



Problem-Oriented Guides for Police Problem-Specific Guides Series No. 34

# Robbery of Taxi Drivers

By Martha J. Smith





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## Robbery of Taxi Drivers

Martha J. Smith

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### **About the Problem-Specific Guides Series**

The *Problem-Specific Guides* summarize knowledge about how police can reduce the harm caused by specific crime and disorder problems. They are guides to prevention and to improving the overall response to incidents, not to investigating offenses or handling specific incidents. The guides are written for police—of whatever rank or assignment—who must address the specific problem the guides cover. The guides will be most useful to officers who:

- Understand basic problem-oriented policing principles and methods. The guides are not primers in problem-oriented policing. They deal only briefly with the initial decision to focus on a particular problem, methods to analyze the problem, and means to assess the results of a problem-oriented policing project. They are designed to help police decide how best to analyze and address a problem they have already identified. (An assessment guide has been produced as a companion to this series and the COPS Office has also published an introductory guide to problem analysis. For those who want to learn more about the principles and methods of problem-oriented policing, the assessment and analysis guides, along with other recommended readings, are listed at the back of this guide.)
- Can look at a problem in depth. Depending on the complexity of the problem, you should be prepared to spend perhaps weeks, or even months, analyzing and responding to it. Carefully studying a problem before responding helps you design the right strategy, one that is most likely to work in your community. You should not blindly adopt the responses others have used; you must decide whether they are appropriate to your local



situation. What is true in one place may not be true elsewhere; what works in one place may not work everywhere.

- Are willing to consider new ways of doing police business. The guides describe responses that other police departments have used or that researchers have tested. While not all of these responses will be appropriate to your particular problem, they should help give a broader view of the kinds of things you could do. You may think you cannot implement some of these responses in your jurisdiction, but perhaps you can. In many places, when police have discovered a more effective response, they have succeeded in having laws and policies changed, improving the response to the problem.
- Understand the value and the limits of research **knowledge.** For some types of problems, a lot of useful research is available to the police; for other problems, little is available. Accordingly, some guides in this series summarize existing research whereas other guides illustrate the need for more research on that particular problem. Regardless, research has not provided definitive answers to all the questions you might have about the problem. The research may help get you started in designing your own responses, but it cannot tell you exactly what to do. This will depend greatly on the particular nature of your local problem. In the interest of keeping the guides readable, not every piece of relevant research has been cited, nor has every point been attributed to its sources. To have done so would have overwhelmed and distracted the reader. The references listed at the end of each guide are those drawn on most heavily; they are not a complete bibliography of research on the subject.



 Are willing to work with other community agencies to find effective solutions to the problem. The police alone cannot implement many of the responses discussed in the guides. They must frequently implement them in partnership with other responsible private and public entities. An effective problem-solver must know how to forge genuine partnerships with others and be prepared to invest considerable effort in making these partnerships work.

These guides have drawn on research findings and police practices in the United States, the United Kingdom, Canada, Australia, New Zealand, the Netherlands, and Scandinavia. Even though laws, customs and police practices vary from country to country, it is apparent that the police everywhere experience common problems. In a world that is becoming increasingly interconnected, it is important that police be aware of research and successful practices beyond the borders of their own countries.

The COPS Office and the authors encourage you to provide feedback on this guide and to report on your own agency's experiences dealing with a similar problem. Your agency may have effectively addressed a problem using responses not considered in these guides and your experiences and knowledge could benefit others. This information will be used to update the guides. If you wish to provide feedback and share your experiences it should be sent via e-mail to cops\_pubs@usdoj.gov.



For more information about problem-oriented policing, visit the Center for Problem-Oriented Policing online at <a href="https://www.popcenter.org">www.popcenter.org</a> or via the COPS website at <a href="https://www.cops.usdoj.gov">www.cops.usdoj.gov</a>. This website offers free online access to:

- the Problem-Specific Guides series,
- the companion *Response Guides* and *Problem-Solving Tools* series,
- instructional information about problem-oriented policing and related topics,
- an interactive training exercise,
- on-line access to important police research and practices, and
- an on-line problem analysis module.



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The principal project team developing the guide series comprised Herman Goldstein, professor emeritus, University of Wisconsin Law School; Ronald V. Clarke, professor of criminal justice, Rutgers University; John E. Eck, professor of criminal justice, University of Cincinnati; Michael S. Scott, clinical assistant professor, University of Wisconsin Law School; Rana Sampson, police consultant, San Diego; and Deborah Lamm Weisel, director of police research, North Carolina State University.

Nancy Leach and Cynthia Pappas oversaw the project for the COPS Office. Rebecca Kanable edited the guide. Research for the guides was conducted at the Criminal Justice Library at Rutgers University under the direction of Phyllis Schultze.



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#### The Problem of Robberies of Taxi Drivers

The guide begins by describing the problem and reviewing factors that increase the risks of robbery of taxi drivers. The guide then identifies a series of questions that might assist you in analyzing your local taxi robbery problem. Finally, the guide reviews responses to the problem and what is known about these from evaluative research and police practice.

One of the biggest barriers to understanding the problem of taxi driver robbery is the lack of data specifically collected on this crime. Most police departments do not record the circumstances surrounding a robbery incident in a way that allows taxi robberies to be identified easily. Much of what is known about taxi robbery is based on information recorded on assaults and homicides by occupation.<sup>†</sup> These data consistently show that, as an occupation or industry, taxi drivers have the highest or among the highest risk of job-related homicide and assault.<sup>‡</sup> Robbery is the motive for more than half of all work-related homicides (80 percent) and non-fatal assaults (60 percent).<sup>‡</sup> A U.S. study that did look at robbery victimization data by occupation also found that taxi drivers were among those most often robbed.<sup>3</sup>

Even the information that is available, however, is likely to be incomplete.<sup>4</sup> Many drivers work as independent contractors and, as such, may not be eligible for workers compensation (one of the main data sources for studies of occupational assault). More importantly, the structure of compensation for services in the industry (where time off means no income) decreases the incentive drivers might otherwise have to report crimes to the police or other official sources. That may be especially true if drivers see

† No studies focused specifically on taxi driver victimization have been carried out in the United States though such research has been done in Australia (Mayhew, 1999; Haines, 1997; Keatsdale Pty. Ltd., 1995), Canada (Stenning, 1996), the United Kingdom (Westmarland and Anderson, 2001; Smith, forthcoming) and the Netherlands (Elzinga, 1996). Mayhew (2000b) provides a comprehensive review of the studies that have looked at taxi driver assaults.



† If police do not take crimes seriously, then this may lead to additional problems. For example, Mayhew (1999) noted the belief among some drivers that police failure to take small fare evasions seriously may embolden offenders and lead to more serious incidents with drivers.

†† The term "gypsy cab," which historically has been limited to services that operate without the needed licenses in an area, is increasingly being used in New York City to refer to livery services (Marosi, n.d.). the crime as relatively minor, they do not think the police can do anything about it, or they think that the police will not take their crime problems seriously. The problem of under-reporting may be particularly acute in relation to attempted robberies since these are likely to be seen by drivers as less severe incidents. However, attempted robberies may be particularly useful to understand when developing problem-solving strategies since they were successfully disrupted for some reason.

To understand taxi robberies it is necessary to understand the industry in which cab drivers operate. The compensation that drivers receive is related to the number of fares they have in a given shift, the distance they travel, the amount of tips they receive, and the costs of the vehicle (and any fees paid for access to fares via radio dispatch, if they use this service). Robbery depletes driver revenue and has the potential for injury and death. Therefore, drivers must continually balance the competing concerns of increasing revenue through accepting fares and of risking potential revenue loss (and potential physical harm). Knowing how the taxi industry is organized in a particular locality is an important first step in developing a taxi driver robbery problem-solving strategy related to that place.

In general, there are two different types of taxi services:

- "hackney" cabs that can pick up fares off the street or from taxi stands. (This type of service is also referred to as "ply-for-hire" service, "medallion" cabs in New York City, or some other term related to the color of the vehicles, such as "black cabs" in London.)
- "livery" cabs that must be booked through a central dispatching office. (This service is also known under a variety of local names, such as "mini-cabs" in London and "car services" in the New York metropolitan area.)



Problem-solvers need to look at the types of services offered in the community in order to look for patterns of offending. Some patterns may be typical for only one set of drivers, if more than one type of service operates in that area, particularly if prevention techniques and equipment differ among the different types of services or ownership relationships.<sup>†</sup>

In general, there are two types of vehicle-driver ownership relationships:

- the owner-driver—where the driver of the vehicle also owns the cab. Owner-drivers may operate without a radio or may lease radio and radio-dispatch services from a company that handles telephone bookings.
- the driver-lessee-where the driver leases the vehicle from the owner. Leasing arrangements may be very different in different locations and may result in a variety of pressures and constraints on drivers and owners. Drivers may lease their vehicles full-time or by shifts, may not drive the same vehicle for each shift, and may receive all of the proceeds of their fares or only a percentage. Drivers without full control over their vehicles may not be able to determine the types of safety equipment that are present in their cabs. Owners, on the other hand, may have a few cabs or may operate large fleets of vehicles. The different situations of owners may influence their ability or willingness to purchase expensive safety features, such as driver screens, digital cameras, and global positioning satellite technology. However, the size of the owner's fleet may not necessarily determine whether equipment is installed. For example, economies of scale may make some owners more likely to install certain equipment while others may operate in a monopoly situation and decide such expenditures are not necessary.

<sup>†</sup> The recent drop in the level of homicides among livery drivers in New York City (Luo, 2004) may be an example of how the prevention equipment on different types of taxi services can affect the victimization patterns of drivers. In the early 1990s yellow cab drivers and livery drivers in fleets were required to have bulletproof partitions in their cabs. Homicides among these drivers dropped following this initiative (Marosi, n.d.). Livery drivers who were owner-drivers were not required to have bulletproof partitions in their cabs until 2000 when the regulations changed following a spate of murders of livery drivers. With this new initiative, all livery drivers were required to install partitions or surveillance cameras. Establishing a direct link between the requirement for new equipment and the drop in homicides among livery drivers is difficult to do unambiguously, however, since other initiatives (such as increased use of decoy officers, targeting of taxi robbery locations, use of special decals that allow police to stop drivers without probable cause or reasonable suspicion, and tougher sentencing laws) were also in place. In 2001, a program was also started in New York City to install emergency contact systems in yellow and livery cabs using global positioning satellite technology and cell phone links (Mayersohn, 2001).



† One oversight model is illustrated by the New York City Taxi and Limousine Commission (see <a href="www.nyc.gov/html/tlc/html/home/home.shtml">www.nyc.gov/html/tlc/html/home/home.shtml</a>) while another model involves the direct control of taxi services by the local police department, as found in Boston with the Hackney Carriage Unit.

†† Examples of partnerships involving taxi representatives can be found in Melbourne. Australia (Taxi Driver Safety Committee, 1996), Manitoba, Canada (Manitoba Taxicab Board, 1991), and Manchester, England (Manchester City Council, 2003). While the Manchester partnership has focused on late-night city center travel and disorder problems, rather than robbery, it is an example of the type of partnership initiative that has developed under the Crime and Disorder Act 1998 directing local governmental authorities in England and Wales to set up crime and disorder partnerships with the police and other agencies, audit local crime, set up strategic plans to address these problems, and carry them out (see, e.g., Home Office, 1998).

††† Sexual assaults on women have been the focus of a large number of enforcement initiatives in London recently under the Project Sapphire umbrella (see www.met.police.uk/sapphire/). Taxi services are usually regulated by some governmental or quasi-governmental body.† Both hackney and livery services may be regulated by the same oversight agency. Common regulatory features of these agencies include:

- · setting fares,
- licensing drivers and vehicles (including regulating the number of vehicles within particular areas),
- · controlling the conditions of vehicles, and
- monitoring the behavior of drivers.

Police departments may try to set up partnerships among regulatory agencies and industry representatives (including radio-dispatching companies, owners, associations of owners, drivers, driver associations, and labor unions) to help implement problem-solving initiatives. The partners in the problem-solving process may need to understand both how the industry is regulated in an area and the context in which past regulation was implemented before they can begin to assess the best responses to current problems.

#### Related Problems

This guide focuses on robbery of taxi drivers. It does not address crimes by taxi drivers against passengers or other drivers.<sup>†††</sup> In addition, it does not attempt to address fully the following crimes against drivers:

- · homicide.
- assault,
- threats of physical violence,
- verbal aggression or harassment,
- hate speech,
- · fare evasion, or
- · vandalism.



It also does not include robbery involving delivery services of perishable items, such as pizzas or Chinese food, or of valuables, such as cash.

While robbery is the primary motive for many attacks and resulting injuries across all occupations, this finding may be location-specific for taxi drivers. Some research in Australia<sup>7</sup> and Britain<sup>8</sup> has found that alcohol plays a role in driver assaults, but it is not clear that these assaults are primarily a subset of robbery-related assaults nor how prevalent they are compared to robbery-motivated assaults. Some drivers have suggested that driver behavior, such as over-charging, taking the long way around, and aggression or rudeness, may lead to aggression by passengers.9 It is unclear whether, or how often, this aggression escalates into a later robbery event or whether other types of verbal harassment or hate speech are related to taxi driver robbery. There is some evidence, however, that driver pursuit of fare evaders can result in robbery.<sup>10</sup> Policing agencies may, therefore, find it useful to look carefully at a variety of incidents involving taxi drivers in order to understand the taxi robbery problems in their area.

Policing agencies seeking to limit the number of taxi driver robberies in their area need to try to understand where the links between crimes can be made, as well as how the series of actions in a robbery crime "script" develop and how they relate to prevention schemes. For example, prevention measures, such as safety shields between drivers and passengers, designed to help prevent one type of crime (robbery) may also help prevent other crimes (homicides and assaults). Yet, drivers in some areas have been concerned that they may depersonalize them or go against a culture that prizes friendliness, banter, and lack of social divisions. This might result in lower tips and possibly

<sup>†</sup> A crime "script" is a shorthand term developed to help describe the stages in an unfolding crime event, similar to the "modus operandi" (Cornish, 1994).



increased fare evasion and vandalism. If these unwanted consequences do not materialize, then it may be easier for drivers to accept the prevention measures against the rarer robbery event. Thus, police agencies seeking to understand a local taxi driver robbery problem may wish to monitor other offenses against drivers both before and after implementing new prevention initiatives.

### Factors Contributing to Robberies of Taxi Drivers

Understanding the factors that contribute to your problem will help you frame your own local analysis questions, determine good effectiveness measures, recognize key intervention points, and select appropriate responses.

Taxi drivers are at risk of robbery due to a combination of factors related to the nature of their job:

- They have contact with a large number of strangers or people they do not know well.
- They often work in high-crime areas.
- They usually carry cash with them in an unsecured manner and handle money as payment.
- They usually work alone.
- They often go to, or through, isolated locations.
- They often work late at night or early in the morning.

These risk factors, among others, have been mentioned in a number of studies of workplace homicide and violence in general.<sup>12</sup>



Not all places pose the same degree of danger in relation to these factors, nor do all drivers have the same degree of exposure to these risk factors. For example, even within a given locality, there may be a great deal of variability in the designs and features of the vehicles themselves. Some cabs may be purpose-built vehicles,† equipped with driver safety screens, radios, charge card machines, global positioning satellite (GPS) tracking, and digital infrared cameras. Other cabs in that area may have none of these features.

One study in Australia found that robberies were most likely to be carried out by young men who were inebriated and hailed the cab from the street or taxi stands.<sup>13</sup> In other places, robberies may be most likely to follow calls to dispatchers by women, with drivers arriving to find a man with a gun and no women.<sup>14</sup> Drivers must be made aware of the common patterns for robberies in their area, but should also be aware that they may not always be able to identify potential robbers or robbery situations before the event unfolds.

<sup>†</sup> Purpose-built vehicles are those designed specifically for use as taxicabs, such as Checker cabs and the London cab



## **Understanding Your Local Problem**

The information provided above is only a generalized description of taxi driver robbery. You must combine the basic facts with a more specific understanding of your local problem. Analyzing the local problem carefully will help you design a more effective response strategy.

### Asking the Right Questions

The following are some critical questions you should ask in analyzing your particular problem of taxi robbery, even if the answers are not always readily available. Your answers to these and other questions will help you choose the most appropriate set of responses later on.

To understand the problem of taxi robberies it is important for local police agencies to understand the types of services normally provided by taxis operating in their jurisdiction. The central distinction is between hackney cabs and livery cabs (discussed above). Other distinctions among types of taxi services may also be important for understanding the environment in which drivers normally work.

#### Incidents

- How many robberies of taxi drivers occur in your jurisdiction? What has been the trend over time in recent years?
- What percentage of all robberies in your jurisdiction is of taxi drivers?
- What percentage of taxi robberies results in injury or death to the driver?
- How many attempted robberies of taxi drivers occur?
   What is the ratio of attempted taxi driver robberies to completed taxi driver robberies?



 What percentage of robberies of taxi drivers is reported to police? Is there an agency that victims may report to other than the police?

### Taxi Company Practices

- Is the industry primarily operated by large vehicle-leasing firms or by independent owner-operators who pay set fees for radio equipment and access to fares through them?
- Do many of the taxis in the area operate without being attached to a radio-cab company?
- Are taxis allowed to cruise the streets for fares? Are they limited to taxi-stand pick-ups?
- Are there regulations that limit taxi drivers' discretion in accepting fares?
- Do drivers receive any compensation for lost wages due to crime victimization, crime-related injuries, complaint filing, or case prosecution?
- What policies, if any, have taxi companies in your jurisdiction enacted to prevent robbery of their drivers?
- Do taxi companies authorize drivers to refuse to pick up or drop off passengers in certain areas of the jurisdiction? If so, do crime reports indicate that these areas are in fact unsafe? Has this practice created any controversy in the community?



It is also important for police agencies to understand the types of passengers normally frequenting cabs in the area and why they take taxis. Common passenger types include:

- the disabled and the elderly;
- non-drivers-including the poor, those who have lost their licenses, and the young:
- those unable or unwilling to drive because of their alcohol or drug consumption;
- regular passengers;
- those going to the airport or train station; and
- business people.

#### **Victims**

- Which type of driver is most commonly a robbery victim in the area-the hackney, or ply-for-hire, driver who can pick up fares from the street or the driver limited to prebooked fares? Are there differences between these drivers in the types of vehicles they use or in the safety equipment on the vehicles? Is there a difference in the amount of interaction among drivers of these types of taxis? Do the drivers in these groups belong to different ethnic groups, have different levels of experience, or represent different age groups?
- Were the robbers picked up off the street by a taxi licensed only for pre-booked fares, suggesting that the drivers were risking their license to take the fare?
- Were the drivers in the cab when the robbery started?
- Did the victims have, and use, safety screens?
- Did the cabs have a digital camera or a global positioning satellite (GPS) system?
- Do the victims usually operate with a radio or have a CB in the cab?



- Do the cabs have some type of alarm, such as a trouble light on the outside of the cabs, an alarm that is triggered at the dispatch office, or a procedure for using a trouble code word?
- Were the victims able to summon help during the incident? If so, was enough information given to locate the driver? If help arrived, at what point in the robbery incident did someone appear?
- Did the victims have a weapon (e.g., gun, knife, tire iron, pepper spray, or flashlight)? Were they able to use it?
- Are drivers usually injured during, or after, the robbery? If so, what types of injuries do they suffer?
- Is the proportion of drivers from particular demographic groups who are robbed approximately the same as the proportion of drivers from these groups in the local taxi industry as a whole?
- How fearful are taxi drivers in your jurisdiction of robbery? How has that fear level changed over time?

#### **Offenders**

- Are most of the robbers passengers in the cab?
- Do the offenders most often hail the cab from the street, or call for a cab from a phone booth or mobile phone, or from a particular location?
- Did the robber operate on his/her own or with an accomplice? Was the offender from an identifiable group? Were the victim and the offender from the same ethnic or racial group? Was the robber male or female?
- Did the offender intimidate the driver through threats or harassment prior to the robbery?
- Did the offender appear to be an opportunistic offender or one who seemed to be experienced in carrying out this type of offense?
- Was the perpetrator armed with a weapon? If so, what type of weapon? When was the weapon first shown or threatened?



#### Locations/Times

- In what parts of town do the robberies tend to occur or cluster? Where was the pick-up location? What destination was given? Where was the actual robbery done? Was the driver or cab taken to another location after the robbery?
- · Were the robbery sites given as the destinations at the beginning of the taxi trips?
- Are the areas where robberies occur similar in design? For example, are they difficult to maneuver in, or do they involve complicated street plans where drivers can become easily lost?
- Are incident areas clustered geographically? Do these areas also have high rates of fare evasions? Do experienced drivers tend to avoid these areas?
- Do robberies involving drug addicts occur more often in certain geographic areas, such as near dealers' residences?
- When do these robberies mainly occur (time of day, day of week, month, season)? Do these times correspond to driver shifts? For example, do robberies tend to occur toward the end of a shift on a busy night? As drivers are returning to base or home? Or do robberies tend to occur when drivers are not busy, suggesting they may be taking risks to increase their takings?
- Do robberies in certain places occur more often at certain times of the day?
- Are the robbery locations normally deserted at the time of day when the incidents occurred there?



#### † Also see Problem Solving Tips: A Guide to Reducing Crime and Disorder through Problem-Solving Partnerships (U.S. Department of Justice COPS Office, 2002).

### **Measuring Your Effectiveness**

Measurement allows you to determine to what degree your efforts have succeeded, and suggests how you might modify your responses if they are not producing the intended results. You should take measures of your problem before you implement responses to determine how serious the problem is, and after you implement them to determine whether they have been effective. All measures should be taken in both the target area and the surrounding area. (For more detailed guidance on measuring effectiveness, see the companion guide to this series, Assessing Responses to Problems: An Introductory Guide for Police Problem-Solvers.†) Due to the problems involved in finding comparable surrounding areas, police agencies may try to get comparison figures from similar types of cities or local areas within the region.

Police and industry efforts to record the number of robberies of taxi drivers more accurately may lead to an increase in reported crimes that reflects only reporting practices and does not indicate a real increase in the number of incidents. If police agencies or taxi regulators try to increase robbery and attempted robbery reporting levels, then they should do this several months *prior* to the implementation of any new preventive measures.

The following are potentially useful measures of the effectiveness of responses to taxi robbery:

 reductions in the number of robberies (and attempted robberies) of taxi drivers (and in the proportion of taxi robberies in comparison to all robberies in the area), controlling for taxi business volume and the number of taxis:



- reductions in the number of repeat robbery victimizations of taxi drivers, controlling for the number of drivers;
- reductions in the proportion of completed robberies to the number of attempted robberies of taxi drivers;
- reductions in the reported response time of police and other drivers to calls for assistance:
- reductions in the number of homicides of taxi drivers (and in the proportion of driver homicides in comparison to all homicides in the area), controlling for taxi business volume and the number of taxis;
- reductions in the number of driver assaults (and in the proportion of taxi driver assaults in comparison to all assaults in the area), controlling for taxi business volume, the number of taxis, the number of drivers, and the number of years of experience of drivers;
- reductions in the number of repeat assault victimizations of taxi drivers, controlling for the number of drivers;
- reductions in the severity of injuries resulting from robberies and attempted robberies of taxi drivers, controlling for the number of assaults;
- reductions in the time taken off following robbery or attempted robbery by taxi drivers, controlling for the number of assaults;
- reductions in the number of workers compensation claims filed by taxi drivers following robberies or attempted robberies, controlling for taxi business volume and the number of drivers;
- reductions in the number of driver complaints of harassing comments (a possible precursor to a robbery), controlling for taxi business volume;
- reduction in driver turnover in the industry, controlling for taxi business volume;
- · reductions in reported fear among drivers of being crime victims:



- reductions in the number of passenger complaints to the taxi regulator (including service refusals overall, and those based on claims of racial or ethnic discrimination and residential discrimination (both in terms of pick-ups from residences and street hails once the destination has been given), controlling for taxi business volume and the number of taxis: and
- reductions in passenger volume.

Police agencies, taxi regulators, or industry representatives should measure the extent to which initiatives have been adopted to help ensure that any apparent success (or failure) is correctly attributed to the appropriate antirobbery initiative. If police or regulators are to assess prevention efforts accurately, then there must be cooperation among the various information holders. One way to accomplish this would be to document the crime prevention hardware and systems on a vehicle at the time it is inspected by the taxi regulator, with owners being required to report changes between inspections with an easy-to-use reporting form. Also, the agency operating a grant or loan program to support the installation of particular security devices should keep records of the vehicles receiving the equipment and forward this information to taxi liaison officers in policing agencies or to those in the regulator's office who monitor crimes against drivers. And finally, police agencies instituting new patrol practices in response to taxi crime should document when these initiatives begin so that their effectiveness can be monitored more accurately. As this listing clearly indicates, no one stakeholder can perform the assessment needed to determine what works in a particular area. Cooperation is crucial for accurate assessment.



Getting information from taxi drivers about the volume of their business may be difficult if they are not required to keep a log of their trips since they deal in cash and some of them may be reluctant to disclose the extent of their earnings, particularly if they do not report all of their income for tax purposes or to the owner of the vehicle (where the owner is entitled to a percentage of the takings). Also, driving a taxi is often an entry-level job for many new, and undocumented, immigrants who also may be reluctant to report any information to policing agencies or taxi regulators.



### Responses to the Problem of Robbery of Taxi Drivers

Your analysis of your local problem should give you a better understanding of the factors contributing to it. Once you have analyzed your local problem and established a baseline for measuring effectiveness, you should consider possible responses to address the problem.

The taxi industry is often regulated by an agency within local government, by an independent commission, or by the police.† These bodies set fares and limit the number of licenses permitted within particular areas, as well as control the conditions of vehicles and monitor the behavior of drivers. Often the jurisdictional boundaries between these regulatory agencies and police are not clear to everyone affected. The problem is compounded if the regulatory agency does not deploy inspectors during the late night or early evening hours. The police may be called upon to act in areas for which they have little training. They may be asked by drivers to resolve complaints that are civil, rather than criminal in nature-such as fare evasion in some locations. Taxis may operate outside their home jurisdiction and taxis from other areas may drop passengers off in local policing areas. Coordination between police and the taxi regulators may require the appointment of a special officer.

The development of industry-wide responses should involve not only the police and the regulatory bodies covering a service area, but also other interested groups such as drivers, drivers' associations, vehicle owners, and radio-cab booking companies. One researcher has commented that voluntary measures, even with wide support among drivers, do not have much chance of penetration into the industry without the support of owners.15 Sometimes these agencies

<sup>†</sup> In Boston, the taxi industry is regulated by the Boston Police Department (the Hackney Carriage Unit) while in New York City, the Taxi and Limousine Commission sets the rules for both hackney and livery services (see www.nyc.gov/html/tlc/ html/home/home.shtml).



† But see Department of Infrastructure, Energy and Resources (2003) for an example of a regulatory impact statement on the requirement that security cameras be installed in taxicabs in Hobart, Tasmania, Australia, where the costs and benefits of security cameras, driver safety shields, and emergency lights and duress alarms are each set out.

†† Mayhew (2000a) presented a comprehensive review of prevention strategies related to assaults of taxi drivers.

require a single type of safety device, such as a bulletproof screen between passengers and drivers, while at other times they may allow drivers or owners to choose from several possible devices, such as safety screens, digital surveillance cameras, or automatic vehicle locators (AVLs) in combination with an alarm.<sup>16</sup> Policies that provide some choice among safety measures may represent a compromise among competing interest groups rather than a judgment about comparative effectiveness.† However, because so little is known about the effectiveness of most of these measures, it is too soon to draw conclusions about whether it is more useful to focus on a single prevention measure or to allow a variety of measures to operate within a single area.

The responses recommended below are reasonably likely to have some beneficial effect in preventing robberies of taxi drivers; however, unless otherwise noted, none of these responses has been properly evaluated for effectiveness. Since so little research has been done in this area, it is too early to label measures as ineffective. This is why the last three responses are included but discussed separately as responses with limited potential for effectiveness. It is also important to note that, although installation costs are frequently cited as reasons for not implementing particular problem-solving strategies, a number of grant or loan programs have been set up, such as those in New York City<sup>17</sup> and Washington, D.C.<sup>18</sup>

The following response strategies provide a foundation of ideas for addressing your particular problem. These strategies are drawn from a variety of research studies<sup>††</sup> and police reports. Several of these strategies may apply to your



community's problem. It is critical that you tailor responses to local circumstances, and that you can justify each response based on reliable analysis. In most cases, an effective strategy will involve implementing several different responses. Law enforcement responses alone are seldom effective in reducing or solving the problem. Do not limit yourself to considering what police can do. Give careful consideration to who in your community shares responsibility for the problem and can help police better respond to it.

#### Vehicle Equipment

1. Separating drivers from passengers. Screens or partitions should be effective if they make it more difficult for robbers to carry out the type of threat most common with taxi robberies in an area. For example, bullet-resistant screens (and bulletproof plates behind the driver's seat) are designed to prevent robberies with a gun when the robber is seated behind the driver. In the only well-designed evaluation of a security measure in a taxicab found for this review, bullet-resistant safety screens between drivers and passengers both reduced the number of assaults on drivers and were cost effective.19 Given the probable links between driver assault and robbery, this result should apply to robbery reduction as well."





Physically separating drivers from their fares can help prevent driver assault and/or robbery.

<sup>†</sup> A report from the Manitoba Taxicab Board (1991) presents an extensive discussion of taxi screens.

†† The importance of industry-wide use of safety screens in an area has been illustrated with the case of New York City livery drivers. If livery drivers owned the cab they drove, they were exempt from the mandatory shield requirement directed at hackney cabs in the 1990s. While homicide deaths among hackney drivers dropped, livery drivers continued to be victimized (Marosi, n.d.). In 2000, following a number of killings of livery drivers, all livery drivers were required to install either a shield or a digital surveillance camera (Luo, 2004; see also New York City Taxi and Limousine Commission, 2000b), Homicides have declined markedly for livery drivers since 2000. It is difficult to credit shields completely for this change, however, since a number of other prevention programs were also in effect in that period.



† Passenger injury was seen as a major problem in New York City cabs. The "Celebrity Talking Taxi" Program, begun in 1997, used recordings by celebrities to remind passengers to wear their seat belts (New York City Taxi and Limousine Commission, 2002). The program was abandoned in 2003 following a study of passenger compliance (Feuer, 2003). The recordings were seen as annoying and repetitive, leading many passengers to defy the recommendation to buckle-up.

Although taxis in many large U.S. cities have driver safety screens, this is by no means a universal feature in all vehicles. Screens have been seen to have the following disadvantages:20

- expensive to install,
- do not fit well in vehicles that are not purpose-built vehicles.
- limit driver-passenger interaction (and, therefore, possibly limit tips),
- can interfere with heating and air conditioning circulation, and
- can lead to head injuries following sudden stops where passengers have not been wearing seat belts.

However, as one study found, drivers who have been the victims of assaults or robberies may be more likely to want screens in their cabs than those who have been the victims of less serious crimes.<sup>21</sup> If taxi regulators require drivers to have screens in their vehicles, then they must provide drivers with information about the types of attacks that screens can protect them against, such as whether they are shatter resistant as well as being bulletproof.

2. Recording activity with security cameras. Security cameras in taxis can serve a variety of interests related to robbery prevention. Police and prosecutors can use the images to help catch offenders and increase the evidence available for conviction. For drivers who may be more interested in prevention than detection, surveillance cameras in taxis may deter would-be robbers (or attackers) who do not want their images caught on camera. Notices to customers of the presence of cameras should increase their deterrent effect. To achieve a similar deterrent effect, prosecutors need to ensure that successful prosecutions using camera evidence are highly publicized within their



area. One danger for drivers having cameras in their cabs is that they may begin to rely on the camera as a substitute for their own careful assessment of their passengers and may fail to use their normal precautions.



Security cameras in taxis can capture robberies in progress.

The types of cameras available for use in taxicabs have become increasingly sophisticated in the last 10 years.<sup>22</sup> Digital cameras, with infrared capability, can be connected to systems that hold a large number of images. Drivers must be aware whether their system writes over images or can retain a certain number of images if an alarm is triggered. If camera images are stored on equipment held in the trunk of the cab, there is a possibility that when robbery events are caught on camera, offenders may try to destroy the equipment (and cab) to eliminate the evidence. Systems that transmit the images to a central location away from the taxi should help to overcome this problem if offenders are aware of how these systems work. Industry representatives should explore technological innovations that make vehicle destruction less likely.



<sup>†</sup> This would require images to be stored and accessed only through a central computing facility, such as one run by the police department or the industry's oversight commission. These images would then only be downloaded in special circumstances, such as when a crime occurs or a complaint has been made against the driver. Protection against passenger complaints is seen by many drivers as an additional advantage of having cameras in their cabs and may encourage drivers to install them. Cameras can also be used to help prove or disprove complaints against drivers-if the images have been preserved.

†† The effectiveness of cameras in taxis is a hotly debated issue (see Rathbone, n.d.).

Not all passengers like cameras.23 Part of this may be due to uncertainty over how their images will be used. Regulators need to set up strict safeguards to protect passenger privacy. Legislation over use of the images may provide some protection, but this may also be achieved if the images are not available to the drivers.† Clearly, much depends on the technology used.

Some cities, such as New York City, Chicago, and Sydney, Australia, permit drivers to have cameras in their taxis in lieu of driver safety shields. †† Police-industry partnerships need to be aware that not all prevention devices may be equally effective against robbery. Crime displacement may occur if potential robbers see one set of drivers as less protected than drivers with other devices in their cabs.

3. Using a radio or alarm to call for help. Although alarms and radios may be used to call for help, drivers may find it very difficult during robberies to use radios (dispatching or CB) or mobile telephones to call for help. Some devices require drivers to hold down a button while speaking or press a series of buttons to connect with the listener. Furthermore, it may become apparent to the assailant that the radio or telephone has been activated or that the driver is broadcasting the cab's location or using a code indicating that there is trouble. This could put the driver in additional peril. Radios can be disabled and help may not arrive immediately.



The U.S. Occupational Safety and Health Adminstration has advocated so-called "open mikes." These devices block the airwaves on that channel, broadcasting whatever comes from the open mike. Accidentally switching on an open mike may be a particular problem if the open channel is also the company's dispatching channel since it is blocked when left "open" and the driver cannot be contacted to close it. If the driver carries a mobile phone, the dispatcher has that number, and mobile phone use by taxi drivers is not prohibited, then that problem may be overcome.

Drivers can use alarms to signal to some central location (taxi company or police station) that they are having trouble or they can be used to set off a "trouble light" on the vehicle itself that cannot be seen by the passengers. Alarms triggered easily through the pressing of a toggle switch at the driver's foot, on the steering wheel, or on the radio itself may also be accidentally switched on. While this may be avoided if the driver has to confirm the alarm, this puts an extra burden on the driver as an incident is unfolding.

In an area with foot or vehicle traffic, passersby may see trouble alarms and summon police. Publicity about trouble lights should increase awareness among those outside the taxi industry about the meaning of these lights and avoid confusion with "ready-for-hire" lights on hackney cabs.

Drivers and dispatchers need to be carefully trained by the taxi companies:

- To understand what events are serious enough to warrant calling for help.
- To know how their alarm systems work, what their limitations are, and whether these limitations can be overcome.



Police officers must be carefully trained in the protocols for response so that they do not increase the potential harm to the driver. Police departments must understand the problems that may arise with these systems and should review with taxi drivers and dispatching companies their response protocols.

4. Keeping track of vehicle locations with automatic **vehicle location (AVL) systems.** Systems using global positioning satellite (GPS) technology have advantages over systems that require drivers to broadcast their locations during a robbery incident. With GPS systems, all that is required is the triggering of an alarm and the monitoring of that alarm signal by someone who can send help.

Taxi dispatching companies are increasingly using GPS systems to determine which driver is closest to a pick-up location. Some drivers do not like them because they do not take into account driving times to locations or because they allow too much oversight of the driver's movements. Driver resistance to having an alarm system linked to GPS tracking may be overcome if the systems are independently installed (such as by the taxi-oversight commission or agency) and monitored (by the commission or the local police department).

5. Putting trunk latches on the inside of vehicle trunks as well as near drivers. All taxi vehicles should be equipped with a latch that allows someone to open the trunk from the inside. This feature is not designed to reduce the number of robberies but to reduce the potential harm to drivers who may be locked in the trunk following a robbery incident. Trunk latches near the driver's seat may be standard features on many cars used as taxis. They permit drivers to open trunks without getting out of the cab, which may prove useful late at night if the driver does not think it is safe to exit the cab.



**6. Disabling vehicles.** Systems that allow cabs to be disabled remotely by having the engine turned off may become more readily available.25 They could be activated by a silent alarm and used to disable a vehicle during a robbery or to prevent a getaway. Drivers using this technology must be trained in how to respond safely to both the lack of engine power and to a variety of potential responses by offenders.

# Money Matters

Given that one of the reasons that taxi drivers are at risk of robbery is that they carry cash with them, a number of different strategies have been developed to limit the availability of cash in taxis.

- **7. Eliminating cash payments.** Drivers should be encouraged to use payment systems that are cashless. Systems used, or proposed, include:
- Credit or debit cards. (The most efficient systems appear to be those in which small machines are installed in the cabs. Some may even be set up so that the passenger swipes the card. This may encourage customer use in areas where passengers are distrustful of drivers. Some companies handle credit cards centrally by calling in the information though this may be a time-consuming process.)



Machines that allow taxi drivers to accept credit cards are becoming more common.



- Farecards. (Areas that use farecards for public transportation should consider including taxis in the system. If this technology becomes less expensive, it may be possible for communities or companies to run their own systems.)
- Accounts accessible through mobile phones. (This system allows the mobile phone to be used to gain access to debit accounts.26)
- Accounts for regular customers, such as restaurants, hospitals, and social services. (Authorized passengers merely sign a bill. Drivers can use this "money" to help pay their own account with the dispatching company.)
- Personal checks. (Individual drivers may accept personal checks from passengers. This may be considered financially risky even when check guarantee cards are present.)

Cashless systems can be unpopular with drivers for a number of reasons:

- Drivers may feel that their regular customer base is unlikely to be able to move to a cashless system and they will lose trade if it is the only alternative offered.
- It may be expensive for drivers to install the technology necessary to handle these systems. (It may not be seen as cost effective if their customer base is unlikely to use a cashless system and there is no pre-existing farecard system in their area.)
- Passengers may try to use stolen credit or debit cards, or pass bad or stolen checks so the driver may be concerned about receiving payment from the credit card company or bank.
- Drivers may wish to limit any records that accurately reflect their income. (Drivers working for companies may conceal their real income if the company is supposed to receive a percentage of the takings. Drivers may not report all of their income to the government, particularly their tips.)



As more businesses move toward a cashless system, however, drivers should eliminate cash (as much as possible) so that they are not a sure source of cash for would-be robbers. Nevertheless, if cashless systems operate along side regular cash operations, then drivers will still be at fairly high risk of robbery.

**8. Dropping money off.** Drivers should be encouraged to drop off cash during their shifts. They can drop the cash at home, at cash machines, and at dispatching offices (where individual slots and compartments can be set up to hold each driver's money separately from the others). Drivers may not use drop-off locations if they are not convenient or they perceive their risk of robbery in the taxicab to be low.

If the taxicab carries a sign indicating that the driver carries only a limited amount of cash (and the drop off is actually carried out), then the dropping off not only limits driver loss but could limit the risk of robbery in the vehicle. However, this strategy carries risks. Drop-off routines must be varied to prevent robbers from staking out drop-off locations and carrying out hold-ups as drivers leave their cabs. Dispatching offices holding driver cash must be made secure against robbery as well.

**9. Keeping money locked up or out of sight.** Drivers can put money in a locked safe in the cab. If a safe is used, it is not clear whether this should be advertised (as in convenience stores). It is possible that such advertising might lead to the escalation of the incident from a robbery to a robbery with an abduction of the vehicle, and possibly the driver.27 This might lead to greater injury to the driver and damage to the vehicle.

<sup>†</sup> Australian research has shown that many robberies involve small amounts of money-less than \$30 (Keatsdale Ptv. Ltd., 1995).



Several methods can be used to prevent passengers from seeing that drivers are carrying large amounts of money and knowing where it is kept. The first two techniques listed below may be more effective since they do not involve a possible confrontation with passengers:

- Drivers can keep cash for making change separate from the bulk of their takings so only a small amount of money is seen.
- · Taxi regulators can limit the amount of cash that drivers are required to carry to make change for passengers. (This limit should then be advertised in the cab where fares are posted.)
- Drivers can say they don't have change and offer to stop at a convenience store or gas station to allow the passenger to get change. (They can claim they just made a cash drop or just started their shift.)
- Drivers may also tell passengers that they cannot change large bills (or post a notice to this effect), citing "company policy" even if they do not work for a company.

10. Minimizing expectations about the amount of **money present.** Passengers frequently ask drivers whether they have "been busy" during their shift. While this may be friendly interest or normal small talk, drivers are frequently advised to play down how busy they have been by saying they have just started their shift or have not been very busy. This is done in case the passenger is using the question as a precursor to a robbery.

#### Other Driver Practices

Drivers may learn these practices from other drivers—e.g., family or friends in the business-or through driver safety education programs (see No. 28 below).



- 11. Controlling who gets in. Drivers use a number of techniques to control who gets in their cabs. Robbers may sneak up on drivers to catch them by surprise. More often, however, these techniques are used by drivers to allow them to assess the potential risks they think passengers pose prior to letting them in their cabs. Once passengers get in, it can be very difficult for drivers to remove them. Access control techniques include:
- Screening who enters the cab. Using this technique, drivers can exclude people by behavior or demeanor (using abusive language, inability to stand, carrying food, or having bloodied clothing) (see also No. 29 below). Passenger screening is most controversial, however, when it involves refusing passengers from particular ethnic or racial groups (racial profiling) or failing to pick up or drop off passengers at certain locations or areas of a town (residential discrimination). To meet the public service mission of the industry and prevent invidious discrimination, taxi regulators usually set out a limited set of circumstances under which a driver can refuse a fare and provide a mechanism for passengers to make complaints for service refusals.† Although it is usually drivers who are penalized for illegal service refusals, regulators can seek to have companies held accountable for the behavior of their drivers, both ethically and legally, particularly when the service refusal is racially motivated.<sup>††</sup>

One of the reasons police agencies need to be concerned about taxi robbery is that robbery and fear of robbery fuel discriminatory practices if drivers perceive that they are at unreasonable risk merely by picking up certain passengers or going into certain neighborhoods. This problem is likely to be more difficult to deal with than racial profiling within policing agencies. Instead of dealing with a situation in

- † For example, the New York City Taxi and Limousine Commission sets out some of this information in an easy-to-use format for passengers (and drivers) at www.nyc.gov.html/ tlc/html/passenger/faq pass.shtml.
- †† New York City and Washington, D.C., have recently dealt with highprofile campaigns and lawsuits against service refusals on the ground that they amount to illegal racial profiling or residence discrimination. In New York City, the recent campaign against service refusal on racial grounds began in response to a complaint by actor Danny Glover in 1999 who highlighted the problem facing many African-Americans and Hispanics in the city (Yinger, n.d.). Mayor Giuliani reinstated sting operations by police officers that resulted in immediate suspension of the driver, along with other sanctions for repeat offending. The immediate suspension measure was later overturned by a federal judge as it did not meet the requirement for a fair hearing prior to suspension (Padberg v. McGrath-McKechnie, 2002). In Washington, D.C., there have been a number of lawsuits filed in which discriminatory service refusal has been alleged (see Kovaleski, 2003; Mitchell v. Diamond Cab Company, 2003). A report by The Equal Rights Center (2003) cited the D.C. Taxicab Commission for neglecting its responsibilities in the civil rights area for failing to investigate discrimination complaints promptly and thoroughly and for not establishing effective fines and penalties for drivers or companies (see also Kovaleski and Chan, 2003).



† According to this research, as crime was falling in the city, service refusal complaints were rising. These complaints were highest when the demand for cabs was highest, as measured by time spent cruising for customers. This is because when there are a lot of cabs looking for passengers (either because there are more cabs or the fares are high), cabbies cannot afford to be as selective as they can be when there are fewer cabs on the road and fares are lower. In addition, this research cited passenger surveys suggesting that service refusals (both of minority and non-minority passengers) appeared to be related to the pressure to make money and the desire to work only in certain areas of the city.

which an officer is compelled by law to refrain from an action unless it can be justified, here, the driver is compelled by law to act unless the non-action can be justified. In effect, the law is telling one group in a risky industry (police officers) to be risk averse, while it is telling another group in another risky industry (taxi drivers) that they cannot be risk averse. However, if the robbery risks are low, then it becomes easier for drivers to comply with the law and more difficult for them to justify illegal refusals on grounds of high risk. In effect, the low actual risks allow drivers to be both risk averse and not engage in racial or residential discrimination.

One commentator has suggested that general rates of service refusals in New York City are not related to crime levels but rather to the economics of driving a cab. 28,† This finding points to a need for policing agencies to use a problem-solving approach to illegal service refusals-looking at the data on serious crimes against taxi drivers in an area (including type of crime, area, and characteristics of offenders), the number of taxis in service (and the fees paid for cab rental), and the enforcement mechanisms available against drivers and companies who use racial profiling or other illegal screening techniques to ensure that these are all geared to help limit the practice.

- Keeping doors locked while drivers are waiting for the next fare.
- · Keeping windows rolled up enough to prevent someone from reaching in.
- Taking regular riders as much as possible.
- Limiting the number of passengers. (The number of passengers that may be taken in a cab is usually limited by law or by the driver's insurance coverage. These limits primarily relate to road safety issues and are based on the size of the vehicle. Drivers sometimes.



however, will impose their own limits on the number of passengers they will take in certain situations as a means of avoiding potential trouble. For example, they may not stop to pick up four young men on a Saturday night, preferring to wait for a fare with fewer passengers (or fewer young men).)

- 12. Directing passengers to particular seats in the cab.
- Drivers are frequently warned not to allow passengers to sit directly behind them if there is no partition or screen. Drivers may not follow this advice if they do not want to risk provoking passengers or letting them know they do not trust them.
- 13. Finding out the destination before moving. One rule of thumb cited repeatedly is to get the passenger's destination "up front." It is seen as a sign of potential trouble if the passenger refuses to give a destination at the beginning of the trip or changes the destination while en route.

Drivers can use a trip sheet (in which all pick-up times and destinations are recorded), title company policy, or radio in to the dispatcher if customers refuse to give a destination. These techniques may also be used to legitimize a request to get out of the cab if the destination is not given (see No. 16 below).

# 14. Sharing destination information with others.

Drivers should be encouraged by companies, the police, and regulators to keep as many people informed of their whereabouts as possible, especially where cameras or GPS systems are not used. Drivers should inform the dispatcher (or another driver) of their whereabouts, proposed route, and destination each time a new passenger gets in the cab. If drivers do not work for a radio-dispatching company,

<sup>†</sup> The trip sheet may be required by the regulator or company to keep track of driver income, but it may also be used to document patterns of robbery if the driver is killed or seriously incapacitated during the crime.



they must rely on other drivers for support. When drivers let someone know where they are going, this also lets the passenger know that someone knows this information as well.

15. Putting additional people in the cab. In some places, such as Jersey City, New Jersey, drivers do not always work alone in their cabs at night but carry another person in the passenger seat for back up. This practice appears to be intended primarily to increase driver safety but may be intimidating for some passengers. Another practice that can provide additional oversight involves taking unrelated riders together in the same vehicle. Although drivers are provided with additional oversight with shared riding, they may also have more conflicts to deal with between passengers, especially when some of them have been drinking. The benefits for passengers may be mixed since they may have shorter waiting times for cabs, but may not want to ride with strangers.

16. Setting rules and asking those who don't meet them to get out. Drivers may set rules such as no smoking or eating in the cab—and may ask passengers to get out of the cab if they don't follow them. These rules are individual ones that may not be sanctioned by the commission or agency that governs taxi operations. Drivers may also ask passengers to leave if they are aggressive toward them. Drivers may think that failure to stand their ground over minor matters will be seen as a weakness and lead to more serious aggression or be used as an excuse for a robbery.



- 17. Trying not to provoke passengers. Drivers are often told not to use aggressive language with customers since this may provoke an attack. Drivers may also establish patterns of interaction, such as always explaining to passengers which route they plan to take, to eliminate later disputes over fares. Drivers may find it difficult to both set rules (No. 16 above) and to try not to provoke passengers. Driver training sessions may help them deal with these types of problems (see No. 28 below).
- 18. Knowing where to go for help late at night. If drivers know which locations, such as police stations or sub-stations, fire stations, convenience stores, or gas stations, are open or staffed 24 hours, then they can use this information:
- To drop off unruly passengers and prevent an incident from escalating to a robbery.
- To gain assistance in dealing with an unfolding robbery.
- To get help following a robbery.
- 19. Allowing others to see inside the cab. Taxicab owners and drivers should keep the vehicle's windows free of obstructions so passersby can see inside the taxi. Tinted glass impedes surveillance by those outside the cab. Drivers are also encouraged to drive along the main roads and well-lit side roads if possible late at night. Obstruction-free windows are part of the package of measures related to lower numbers of convenience store robberies in a number of studies.29

<sup>†</sup> In a study of taxi drivers in Cardiff, Wales, drivers related a number of incidents in which they tried to go to police stations for assistance late at night only to find that the stations were not open (Smith, forthcoming).



## 20. Limiting where the cab will make a drop off.

Drivers should be wary of making a passenger drop off in a dark, isolated, or out-of-the-way location because these do not permit surveillance by others or allow the driver to see if someone is lurking at the destination. Similarly, vehicles can be boxed in if an attempt is made to drop off passengers in alleys or dead-ends. Drivers should approach these locations with caution, particularly if other drivers in the area have reported these spots as sites for robbery, fare evasion, or vehicle damage.

# 21. Staying in the cab unless it is safe to get out.

Drivers are frequently advised not to chase fare evaders since they may find themselves in an isolated area and be attacked and robbed by the "runners" or their compatriots.

During or after a robbery incident, drivers are sometimes advised to get out of the cab if they are sure it is safe to do so. This is an area in which driver training, based on experience in an area, should guide drivers in how best to judge whether to exit a cab during or after an incident.

**22. Limiting injury when a robbery occurs.** Taxi drivers are frequently advised to cooperate with those trying to rob them by handing over their money and not fighting back.

Drivers should carry first aid kits in their cabs even if this is not required by their local regulatory agency. These could help limit any injury they receive during a robbery or assault.

Similarly, drivers should keep an extra key in a pocket to allow them to use their cab if the robbers have taken their keys. This is particularly important if they have been abandoned in a remote location and have no radio or telephone.



# Policing Practices

There are various organizational approaches police agencies can take to address taxi robbery problems. Special units could be set up to deal with taxi driver robbery if the number of incidents appears high. These units should be used to help determine patterns in taxi robbery and then develop strategies to address what they find. For example, they may target specific areas with high numbers of robbery incidents using decoy taxis driven by police officers.

Police may also want to have a more general taxi unit that deals with a variety of taxi-related crimes, developing expertise in the area. The taxi unit should:

- Establish protocols for learning about common robbery scripts, utilizing crime analysis techniques as well as crime mapping technology.
- Develop easy ways for drivers to report crimes against them.
- Attend meetings and meet informally with drivers, owners, and dispatchers.
- Establish contacts with unlicensed drivers or otherwise learn about their position in the industry.

**23. Authorizing police stops.** In New York City, the Taxi/Livery Robbery Inspection Program (TRIP) has been used to stop cabs on the street without the need for establishing reasonable suspicion or probable cause. Under this program, taxi owners sign a voluntary registration form allowing police to stop their cab for a brief inquiry and a visual inspection of the vehicle. Owners also agree to have all drivers of the vehicle sign a consent form with similar provisions. Decals of participation are placed on the back window in the vehicle and in the passenger compartment, which note in English and Spanish that



† See Spelman (1990) for a discussion of repeat offender programs.

the cab may be stopped at any time and visually inspected for the driver's safety. A registry of participating vehicles is kept, as well as a detailed activity log of all police stops.

The constitutionality of this program was recently upheld by the New York Court of Appeals.<sup>30</sup> TRIP differs from earlier programs that were struck down by the Court of Appeals<sup>31</sup> and the U.S. District Court.<sup>32</sup> The earlier programs involved too much discretion for police in how to carry out the stops. A program in Boston (TIP), similar to TRIP in New York City, has been upheld by the U.S. Circuit Court.<sup>33</sup> The Boston Police inform drivers where they will have their check points so that drivers who feel danger or concern can drive by and turn on their cab's amber light (an alarm signal) for the officers to see (Sweeney, 2004).

**24. Targeting repeat offenders.** If police intelligence indicates that a few offenders are responsible for a number of different taxi driver robberies or attempted robberies in a local area, then a repeat offender program should be used to target these individuals or groups of offenders. Police investigation techniques, as well as crime pattern analysis, should be used to establish how best to target the offenders. For example, the New York City Police Department has used decoy drivers to combat taxi robberies in certain areas.<sup>34</sup> While detection and prosecution should operate to incapacitate those who have committed a crime, to increase possible deterrent effects, publicity should be used to highlight any successful prosecutions under the program.



## Industry Rules, Regulations, and Practices

Setting up rules, regulations, and practices that control the industry and reduce both actual and perceived unfair or dangerous practices by drivers may increase sympathy for drivers and limit the excuses offenders may offer for targeting taxi drivers.

25. Controlling the environment around taxi stands.

Taxi regulators and city planners should keep surveillance considerations in mind when deciding on the placement of taxi stands (both official stands that allow passengers to hire vehicles on the spot and unofficial ones where company drivers may wait for their next fare). Drivers waiting for fares at taxi stands should not be put at risk of surprise by potential robbers. They should be able to see who is approaching their vehicle from all directions. Adequate lighting and clear lines of sight will allow passersby to see what is happening at the stand. Other aids to surveillance by others include the placement of closed circuit television (CCTV) cameras near stands and the direct supervision of stands at particular hours by police officers, taxi inspectors or taxi wardens.35

Official taxi stands are frequently placed at busy locations, such as near airport or train station exits, shopping centers, and late-night venues, to make it easy for passengers to find cabs. Stands may also be placed near businesses open for 24 hours, such as convenience stores or gas stations.

26. Eliminating passenger and driver conflict over money. Industry practices and the rules and regulations laid out by taxi and limousine commissions and other local licensing agencies must set clear rules about taxi fares. These include:

† "Excuses" refers to the ways in which offenders rationalize their behavior to themselves and others; it does not imply a legal or moral excuse for their offending.



- † For example, the New York City Taxi and Limousine Commission (2001) recently raised the flat-rate amount that drivers could charge for going from JFK Airport to anywhere in Manhattan to \$35.
- †† Taxi dispatchers at Newark Airport ask passengers in the taxi queue where they are going and write the fare on a sheet that is given to the passenger. The sheet contains taxi rules and regulations, as well as information about who to contact to complain about over-charging or other offenses by drivers.
- Requiring (and checking the operation of) taxi meters or posting clear guidelines for zoned fares. (Actual or suspected over-charging by drivers may reduce driver credibility across the industry and provide excuses for potential offenders to victimize drivers.)
- Setting fixed fares for certain routes, such as trips from airports into the city center, or placing taxi dispatchers at taxi stands to set the fares for each destination.
- Allowing drivers to ask for advance payment or partial payment for out-of-town or long-distance fares. (This rule is primarily aimed at eliminating fare evasion; however, it may also be useful for robberies carried out by those seeking to do the crime in an isolated area who do not have the money to pay for the trip. Some drivers may be reluctant to seek payment up front if they think it indicates distrust of the passengers and may lead to conflict or lower tips.)
- Setting charges for passenger soiling of the interior of the vehicle, such as through urination or vomiting or the spilling of beverages or food.
- 27. Setting driver competency standards. Regulatory agencies should set standards for driver and vehicle competency in areas where lack of such standards may lead to dangerous situations for passengers, conflicts over routes, and other frustrations and misunderstandings that are likely to lead to aggression, physical attacks, or robberies. The most common areas noted as needing some level of competency are:
- driving,
- language skills, and
- knowledge of roads and area routes and short cuts.



Local needs will help determine what these standards should be in a particular area.

**28.** Running driver safety training programs. Police agencies, regulators, or industry or driver associations can use driver safety training to help inform drivers of some of the common ways that taxi driver robbery incidents in their area unfold. Ways of trying to prevent the incident at each stage of this "script" can be devised. This type of training may be particularly useful for:

- · new drivers:
- · drivers who have been robbery or assault victims;
- drivers from ethnic minority groups, particularly those whose language skills in the primary language in an area are not strong; and
- drivers who may be seen by robbers as particularly vulnerable (due to their age, sex, or national origin).

Area experts, such as experienced police officers and former drivers, should run these sessions so that drivers see them as worthwhile. Payment for the sessions can be made by the drivers, the dispatching companies, the local government, or by grants. Details of the exact "scripts" or "modus operandi" used by offenders should not be made public to discourage imitation. Formal training has not been found to be associated with lower victimization levels among Canadian drivers. Forgrams should inform drivers of various Internet sites that contain driver safety information or information about how taxis are regulated in their area. These include:

 www.taxi-l.org/index.htm (contains a large variety of materials on taxis),



- <a href="http://crimeprevention.rutgers.edu/crime/robbery/taxi/">http://crimeprevention.rutgers.edu/crime/robbery/taxi/</a> taxi.htm (provides information on strategies that taxi drivers can use to help them avoid becoming crime victims),
- www.nyc.gov/html/tlc/htmlhome/home/shtml (the home page of the New York City Taxi and Limousine Commission),
- <a href="http://dctaxi.dc.gov/dctaxi/site/default.asp">http://dctaxi.dc.gov/dctaxi/site/default.asp</a> (the home page of the District of Columbia Taxicab Commission).
- http://www.puc.state.pa.us/transport/motor/ motor philly taxicabs.aspx (sets out information from the Pennsylvania Public Utility Commission on Philadelphia Medallion Taxicabs).

## 29. Screening passengers by the dispatching company.

Companies often keep records of passengers who have caused trouble for drivers in the past. The rationale for doing this is that it either prevents the passenger from using that taxi service or it allows drivers to decide whether or not they want to pick up the passenger. This type of blacklisting may also be done by location. When this happens, it may penalize those who move into the residence of a former offender, those who live with offenders, or even those who live in the same apartment complex. These blacklisting practices may be over-inclusive in their scope if they focus on passenger address and they can result in racial and residential discrimination if the practices are not limited to actual behaviors of past passengers (see No. 11 above).



Companies can use Caller ID to check to see whether the call is coming from a private or public address, a telephone booth, or a mobile phone. This technology has several uses: it can be used to trace callers if they fail to show up, evade the fare, or attack or rob the driver and it allows companies to match the telephone number to blacklisted numbers (if they have such a list). Passengers calling for cabs from public telephone booths or mobile phones may be more closely scrutinized by drivers since they are less traceable than some other passengers are.

**30. Exempting drivers from seat belt use.** Taxi drivers who drive cabs without safety screens between themselves and their passengers should be permitted to decide when they will wear their seat belts.<sup>37</sup> Seat belts can be used to strangle someone from behind.

Responses With Limited Potential for Effectiveness

Because so little is known about taxi robberies and their prevention, the only responses included here are ones that appear to hold little promise as effective protection strategies against robberies.

**31. Locking passengers in.** Purpose-built taxicabs, such as the newer versions of London cabs, have systems that lock passengers in when the driver's foot is on the brake. The driver can also control the locking mechanism independently. Posted signs and warning lights describe the braking system and notify customers when it is in operation.



Drivers can use this type of system to prevent nonpayment of fares as well as keep passengers from getting out where it is not safe. Locking passengers in when no screen is present is likely to escalate the use of violence against drivers. Locking passengers in when there are screens may lead to vehicle damage.

- **32. Working only during the day.** Some drivers choose to work only during the daytime hours due to the risks of crime victimization and encountering difficult passengers at night. While this response may be effective for individual drivers, it holds little promise across an industry that relies in large part on nighttime trade. Furthermore, this strategy will only show limited results since not all robberies occur at night.
- **33. Carrying a weapon.** Many drivers carry something in their cabs that can be used as a weapon in an attack, such as a blunt instrument or spray.<sup>38</sup> It is not known whether potential offenders will try to avoid drivers who they think may be carrying a weapon. The primary danger for drivers carrying such weapons is that the weapons may be used against them. In addition, it may not be legal for them to carry these types of weapons in their cabs.



# Appendix: Summary of Responses to Robbery of Taxi Drivers

The table below summarizes the responses to taxi driver robbery, the mechanism by which they are intended to work, the conditions under which they ought to work best, and some factors you should consider before implementing a particular response. It is critical that you tailor responses to local circumstances, and that you can justify each response based on reliable analysis. In most cases, an effective strategy will involve implementing several different responses. Law enforcement responses alone are seldom effective in reducing or solving the problem.

Response No.	Page No.	Response	How It Works	Works Best If	Considerations
Vehide Equip	pment				
1.	21	Separating drivers from passengers	Keeps offenders from reaching drivers to carry out threats	most robbers attack from back seat, screens are fitted on all cabs, and cabs are purpose-built or large	Screens are expensive to install, passengers need to wear seat belts to prevent sudden- stopping injuries
2.	22	Recording activity with security cameras	Increases chances of offenders being caught, may discourage offenders from from doing crime	camera and any resulting prosecutions are publicized	Cameras need to be well-designed for the environment, passengers may question how images will be used, offenders may try to destroy camera evidence, resulting in escalation of the crime event



Response No.	Page No.	Response	How It Works	Works Best If	Considerations
3.	24	Using a radio or alarm to call for help	Permits the driver to notify others that a crime is in progress or has occurred	technology is easy to use and unlikely to be tripped accidentally, location and problem can be communicated, and help is close at hand	Good training in use of equipment and clear protocols for use response are needed
4.	26	Keeping track of vehicle locations with automatic vehicle location (AVL) systems	Allows a third party to know where the cab is if an alarm or distress call is received	used with an alarm system, system is constantly monitored, and help is close at hand	Systems are expensive to install and clear protocols for response are needed
5.	26	Putting trunk latches on the inside of vehicle trunks as well as near drivers	Allows drivers imprisoned in trunks to get out, and prevents drivers from having to get out if the vehicle if a situation seems unsafe	driver is not badly hurt when placed in the trunk, driver is able to correctly assess the dangerousness of a situation	Latches in trunks are designed to reduce level of injury while latches in vehicles require driver judgement of a situation that may not always be clear
6.	27	Disabling vehicles	Prevents vehicles from getting to desired place for robbery or offenders from getting away in vehicles	it is safe to stop the cab and it is in an area where help is readily available, and it is safer to have robbers unable to get away than to have them escape after a robbery	Potential response from offenders may escalate the incident



Response No.	Page No.	Response	How It Works	Works Best If	Considerations			
Money Matter	Money Matters							
7.	27	Eliminating cash payments	Lowers the amount of ready cash in vehicles, making drivers less attractive targets	variety of payments methods results in little or no cash in vehicle	Nature of regular clientele may make it difficult for drivers to move to a cashless system, and use of even small amounts of money may still make drivers attractive to some offenders			
8.	29	Dropping money off	Lowers the amount of ready cash in vehicles, making drivers less attractive targets	it is easy and safe for drivers to drop money off at ATMs, home, or base	Securing alternative sites may be difficult or costly, with some alternatives (ATMs) providing records of money earned			
9.	29	Keeping money locked up or out of sight	Makes it difficult for offenders to find or get money, or to know exact amount carried	drivers can refer to some rule or practice that confirms that little money is available	Money locked in safes, with notice given, could escalate the incident to kidnapping or vehicle theft			
10.	30	Minimizing expectations about the amount of money present	Prevents offenders from expecting or being tempted by the knowledge of large amounts of cash present	it is reasonable to believe the driver is telling the truth	Offenders may not believe drivers, may be willing to rob them even for a very small amount of money			



Response No.	Page No.	Response	How It Works	Works Best If	Considerations			
Other Driver	Other Driver Practices							
11.	31	Controlling who gets in	Allows driver to assess who enters the vehicle and when, and how many people enter the vehicle, since keeping people out is easier than getting them out once they are in	robberies in an area are committed by offenders who have characteristics that make them easily identifiable, such as being unruly, and allow the driver to legally refuse them entry	Not enough is known about robbers to make them easily identifiable so screening can lead to racial or residential discrimination, with drivers violating regulations that usually require them to take all passengers (except in limited circumstances)			
12.	33	Directing passengers to particular seats in the cab	Keeps passengers from sitting in the seats most associated with robberies in an area	the cab is not crowded and the passenger is not insulted by the request	Where safety screens have been installed, passengers should not be able to sit in the front seat if it is within the barrier			
13.	33	Finding out the destination before moving	Identifies those who are not seeking a ride but are looking for a good location to carry out a robbery	offenders do not have a plausible destination to offer driver	Drivers should be alerted when passengers change destination en route			
14.	33	Sharing destination information with others	Informs passengers that someone outside the cab knows of their destination and possible route or has seen them	offenders are uncertain who and how many people know destination or, if given within sight of another driver, whether another driver can identify them	This strategy may not provide any additional crime prevention effect if the cab has an AVL device			



Response No.	Page No.	Response	How It Works	Works Best If	Considerations
15.	34	Putting additional people in the cab	Increases the perceived difficulty of doing a robbery and if successful, the risk that the offender will be identified	increasing the number of people in the cab does not lead to increased problems for driver, such as conflicts among passengers	These schemes may only be popular among passengers where cabs are scarce (ride-sharing) and driver companions are not seen as increasing the risk of assault on passengers by drivers
16.	34	Setting rules and asking those who don't meet them to get out	Informs potential offenders that drivers are willing to control what happens in the cab, or deflects potential offenders away from the cab at an early stage of what may become a robbery event	driver rules are backed up by official rules from the regulator or taxi company	Research on the unfolding of robbery events is limited
17.	35	Trying not to provoke passengers	Prevents passengers from using driver behavior as an excuse for criminal behavior	drivers know the types of responses or situations that may provoke an aggressive response or escalate aggression by passengers	Taxi regulators may eliminate some sources of conflict between drivers and passengers by setting rules for handling common situations (No. 26) or running training programs for drivers (No. 28)
18.	35	Knowing where to go for help late at night	Increases drivers' chances of gaining assistance before, during, or after a robbery event	those at the 24-hour location know it has been identified as a place where assistance may be sought and are trained in handling these types of situations	Drivers must be kept informed when 24-hour locations close down, particularly if they are police stations



Response No.	Page No.	Response	How It Works	Works Best If	Considerations
19.	35	Allowing others to see inside the cab	Increases the possibility that a third party will see the driver in trouble and call the police	robbery occurs in an area where there is vehicle or street traffic	This measure has not been evaluated in relation to taxicabs though it is among a group of factors found to be effective in limiting convenience store robberies
20.	36	Limiting where the cab will make a drop off	Protects driver from being surprised by the passenger or others at the drop-off location or limited in his/ her ability to get away, allows onlookers to monitor events more easily	driver is aware of the physical layout of the street prior to entry into it	Demonstrates the importance of having good data available to drivers about where crimes have occurred
21.	36	Staying in the cab unless it is safe to get out	Provides driver with a (limited) physical barrier to an attack from outside the cab and may be a means of getting away from an offender located in the cab	driver is protected by a screen or otherwise physically separated from the offender	Drivers should be trained to assess risks of leaving vehicles in different robbery scenarios and types of cabs, as they may vary greatly
22.	36	Limiting injury when a robbery occurs	Keeps the robbery from escalating into a robbery with injury, or one with serious injury	driver is not so seriously injured that he/she cannot carry out protective activities	Does not prevent the crime from occurring but may be useful in limited situations



Response No.	Page No.	Response	How It Works	Works Best If	Considerations
Policing Practic	es				
23.	37	Authorizing police stops	Allows police to stop a cab without reasonable suspicion or probable cause	protocol followed by police is understood by drivers	Program used must pass constitutional standards and limit the intrusion to the passengers
24.	38	Targeting repeat offenders	Incapacitates those who have committed and may be most likely to commit future taxi robberies	police can gather the information needed to identify and locate repeat offenders, and have the resources to find them	Requires substantial police and other criminal justice system resources, as well as accurate information about the offenders
Industry Rules,	Regulations a	and Practices			
25.	39	Controlling the environment around taxi stands	Allows drivers and others to see who is waiting at the stands or to supervise activity in the area	area can be controlled to allow orderly waiting and turn taking by passengers and drivers	Orderly waiting at stands may increase the ability of all present to look for signs of danger among passengers as they enter cabs as well as while the cabs and passengers are waiting
26.	39	Eliminating passenger and driver conflict over money	Prevents common conflicts that may escalate into aggressive behaviors	rules set up actually eliminate the conflict rather than setting up additional conflicts	While this strategy may be used to serve additional concerns besides crime prevention, in terms of robbery, these standards may also prevent passengers from using driver behavior as an excuse for criminal behavior



Response No.	Page No.	Response	How It Works	Works Best If	Considerations
27.	40	Setting driver competency standards	Prevents common conflicts that may escalate into aggressive behaviors	it is clear what types of knowledge or competency are related to driver- passenger conflicts	While this strategy may be used to serve additional concerns besides crime prevention, in terms of robbery, these standards may also prevent passengers from using driver behavior as an excuse for criminal behavior
28.	41	Running driver safety training programs	Helps drivers deal with situations in which their response may affect whether a robbery is committed or not	programs are run by experts in the field and are seen as effective by drivers	The costs of running the program should be split among the beneficiaries of better driver training, which may include the public, policing agencies, local taxi companies, as well as the drivers themselves
29.	42	Screening passengers by the dispatching company	Uses lists of previously troublesome passengers or addresses, or technology (Caller-ID), to set up blacklists	the blacklist is based on passenger identification rather than address location, and passengers causing one type of trouble are also likely to do robberies	Can be over- inclusive if it relies on location or address since other non-troublesome potential passengers may be included on the blacklist and could result in racial or residential discrimination if the focus is not on the actual past behavior of passengers

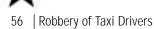


Response No.	Page No.	Response	How It Works	Works Best If	Considerations
30.	43	Exempting drivers from seat belt use	Prevents an offender from using a belt to strangle the driver and allows the driver to exit the vehicle quickly	local area conditions provide a safe backdrop for beltless driving	Should not be needed if cabs are equipped with a screen between the passenger and the driver
Responses Wit	h Limited Pot	ential for Effectivenes	S		
31.	43	Locking passengers in	Prevents passengers from exiting the cab without the driver's awareness or permission	there is a screen between passengers and drivers	If there is no screen, then passengers may attack the driver unless he/she has exited the vehicle
32.	44	Working only during the day	Keeps drivers from working during the times when robberies most often occur	industry conditions allow drivers to make a living only working daytime hours and no nights	May only work for some drivers since the company may require 24-hour availability, and may only be a limited protection since some robberies occur during the daytime
33.	44	Carrying a weapon	Acts as a means for drivers to protect themselves during a crime or may deter offenders from attacking drivers who they think are armed	driver is trained in use of this weapon	May result in weapon being used against driver



#### **Endnotes**

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- <sup>2</sup> Casteel and Peek-Asa (2000).
- <sup>3</sup> Block, Felson, and Block (1984).
- <sup>4</sup> Mayhew (1999).
- <sup>5</sup> Casteel and Peek-Asa (2000).
- <sup>6</sup> Bourette and Hanes (2000).
- <sup>7</sup> Haines (1997).
- 8 Smith (forthcoming).
- <sup>9</sup> Smith (forthcoming).
- 10 Mayhew (1999).
- 11 Easteal and Wilson (1991).
- <sup>12</sup> NIOSH (1995); Fisher, Jenkins, and Williams (1998).
- 13 Mayhew (1999).
- <sup>14</sup> Okeson and Smith (1997).
- 15 Haines (1998).
- <sup>16</sup> Stone and Bienvenu (1995).
- $^{17}$  Schwartzman (2001); Mayersohn (2001); New York City Taxi and Limousine Commission (2000b).
- <sup>18</sup> Jackman and Smith (2001).
- <sup>19</sup> Stone and Stevens (2000).
- <sup>20</sup> Stone and Bienvenu (1995).
- <sup>21</sup> Mayhew (1999).
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- <sup>23</sup> Jackman and Smith (2001).
- <sup>24</sup> U.S. Department of Labor (2000).
- <sup>25</sup> Mayersohn (2001).
- <sup>26</sup> Pandya (2001).
- <sup>27</sup> Easteal and Wilson (1991).
- <sup>28</sup> Schaller (1999).
- <sup>29</sup> Casteel and Peek-Asa (2000).
- <sup>30</sup> People v. Abad (2002).
- <sup>31</sup> Matter of Muhammad F. and People v. Boswell (1999).
- <sup>32</sup> U.S. v. Santiago (1996).
- <sup>33</sup> U.S. v. Woodrum (2000).



- <sup>34</sup> Luo (2004).
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- <sup>38</sup> Stenning (1996).



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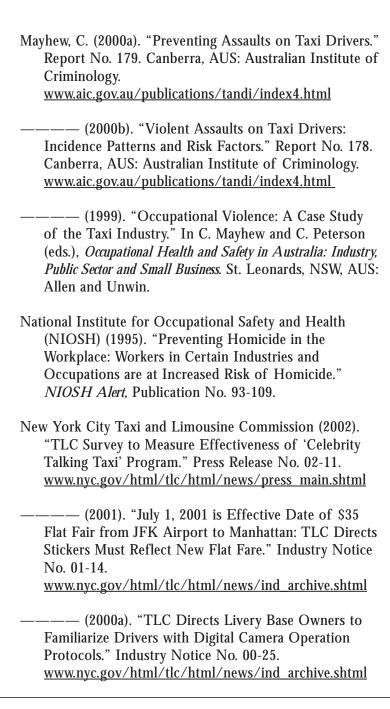


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#### About the Author

Martha J. Smith

Martha J. Smith is an associate professor of criminal justice in the School of Community Affairs at Wichita State University in Wichita, Kansas. She teaches courses in criminological theory to graduates and undergraduates, as well as a criminal procedure course for graduate students. Her research interests include crime on public transit and paratransit (taxis); vandalism; and decisionmaking by victims, offenders, police officers, and judges. Dr. Smith has worked as a senior research analyst at the New York City Criminal Justice Agency, the executive director of the Nebraska Criminal Defense Attorneys Association, the research director at the Center for Crime Prevention Studies at Rutgers University, and a research consultant in London. She has been involved in a number of different types of research projects, and has taken the lead in studies of crime on the New York City subway system, crime prevention measures used by taxi drivers in Cardiff, Wales, and vandalism decision-making among youngsters in London. She recently edited (with Derek Cornish) Theory for Practice in Situational Crime Prevention. Dr. Smith has taught at the University of Nebraska at Omaha and at Cardiff University. She received her bachelor's degree in psychology and sociology from Brown University, her law degree from New York University, and her master's and doctorate in criminal justice from Rutgers University.



# **Recommended Readings**

- A Police Guide to Surveying Citizens and Their Environments, Bureau of Justice Assistance, 1993. This guide offers a practical introduction for police practitioners to two types of surveys that police find useful: surveying public opinion and surveying the physical environment. It provides guidance on whether and how to conduct costeffective surveys.
- Assessing Responses to Problems: An Introductory Guide for Police Problem-Solvers, by John E. Eck (U.S. Department of Justice, Office of Community Oriented Policing Services, 2001). This guide is a companion to the Problem-Oriented Guides for Police series. It provides basic guidance to measuring and assessing problem-oriented policing efforts.
- Conducting Community Surveys, by Deborah Weisel (Bureau of Justice Statistics and Office of Community Oriented Policing Services, 1999). This guide, along with accompanying computer software, provides practical, basic pointers for police in conducting community surveys. The document is also available at www.ojp.usdoj.gov/bjs.
- Crime Prevention Studies, edited by Ronald V. Clarke (Criminal Justice Press, 1993, et seq.). This is a series of volumes of applied and theoretical research on reducing opportunities for crime. Many chapters are evaluations of initiatives to reduce specific crime and disorder problems.



- Excellence in Problem-Oriented Policing: The 1999 Herman Goldstein Award Winners. This document produced by the National Institute of Justice in collaboration with the Office of Community Oriented Policing Services and the Police Executive Research Forum provides detailed reports of the best submissions to the annual award program that recognizes exemplary problemoriented responses to various community problems. A similar publication is available for the award winners from subsequent years. The documents are also available at <a href="https://www.ojp.usdoj.gov/nij">www.ojp.usdoj.gov/nij</a>.
- Not Rocket Science? Problem-Solving and Crime Reduction, by Tim Read and Nick Tilley (Home Office Crime Reduction Research Series, 2000). Identifies and describes the factors that make problem-solving effective or ineffective as it is being practiced in police forces in England and Wales.
- Opportunity Makes the Thief: Practical Theory for Crime Prevention, by Marcus Felson and Ronald V. Clarke (Home Office Police Research Series, Paper No. 98, 1998). Explains how crime theories such as routine activity theory, rational choice theory and crime pattern theory have practical implications for the police in their efforts to prevent crime.
- Problem Analysis in Policing, by Rachel Boba (Police Foundation, 2003). Introduces and defines problem analysis and provides guidance on how problem analysis can be integrated and institutionalized into modern policing practices.



- Problem-Oriented Policing, by Herman Goldstein (McGraw-Hill, 1990, and Temple University Press, 1990).
   Explains the principles and methods of problem-oriented policing, provides examples of it in practice, and discusses how a police agency can implement the concept.
- Problem-Oriented Policing and Crime Prevention, by Anthony A. Braga (Criminal Justice Press, 2003). Provides a thorough review of significant policing research about problem places, high-activity offenders, and repeat victims, with a focus on the applicability of those findings to problem-oriented policing. Explains how police departments can facilitate problem-oriented policing by improving crime analysis, measuring performance, and securing productive partnerships.
- Problem-Oriented Policing: Reflections on the First 20 Years, by Michael S. Scott (U.S. Department of Justice, Office of Community Oriented Policing Services, 2000). Describes how the most critical elements of Herman Goldstein's problem-oriented policing model have developed in practice over its 20-year history, and proposes future directions for problem-oriented policing. The report is also available at <a href="https://www.cops.usdoj.gov">www.cops.usdoj.gov</a>.
- Problem-Solving: Problem-Oriented Policing in Newport News, by John E. Eck and William Spelman (Police Executive Research Forum, 1987). Explains the rationale behind problem-oriented policing and the problem-solving process, and provides examples of effective problem-solving in one agency.



- Problem-Solving Tips: A Guide to Reducing Crime and Disorder Through Problem-Solving **Partnerships** by Karin Schmerler, Matt Perkins, Scott Phillips, Tammy Rinehart and Meg Townsend. (U.S. Department of Justice, Office of Community Oriented Policing Services, 1998) (also available at www.cops.usdoj.gov). Provides a brief introduction to problem-solving, basic information on the SARA model and detailed suggestions about the problem-solving process.
- Situational Crime Prevention: Successful Case **Studies**, Second Edition, edited by Ronald V. Clarke (Harrow and Heston, 1997). Explains the principles and methods of situational crime prevention, and presents over 20 case studies of effective crime prevention initiatives.
- Tackling Crime and Other Public-Safety Problems: Case Studies in Problem-Solving, by Rana Sampson and Michael S. Scott (U.S. Department of Justice, Office of Community Oriented Policing Services, 2000) (also available at www.cops.usdoj.gov). Presents case studies of effective police problem-solving on 18 types of crime and disorder problems.
- Using Analysis for Problem-Solving: A Guidebook for Law Enforcement, by Timothy S. Bynum (U.S. Department of Justice, Office of Community Oriented Policing Services, 2001). Provides an introduction for police to analyzing problems within the context of problem-oriented policing.
- Using Research: A Primer for Law Enforcement *Managers*, Second Edition, by John E. Eck and Nancy G. LaVigne (Police Executive Research Forum, 1994). Explains many of the basics of research as it applies to police management and problem-solving.



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