can easily be driven to others with minimal possibility of detection and interdiction. This is particularly true in Europe, where the abolition of borders between 25 countries rendered the freedom of movement ideal for auto thieves. Densely populated areas near international land borders and seaports generally have the highest vehicle theft rates and, correspondingly, the lowest recovery rates.

According to the 2004 organized crime situation report by the Council of Europe [12], "As globalization facilitates the expansion of international trade in almost any sector, so does it facilitate transnational operations of criminal organizations on classical crime markets, such as trafficking in drugs, arms, vehicles, cigarettes and others". Economic disparity between affluent countries and neighboring developing countries is clearly a precipitator. Unfortunately, inadequate and ineffective data exchange exacerbates the problem and challenges authorities.

The following example demonstrates the pervasiveness of this crime and clearly establishes a nexus between organized crime, vehicle theft, and fraud. Border guards in Finland encounter a late model Mercedes, registered in the US, preparing to cross the border into Russia. Unfortunately, even though the guards are suspicious, they are unable to readily access US databases to determine whether the vehicle is stolen. Based upon their sovereign laws and the fact that they were unable to make inquiry into the vehicle's status, the guards were compelled to allow it to proceed without further delay.

In this particular scenario, the Mercedes was not yet reported stolen when it was encountered in Finland. Approximately three months later, the lien holder, Mercedes-Benz USA Credit, attempted to notify the buyer that payment had not been received. It was soon discovered that the vehicle was purchased under assumed identity using an innocent person's credit information. Interestingly, the buyer made two loan payments under the assumed identity even though the vehicle was already illegally exported. This was probably done to avoid any possible suspicion during transit.

A review of this case highlights the involvement of transnational organized criminal enterprises engaging in vehicle theft and fraud to generate huge profits. It is obvious that an individual or opportunist car thief could not accomplish such a complex transaction. First, a convincing identity theft had been perpetrated, which facilitated the purchase of a luxury automobile with minimal investment. Next, the vehicle was illegally exported from the United States to Europe. Finally, it was likely sold to an unsuspecting buyer.

Additionally, the dynamics of illicit markets such as these compromise legitimate business opportunities and government operations (by avoidance of taxation). It is difficult to establish a sound business decision that would justify legally exporting a vehicle from North America that was originally made in Europe and then shipping it back to Europe. Unfortunately, criminals are very adept at exploiting inefficiencies and weaknesses in the system. It may seem logical to assume that the flowing direction of stolen vehicles would simply follow the illegal trafficking of other goods. But in practice it is not quite the case, as Williams writes [13]: "Most of the markets have become global in scope and generally involve

trafficking of illicit products from the developing world or states in transition to the developed world. The exceptions are arms and cars. Luxury motor vehicles in particular go from the countries of Western Europe to states in transition in Eastern Europe and the former Soviet Union and to developing states in Africa. Similarly cars stolen from the United States often end up in Central and South America. This is an interesting reversal of the direction of most illicit flows."

1.4 ENFORCEMENT AND PREVENTION STRATEGIES

1.4.1 Preventive Measures

Traditionally, vehicle theft has been considered a local crime issue. This view has dramatically changed. It is generally understood that vehicle theft must be addressed cooperatively and strategically. An effective anti-vehicle theft campaign needs to focus on several vital elements, such as efficient data exchange, coordinated law enforcement activities, aggressive prosecution, public awareness and community education, and vehicle security measures.

It is important to acknowledge that from a general perspective, vehicle theft is a preventable crime. Deterrence and crime prevention are always more cost effective than enforcement, investigation, and prosecution afterward. Ultimately, the public is responsible for taking reasonable precaution to protect its property. Owners should be informed about vulnerability and ways to avoid vehicle theft. The NICB recommends a "layered approach" to prevent vehicle theft [14]. Accordingly, the more layers of protection on a vehicle, the more difficult it is to steal.

The following four layers of protection are considered in the NICB's approach:

Layer 1: Common sense
- Never leave an unattended vehicle running.
- Remove keys from the ignition.
- Lock doors and close windows.
- Park in a well-lit location.

Layer 2: Warning devices and active anti-theft devices (see Chapter 8)
- Audible alarms
- Steering column collars, steering wheel/brake pedal locks
- Theft deterrent program decals
- Identifying marks and identification concealed in and on the vehicle
- VIN etching on glass and other components

Layer 3: Immobilizing devices and passive anti-theft devices
- Kill switches (electrical/fuel system disablers)
- Smart keys

Layer 4: Tracking devices

Efforts must be undertaken by manufacturers to enhance passive anti-theft systems and component parts marking. Passive anti-theft systems are critical because they require minimal effort to activate and are not dependent on manual application by the operator. Component parts marking is necessary to readily identify items stripped from stolen vehicles.

1.4.2 Investigative Measures

There are many enforcement strategies. Some are reliable and true investigative techniques, and others are new and innovative. Crime pattern targeting and aggressive high-intensity patrol activities prove effective (see Chapter 21). Covert undercover work, the use of informants, and "store-front" operations are also important activities in disrupting criminal organizations (see Chapter 18). Bringing together multiple disciplines, such as police, customs agencies, and insurance organizations, in the form of task forces is often well served in dealing with cross-jurisdictional international issues.

Bait cars, license plate reading cameras, and gamma ray scanners are three methods of technology used to combat vehicle theft (see Chapters 18 and 20). Bait cars are typically used in high theft areas and are equipped with tracking systems, audio/video recording devices, and electronic equipment capable of remotely disabling the vehicle. Before these systems were available, the police relied on hit and miss manpower-intensive surveillance. The use of bait vehicles has been well received by the police, prosecutors, public, and media. These are an efficient use of resources and often involve cooperative partnerships between the insurance industry, the police, and other organizations. For example, in the state of Arizona (US), the Automobile Theft Authority issues grants to police agencies to purchase complete bait car systems, and the insurance industry donates vehicles for use as bait cars [15]. Prosecution is simplified because of the strength of the audio/video recorded evidence. The theft rate in Arizona has decreased significantly since bait cars were deployed [16].

Digital cameras are being strategically deployed to record license plates on vehicles at a variety of locations, such as parking structures, critical infrastructure facilities, and international borders. Additionally, police are using mobile license plate reading cameras in a wide spectrum of environments. License plate reading cameras digitize the alpha-numeric characters, are linked to crime information computers, and rapidly identify wanted vehicles (see Chapter 20). License plate reading cameras are beneficial in both interdiction and generation of intelligence.

Gamma ray scanners are utilized to screen containers for contraband and are particularly useful at land border ports of entry and seaports (see Chapter 20). The sheer volume of vehicular traffic crossing land borders and of containers passing through seaports is overwhelming. Trained operators can identify disparities declared in containers and are capable of recognizing items of concern, including vehicles.

1.5 ORGANIZATIONS

1.5.1 Goals

Many associations and organizations around the world are interested in detection and repression of auto theft. Some of the major associations and organizations are presented in this section. It is not possible within the scope of this chapter to survey and present all these organizations. The reader is invited to check the websites of these organizations. They usually contain very pertinent information, from both preventive and repressive perspectives. Even if the association is not local to the investigator, he or she will find valuable information that will improve his or her knowledge of auto theft and its prevention.

1.5.2 Professional Associations

A/ The International Association of Auto Theft Investigators (IAATI, http://www.iaati.org)

The IAATI is the largest and most important professional association uniting auto theft investigators from around the world. The IAATI official definition is as follows [17]: "The International Association of Auto Theft Investigators (IAATI) was formed in 1952 in order to improve communication and coordination among the growing family of professional auto theft investigators. It has grown to 4,208 members representing over 35 countries and includes representatives of law enforcement agencies, as well as many others with a legitimate interest in auto theft investigation, prevention and education. We recognize that, just as law enforcement agencies cannot successfully function independent of one another, auto theft investigation requires the active participation of the private sector; therefore, our membership also includes the insurance industry, automobile manufacturers, car rental companies and, of course, the National Insurance Crime Bureau and its sister agencies in Canada and Europe."

The IAATI has more than 3,800 members worldwide and has regional chapters and international branches. The United States counts more than 2,900 members and is divided into five regional chapters: North Central, Northeast, South Central, Southeast, and Western. The IAATI has an Australasian Branch (formed in 1994 in Australia), a European Branch (formed in 1990), and a United Kingdom Branch (formed in 2001).

B/ North American Export Committee (NAEC, http://www.naec.ws)

The NAEC was formed in 1995 by representatives from the United States and Canada. The NAEC now also includes Mexico (see Chapter 18 for more detailed information). The NAEC official mission and vision are as follows [18, 19]: "The mission of the NAEC is to bring together those entities that share a common goal of combating the exportation of stolen vehicles and to facilitate contacts for the exchange of information and ideas to achieve that goal. The NAEC vision is to provide a model plan that can be implemented at every port to stop the exportation of stolen vehicles. This model includes verifying the

validity of both vehicle and supporting documentation. It also includes methods of identifying vehicles hidden inside containers without interfering in the daily commerce of the ports."

1.5.3 Government-Sponsored Organizations

A/ Interpol (http://www.interpol.int)

Interpol is the world's largest international police organization. It was created in 1923, and today it includes 184 member countries [20]. It facilitates cross-border police cooperation and supports and assists all organizations, authorities, and services whose mission is to prevent or to combat international crime (see Chapter 22 for more detailed information).

B/ Europol (http://www.europol.eu.int)

The European Police Office (Europol) is defined as [21]: "the European Law Enforcement Organisation which aims at improving the effectiveness and co-operation of the competent authorities in the Member States in preventing and combating terrorism, unlawful drug trafficking and other serious forms of international organised crime." There are 25 Member States in the European Union.

C/ US Organizations

The following US governmental agencies (nonexhaustive list) are generally referred to as auto theft prevention authorities:

- Arizona Automobile Theft Authority (http://www.azwatchyourcar.com)
- Colorado Auto Theft Prevention Authority
- Illinois Motor Vehicle Theft Prevention Council (http://www.icjia.state.il.us/mv)
- Maryland Vehicle Theft Prevention Council (http://www.mdautotheft.org)
- Michigan Automobile Theft Prevention Authority
- New York Motor Vehicle Theft and Insurance Fraud Prevention (http://www.criminaljustice.state.ny.us/ofpa/mvtifpmain.htm)
- Pennsylvania Auto Theft Prevention Authority (http://www.watchyourcar.org)
- Texas Automobile Theft Prevention Authority (http://www.txwatchyourcar.com)
- Virginia State Police Help Eliminate Auto Theft (HEAT) (http://www.heatreward.com)

D/ Australia National Motor Vehicle Theft Reduction Council (NMVTRC, http://www.carsafe.com.au)

The NMVTRC is a not-for-profit association created by the joint initiative of all the Australian governments and the Australian insurance industry. Its mission is to drive down the high level of vehicle theft in Australia to benefit the economic and social well-being of the nation [22]. The association works with police, insurers, motor trades, vehicle manufacturers, registration authorities, and justice agencies.

1.5.4 Privately Sponsored Organizations

A/ Insurance Bureau of Canada (IBC, http://www.ibc.ca)
The IBC is the national trade association of nongovernmental property and casualty insurers. Member insurance companies provide about 90% of the home, car, and business insurance sold in Canada [23]. IBC Investigative Services works in cooperation with insurers, law enforcement agencies, and the Canadian Coalition Against Insurance Fraud to detect and prevent insurance crime and to gather evidence in aid of prosecuting offenders and securing restitution.

B/ National Insurance Crime Bureau (NICB, http://www.nicb.org)
The NICB is a not-for-profit organization supported by property/casualty insurance companies in the United States. Its goal is to facilitate the identification, detection, and prosecution of insurance criminals through a collaboration between insurers and law enforcement agencies (see Chapters 18 and 19 for more information) [24].

C/ Oficina Coordinadora de Riesgos Asegurados (OCRA, http://www.ocra.com.mx)
OCRA is comparable with the IBC and NICB, representing the majority of insurance companies in Mexico (see Chapter 18 for more information).

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