CHAPTER 10

Identifying Meaningful and Useful Patterns

This chapter is new in the second edition, and its purpose is to illustrate how crime analysts identify meaningful patterns that are useful for police. In order to do this, this chapter will first discuss the difference between how persons crime and property crime patterns are identified and second, how police can use the results of pattern analysis to implement problem-solving responses. The remainder of the chapter will discuss specific types of crime commonly examined in tactical crime analysis, key characteristics used to identify patterns for these crimes, and potential responses used by police for these patterns. The discussion is illustrated with practical examples throughout.

To prepare for pattern identification, crime analysts should become familiar with the research related to the crimes they are examining. Although they do not focus specifically on short-term pattern analysis, the Problem Guide series at the Center for Problem-Oriented Policing (www.popcenter.org) can provide the analyst with a wealth of knowledge about general offender, victim, and place trends of the crimes discussed in this chapter.

Persons Crime and Property Crime

Pattern identification in tactical crime analysis is guided by the distinction between persons crime and property crime patterns. That is, persons and property crimes are normally examined separately because the characteristics that link persons crimes to one another are inherently different from those that link property crimes. Persons crimes are those crimes in which people are the targets of the crime. The crimes commonly examined for persons crime pattern analysis are robbery, stranger sexual assault, indecent exposure, and public sexual indecency. Other persons crimes may be examined in pattern analysis by some analysts (e.g., aggravated assaults and
shootings); but the discussion here will focus on robbery, stranger sexual assault, indecent exposure, and public sexual indecency since they are the most common.

In most persons crimes, the victims are also witnesses, so these types of crimes provide analysts with abundant detail about the actions of the suspect, the suspect’s description, and any vehicles involved. The types of patterns typically found for persons crimes are series or sprees because the wealth of information about each crime is used to link incidents by offender. Less often, analysts identify patterns involving hot spots, repeat victims, or hot targets. These types of patterns do not have common suspects but share other characteristics such as proximity, type of victim, and type of place. The following are examples of some specific persons crime patterns:

- **Indecent exposure series**: A suspect on a mountain bike approaches female pedestrians and exposes himself. Four incidents have occurred over a 1-month period, and the suspect’s description, bicycle description, and actions are very similar in all four incidents.

- **Carjacking spree**: Three carjackings have occurred within the city in a period of 3 hours. Two suspects use a car to cut the victim off in traffic and force the victim to stop; then one suspect approaches the victim’s car and orders the victim out of the car at gunpoint. That suspect drives away in the victim’s car, and the other drives away in the suspect car.

- **Mall parking lot hot spot**: Several incidents of robbery of pedestrians and indecent exposure have occurred in a mall parking lot over a 1-month period. The crimes appear to have been committed by different people based on various suspect descriptions by witnesses.

- **Hot target, convenience store**: Several incidents of strong-arm robbery have occurred in the past week at a particular chain of convenience stores throughout the city, yet different MOs and suspect descriptions indicate that multiple suspects are responsible for the crimes.

- **Repeat victim, pedestrians**: Several types of vehicles have been observed driving through a residential area during evening hours. On several occasions, the drivers of the vehicles have exposed themselves to pedestrians. Because the incidents have all occurred at night, officers have not been able to obtain detailed suspect and vehicle descriptions, but the targeted victims have consistently been people walking on the street.

**Property crimes** are those crimes in which property is the target. The crimes commonly examined for property crime pattern analysis are theft from vehicle, auto theft, residential burglary, and commercial burglary. Incidents of theft from buildings, criminal trespass, grand theft, and criminal damage are also examined as they relate to these other crimes or as they indicate overt vandalism and theft of property (e.g., graffiti, mailbox destruction, theft of construction materials). Because witnesses are typically not present during the commission of property crimes, crime analysts usually have little or no suspect information available to use for identifying patterns. Typically, analysts link property crimes together by examining information on types of crimes (e.g., residential versus commercial burglary), types of targets (e.g., office buildings, apartments, versus single-family homes), and
proximity of the incidents. MO and temporal characteristics are also used but to a somewhat lesser degree. The patterns most often identified in the analysis of property crimes are hot spots, hot targets, hot products, and sprees. For example:

- **Residential burglary hot spot**: Several residential burglaries have occurred in a specific neighborhood that has only one point of entry/exit. In all of the burglaries, suspects gained entry to the homes by breaking or prying open a rear window. Suspect information is not available, as there have been no witnesses to any of the incidents.

- **Apartment community hot spot**: Several incidents of vehicle theft and theft from vehicle have occurred at the same apartment community. The number of incidents is much higher than usual; the incidents have occurred at night during a 2-week period, but no suspect information is available.

- **Hot target, new home construction sites**: Numerous burglaries have occurred in the past 6 months at new home construction sites all over the city. Suspects break into or enter unlocked houses under construction and steal appliances or construction equipment. The incidents have all taken place at night, and no suspect information has been obtained; but different tire marks have been found at the scenes, indicating the use of several different types of vehicles.

- **Hot product, pool equipment**: Several thefts from residential backyards have occurred over a 2-month period; pool equipment is the only property taken in the incidents.

- **Spree, vandalism of vehicles**: Twenty-five vehicles along the same street were damaged one night. It seems as though the same suspect(s) committed the crimes, because the cars were next to one another and damaged in the same way—tail lights broken, mirrors damaged.

Even though persons crime and property crime warrant the examination of different characteristics, crime analysts sometimes examine the two kinds of crimes together. Some examples of such patterns include:

- **Burglary and robbery series**: Two “cat” burglaries (when the suspect enters the house at night while the residents are home) and two robberies have occurred in the same neighborhood. Suspect information is available and similar for all of these incidents.

- **Burglary and carjacking spree**: A young man burglarizes a business suite late at night and leaves the scene by carjacking a vehicle. The man then crashes the vehicle into a retail store’s front window, enters the store, and steals additional property. All of these incidents take place within a 1-hour period.

- **Water park hot spot**: Over the past 2 weeks, a water park has had an increased number of thefts from vehicles and auto thefts in its parking lot as well as an increase in public sexual indecency incidents inside the park.

- **Repeat offender, Sam Spade**: The police have contacted Sam Spade several times for trespassing, loitering, and possessing burglary tools in the downtown area. Most recently, Sam has been a suspect of a robbery.

- **Hot product, video games**: During the past 2 months, several houses have been burglarized, and video games have been the only property taken. In addition,
several robberies have occurred in which video games have been taken from students walking home from school.

- **Hot target, beauty salons:** Several incidents of strong-arm robbery and commercial burglary have occurred at beauty salons throughout the city. In each incident, a large amount of cash was stolen from the cash register.

**Potential Responses to Patterns by Police**

It is important for crime analysts to understand how police use the results of pattern analysis for problem-solving responses in order for them to identify meaningful and useful patterns. A pattern represents the scanning and analysis steps of the problem-solving (SARA [Scanning, Analysis, Response, Assessment]) process, so the response is tailored based on the specific pattern activity. For example, if a pattern is daytime residential burglary in a particular neighborhood, successful resolution of that pattern would be stopping residential burglaries during the day in that area. If subsequent burglaries occur at night, in a different neighborhood or to businesses within that area, this is not seen as a failure of the response, since the response to the pattern would not address burglaries with these characteristics (e.g., at night, to businesses, or in a different area). Just as with repeat incidents, the idea is to identify specific activity and respond appropriately to these smaller-scaled, short-term problems so they do not develop into larger-scaled, long-term problems.

The types of responses that police employ for patterns are fairly straightforward and focus on arresting and deterring offenders as well as on crime prevention. More specifically, the following explains the strategies typically used by police for patterns. Notably, the first four responses are focused at the times and in the places of the crimes within the pattern, and the second four responses are conducted during normal business or daytime hours:

- **Directed patrol:** This strategy focuses on police patrol in the areas and times in which a pattern is occurring. Police patrol in cars, on bikes, or on foot. The objective of the directed patrol is for the police to arrest offenders committing a crime or to deter offenders by increasing their perceived risk of being caught.

- **Field contacts:** While conducting directed patrol, another response is to increase the number of contacts of people in the pattern area. This strategy can deter offenders from committing crime and also provide potential investigative leads for patterns and individual crimes. (For more information on both directed patrol and field contacts, see the Center for Problem-Oriented Policing [POP Center] response guide, *The Benefits and Consequences of Police Crackdowns* [2004] at www.popcenter.org.)

- **Surveillance:** This response requires the police to watch and wait in a particular area at a particular time for a crime to happen in order to make an arrest. This is often used in the most specific patterns because personnel costs are very high (e.g., officer overtime). (For more information, see the POP Center response guide, *Sting Operations* [2007].)
• “Sting” or “bait” operations: This response requires a situation where people or property that have been targeted in a particular pattern are put out as “bait” for offenders. Police then directly observe the “bait” or have electronic monitoring that allow them to arrest the offender or record offenders committing the crimes when the bait is taken. (For more information, see the POP Center response guide, Sting Operations [2007].)

• Clearing cases: Once an arrest is made related to a pattern, the pattern can be used to clear the other cases in the pattern.

• Contacting potential victims directly: Research shows that crime prevention education works best when it is targeted at specific victims, times, and areas (Johnson & Bowers, 2003). This response can include either volunteers or police officers contacting specific groups of citizens, residents, or businesses that are most relevant to a particular pattern. The contact can be made in person, through a letter via postal mail, or through flyers left at homes or businesses. The information would include details of the pattern, crime prevention advice, and contact information for the police. Crime prevention advice would include suggestions with immediate results (e.g., lock doors and windows) and those with more long-term results (e.g., installing video surveillance equipment or alarms).

• Reverse 911: This particular technology allows the police to call residents and businesses in a pattern area and leave a recorded message about the crime pattern and crime prevention advice.

• Providing pattern information to the public: By disseminating patterns to the general public, police encourage the public to provide additional information (“tips”) on known crimes as well as to report crimes that have not yet been reported. Also, when offenders see that the police know about their activities, they might be deterred from continuing their offending. Information about patterns also would provide specific crime prevention advice and would encourage individuals to protect themselves. Media such as newspapers, radio, television, and the Internet are used to provide this information. (For more information about crime prevention publicity campaigns, see the POP Center response guide, Crime Prevention Publicity Campaigns [2006].)

What follows is a brief discussion of how these responses can be employed by police for persons crimes and property crimes, separately.

**Persons Crime**

As discussed earlier, persons crime patterns are typically series or sprees, which means that the analyst thinks the crimes have all been committed by the same person or group of people. Because the pattern will contain suspect descriptions and specific MO information, police responses focus on enhancing the investigation and facilitating the arrest of the offender(s). Persons crime patterns can increase the likelihood of arrest of suspects because when multiple crimes are linked together, all of the information is combined to create a more complete picture of the suspect.
and his behavior. For example, the victim in one rape case may provide a general
description of the suspect with specific information about the suspect’s actions. In
a second case that has been linked through the suspect’s behavior, the victim may
have provided a more detailed description of the suspect. By combining this infor-
mation, the investigators have more complete information that could increase the
likelihood of arrest.

Police also respond to persons crime patterns with surveillance and directed
patrol. Crime analysts can use crime pattern information to assist in this process by
attempting to anticipate when and where the offender may hit again. Offenders often
repeat their behavior when it is successful and may choose similar situations to com-
mit their crimes based on their own routine activities and activity space. Linking sim-
ilar crimes together is the only way to discern whether an offender is repeating his
behavior. For example, if the offender has been robbing people at bank ATMs around
malls on weekends during the evening, patrol officers can focus their uncommitted
patrol time in these areas, stopping suspicious people, and detectives can conduct
surveillance on locations that seem likely where people might be robbed.

Police also respond to persons crime patterns with crime prevention education
for specific place managers and potential victims. For example, police may provide
pamphlets with crime prevention advice to convenience store managers at a time
when there is a series of convenience store robberies. They may also provide informa-
tion to bar owners, managers, and patrons about crime prevention at a time
when there is a series of stranger rapes at bars in which the suspect is slipping his
victims a “date-rape” drug.

Finally, police typically provide the information to the public on persons crime
patterns. The most common method of disseminating persons crime pattern infor-
mation to the public is through the media (e.g., newspapers, TV, radio). The public
is typically informed of robbery series, stranger rape series, etc. Although individ-
ual cases are often reported in the media, series of persons crime are much more
serious and get more attention since the suspect is repeating his behavior.

Once the public is provided this information, many different things can happen.
Cases that have already happened, but have not been reported, may be reported.
Another result of media exposure is that witnesses of crimes already included in a
pattern may come forward when they realize the crimes are part of a larger series.
Lastly, providing pattern information to the public allows them to protect them-
selese. In the case of the DC sniper in 2002 where 10 people were seemingly shot at
random in public places, the media attention of this crime series facilitated people
in the DC area to stay in their own homes and go outside only when necessary since
the shooters were targeting people in public places.

Property Crime

Because the likelihood of arresting suspects for property crime is much lower
than for persons crime, police responses to property crime patterns focus more on
deterring offenders and encouraging victims to protect their property and less on
arresting offenders. Most importantly, police respond to property crime patterns by
informing potential victims to protect themselves. As previously noted, people are much more likely to employ crime prevention methods if they feel an immediate threat. The police use property crime patterns to target specific people in pattern areas. Methods such as reverse 911, going door-to-door, and sending letters to citizens or businesses to inform them about the pattern and recommend relevant crime prevention techniques are all different ways police can inform potential victims. Other methods include posting patterns on the Internet for specific neighborhood or business groups. The goal is to provide information about the crime pattern as well as specific things that people can do to protect their property (e.g., lock their car doors), change their habits (e.g., remove valuables from their cars), or increase awareness (e.g., look out for suspicious people in their neighborhoods).

Because property crime often is linked by proximity (i.e., hot spots), police use directed patrol to deter offenders and, less often, catch offenders in the act. As discussed in Chapter 3, hot spots policing does work for reducing crime. Directed patrol can be conducted in police cars, on bikes, or on foot with the goal of increasing the visibility of police and increasing the offenders’ perception of risk of being caught. Additionally, while doing this type of patrol, police can also make field contacts of suspicious people and vehicles. This can help to deter offenders from committing crime through increasing police contact and can also provide potential investigative leads for individual crimes and patterns.

Although property crime patterns do help with arresting suspects in some situations, they are more likely to assist in clearing cases once a suspect is arrested for one crime. For example, when a detective arrests a suspect for breaking into cars in a particular area, the crime analyst can produce a pattern of vehicle burglaries that are in the same area during the same time period. The detective could then use that information to interview the suspect to see if he committed any more crimes.

Finally, for very focused and specific patterns of property crime, police employ responses with the goal of arresting offenders in the act, such as surveillance and bait operations, but these patterns are less common. Some examples include a pattern of auto theft in which a specific type of vehicle (such as a Honda Civic) has been modified for racing; a pattern of theft from vehicle in which a specific type of property from a vehicle such as GPS units or high-end stereos are taken; or a commercial burglary pattern in which the offenders drive a car through the glass window of a particular electronics store. For these patterns, police often use bait vehicles containing the targeted property, or they may use surveillance to observe a set of commercial locations that are similar to those in the pattern in hopes of catching the offender in the act. Notably, these responses are only used for property patterns in which very specific information is available, because the equipment and police personnel time are costly.

Identifying Meaningful Patterns

In most cases, tactical crime patterns are made up of multiple events of one type of crime. However, there are instances, as discussed earlier, in which different types of
crimes make up a single pattern. For example, unsuccessful burglaries can be classified as criminal damage and examined along with successful burglaries. Also, public sexual indecency, indecent exposure, and rape can make up a pattern if an offender is escalating in violence or performs different behaviors depending on the circumstances. An important point is that police officers classify similar crimes differently based on specific legal criteria; however, the crime acts with different legal codes may be similar in nature and can be part of the same crime pattern. A crime analyst needs to take both the classification and the nature of the activity into account in order to identify patterns.

Because MO characteristics can be very specific (e.g., a robber who forces the victim to remove clothing), they can provide obvious links among cases that are months or even years apart. However, there is no way to establish a pattern entirely by MO. In other words, unless the suspect is arrested and confesses, there is no way to be sure that a particular suspect has committed all crimes with the same MO characteristics. In most cases, patterns are linked in other ways as well (e.g., suspect description, type of place). It is unlikely that an offender would deliberately or coincidentally copy another offender’s vehicle or physical description, but it is easy to copy general MO characteristics; for example, a suspect enters a bank and demands money from a clerk using a gun and a note (Bair Software, 1999).

Another factor that can confuse the examination of MO characteristics is that situational circumstances may result in an offender’s altering his or her MO. For example, depending on how a victim reacts, an offender may use less or more violence within the same crime pattern. Or, depending on the environment, a burglar may not kick the door open—his usual MO—because the side window is open and much easier to enter. Also, characteristics that are based on witness descriptions are often problematic. Factors such as lighting, amount of time the victim and offender were together, and fear can influence the accuracy of information provided by witnesses.

**Persons Crime Pattern Key**

**Characteristics and Examples**

When identifying any pattern, crime analysts must think of the potential police responses and make sure their patterns are focused, relevant, and helpful for implementing the appropriate responses. The main focus of persons crime pattern responses is arresting the suspect(s). Therefore, examination of persons crimes would focus on linking crimes through suspect actions and description to develop series and spree patterns. The following are a discussion of the key characteristics and examples of robbery and sex crimes patterns, the two types of persons crimes most commonly examined.

**Robbery Patterns**

Key characteristics of robbery patterns are the actions of the suspect(s) during the crime and the type of victim or place. Although the same robbery offender may commit crimes in different ways to different targets and victims, these patterns are
more difficult to identify. Research shows that offenders who commit commercial robbery are different than those who commit street robbery (Wright & Decker, 1997), so using type of place to distinguish robbery patterns is logical. Suspect descriptions are important in persons crime analysis, but because they can be unreliable, as discussed earlier, they are considered secondary to the suspect's actions. For example, if a robbery is similar to another in terms of the suspect's actions (e.g., using a gun and striking the victim after robbing them) but one description says a white male and the other a Hispanic male, the analyst may include both in the pattern because the victims may not have described the suspects accurately.

Robberies at commercial locations are less likely to be identified through proximity of the incidents because the businesses themselves are typically spread throughout a community (e.g., two electronics stores are not likely located right next to one another). However, proximity can be relevant in street robbery cases where offenders may be targeting people in areas familiar to them (i.e., crime pattern theory). Finally, the use of a vehicle in a robbery makes proximity less important because of the offender's ability to travel and get away after committing the crime. This is why robbery patterns often overlap jurisdiction boundaries and the finalization of a robbery pattern should always include soliciting information from a neighboring agency.

**Example: Street robbery series, Fort Pierce, Florida.** This robbery series consists of 10 robberies over 17 days in which one to four black males (17 to 25 years old, 120 to 150 pounds, 5 feet 8 inches to 5 feet 10 inches tall, with thin builds) approached victims walking along the street, or outside or inside their homes, and demanded money using a black or silver handgun (in seven of the incidents). In four of the robberies, the suspects covered their faces with either masks or T-shirts. In three of the cases, the suspects fired a round(s) toward but did not hit the victims after demanding that the victims give them their wallets and money. The suspects fled the scene on foot in nine of the cases and by car in one. All of the robberies occurred either very early in the morning or very late at night on various days of the week. Victims were older black or Hispanic males, and the property taken included wallets/currency and jewelry. Figure 10.1 illustrates the locations of the robberies.

Although this is just a summary of the cases in the pattern, it is apparent that not all the crimes are exactly the same; the analyst is guessing they are actually related based on the general actions of the suspect, the types of victims being robbed, and the proximity of the crimes in the area and the time frame (17 days). When finalizing the pattern, the crime analyst must decide whether the actions of the suspects in each crime were similar enough to the other crimes to include it in the pattern.

Based on the information provided by this robbery pattern, responses by officers are likely to include investigating all crimes together (e.g., examination of evidence and reinterviewing victims and witnesses with the other crimes in mind), releasing the pattern to the media for citizens to provide additional tips to catch the offenders as well as protect themselves, and providing directed patrol in the pattern area at the times when the robberies are typically happening, since the robberies are occurring in a specific part of the city.
Sexual Crime-Related Patterns

Sex crimes patterns are identified least often in tactical crime analysis. Rapes are typically committed by acquaintances, so there are very few stranger rape incidents and therefore stranger rape patterns. Incidents of public sexual indecency and indecent exposure occur more often than stranger rapes. For all sex crimes, identifying patterns can be simpler than with other crimes because of their rarity and uniqueness of the behavior under examination.

Key characteristics of sex crime patterns are the actions of the suspect(s) during the crime and the type of victim. Similar to robbery patterns, suspect descriptions are important but are less reliable than actions of the suspect. In these cases in particular, the victims are surprised and shocked by the behavior and may not be able to identify the suspect easily (e.g., flashers or a rapist attacking them from behind). However, unlike robbery, cases within a sex crime pattern may be more proximate to one another. A person who is exposing himself to people on the street may be doing this in an area with a significant number of pedestrians with minimal guardianship, such as a park. A rapist attacking college students would have to go to a college area to find his victims. Informing the public and specific groups of potential victims about sex crime patterns is particularly important because many of these crimes go unreported. If victims know others have been victimized and the offender is committing multiple offenses, they may be more likely to report the crime. These unreported incidents can provide additional information to a pattern that can assist in the investigation and apprehending the offender.
Example: Peeping Tom series, Gilbert, Arizona (Fernandez, 2005). This pattern consisted of 25 incidents over 3 months in which a male subject was seen in residential backyards looking through doors or windows between 7:00 p.m. and 12:30 a.m. all days of the week. When confronted by victims, the suspect jumped fences into other yards and left on foot. He was described as a white male, late teens to early 20s, 150 to 165 pounds, 5 feet 9 inches to 6 feet tall, with long or shaggy brown hair, clean shaven or light goatee, pointy nose, and dark clothing. The analyst concluded that because the incidents are in close proximity (less than 1 mile apart), the suspect likely travels on foot.

It is obvious how these crimes were linked together—by specific suspect actions and description. The fact that there were 25 incidents may have made it easier to identify, but the goal is to identify such a pattern when there are fewer incidents. Based on the information provided by this pattern, response by officers is likely to include releasing the information to the media so that citizens can report incidents and sightings of this suspect as soon as possible. In addition, the offender may stop his behavior if he feels there is an increased likelihood of being caught. It is not likely that it will be cost effective for police to conduct surveillance, even though there were 25 incidents, since they occurred over a period of 90 days, which is one incident every 2 to 3 days. However, directed patrol may be beneficial in the area at the times when the suspect had committed the crimes.

Example: Stranger rape series. During my tenure as a crime analyst, we identified a pattern in which a white male suspect approached Asian students around a college campus and asked them for directions to a location, speaking in either Chinese or Japanese. If they answered and did not speak English, he would ask them to get in his car. If they complied, he would subsequently rape them. The crimes occurred in a variety of areas, but the women were initially contacted by the suspect in a small area near campus where foreign students resided. However, it was the specific actions of the suspect that linked the crimes together.

Based on the information provided by this pattern, a response by officers included releasing the information to the public through the media, after which we received additional reports of women who were not Asian but had dark hair and eyes who had been approached but not raped. Even though these women had not been victimized, they provided additional information about the suspect’s car and his physical description. Detectives were able to arrest the suspect after piecing information about the suspect’s vehicle (e.g., partial license plate and description) from the various victims and witnesses.

Property Crime Pattern Key
Characteristics and Examples

Because the main focus of property crime pattern responses by police is having victims protect their property and deterring offenders, crime analysts focus on linking these crimes primarily through the types of crime, type of place, and proximity in location and time. The types of patterns typically found are sprees, hot spots, hot
targets, and hot products. As noted earlier, the MO of a property crime often depends on the opportunities left by the managers or guardians of the property (e.g., unlocked doors, valuables in view, windows in a home with faulty locks). These factors, such as method of entry, point of entry, and type of property taken are used for linking crimes only when they are very specific, which usually indicates a crime series or sprees (same suspect). For example, when working as an analyst, I identified a crime series of homes being burglarized by drilling a hole in the garage door, using a hanger to release the door lock cable, and entering the house through the unlocked internal garage door. An example of a spree is a group of vehicles in the same parking lot being burglarized in a 3-hour time period. The MOs may be different for each car, but the likelihood of multiple offenders committing these crimes in such a short time period and centralized place is unlikely, making the pattern a spree even though there is no suspect information.

**Theft From Vehicle Patterns**

Thefts from vehicles are the most frequently occurring type of crime examined in tactical crime analysis, so these are crimes examined by most crime analysts and result in the highest number of patterns. Often there is little to no suspect information and minimal MO information since many of these thefts occur at night, with no witnesses, and when car doors have been left unlocked. Consequently, the key characteristics of theft from vehicle patterns are primarily based on type of place where the cars are located (businesses versus residence), proximity of the thefts, and time of occurrence. Even though one offender may be committing these crimes across the entire city, the crime analyst typically does not have any suspect information and must distinguish patterns primarily by area (hot spots).

Importantly, hot spot patterns are helpful for police responses since the primary goal is not to arrest but to protect victims and deter offenders from committing the crimes in a particular area. Specific patterns may be identified by MO (e.g., use of a spark plug or window puncher to break a window) and type of property taken—hot product (e.g., cell phones, GPS equipment), or type of place—hot target (e.g., daycare centers, gyms). However, proximity will still be an important factor in the final determination of the pattern. The following are several maps and descriptions of theft from vehicle hot spot patterns. Notice the proximity of the cases and how these patterns are helpful for directing police patrol and educating potential victims in the pattern area.

**Example: Theft from vehicle spree at apartments and condos, Fort Pierce, Florida.** Unknown suspects targeted primarily unlocked vehicles and convertibles at apartment complexes and condominiums. The thefts occurred overnight and stereo face plates, CDs, and other personal property were stolen. Based on the information provided by this pattern, response by officers is likely to include conducting directed patrol with either vehicles or bikes in the pattern area, making field contacts in the area, and contacting residents in the pattern area through flyers, door-to-door, or reverse 911, warning them about the pattern and providing specific crime prevention advice. (See Figure 10.2.)
Example: Theft from vehicle spree at businesses, Port St. Lucie, Florida. On a Monday, between 8:30 p.m. and 10:00 p.m., three vehicles were burglarized at commercial parking lots (see Figure 10.3). The windows in all three vehicles were smashed and purses were taken out of the front seat while victims were inside the businesses. Based on the information provided by this pattern, officer response is likely to include contacting specific businesses in the pattern area to assist them with providing specific crime prevention advice for their customers to not leave their purses in view in their vehicles and to encourage them to watch for suspicious people in the parking lots. Directed patrol and surveillance would not be realistic here because the crimes happen so quickly and only at two locations.

Example: Theft from vehicle hot spot, Port St. Lucie, Florida. Over a 4-day period (Friday through Monday), unknown suspects targeted five unlocked cars, primarily after dark, with one car targeted from 8:00 a.m. to 1:00 p.m (see Figure 10.4). Property taken was personal items left in the vehicles. In addition to contacting residents, conducting directed patrol, and making field contacts, police may also implement a bait vehicle operation in this case because the crimes are very close to one another in both area and time frame.

Example: Theft from vehicle hot product, Danvers, Massachusetts. Over a 2.5-month period, there were 32 incidents where GPS units were taken from vehicles in commercial lots near Route 1 (see Figure 10.5). Thefts occurred primarily between 8:00 p.m.
Several potential suspects were identified and arrested. Based on the information provided by this pattern, additional responses by officers will likely include contacting specific businesses in the pattern area to assist them with providing specific crime prevention advice for their customers and to encourage them to watch
for suspicious people in their parking lots. Because the offenders are targeting a specific type of property, a bait operation in which officers place a vehicle with a GPS unit, in a location where multiple crimes have occurred, at the same time of the thefts (evening), could also be implemented.

**Vehicle Theft Patterns**

Vehicle theft is similar to theft from vehicle except there is even less information to examine for pattern analysis because the car (target) itself is missing. Information about how and why cars are stolen can later be deduced from the condition of the recovered vehicle (e.g., no items taken and the car being out of gas might indicate joyriding), but vehicles are recovered days and weeks after the initial crime or sometimes not at all, which is not helpful for identifying immediate crime patterns. As a result, the key characteristics for vehicle theft are proximity (hot spot), time, and type of place (e.g., residences versus commercial plaza). In certain types of auto theft patterns, like those taken for parts or exported to other countries, the type of vehicle is important since thieves may be targeting a particular type of vehicle (hot target).

**Figure 10.5** Theft From Vehicle Hot Product Map

SOURCE: Map and pattern information courtesy of the Danvers (Massachusetts) Police Department.
Example: Auto theft hot product, Port St. Lucie, Florida. Over a 5-week period, eight auto thefts of Honda Civics or Acura Integras were stolen from in front of residences after dark. In each case, the vehicles had been modified with additional parts and accessories to be “racing vehicles.” In all but two cases, the victims were Hispanic males. Based on the information provided by this pattern, responses by officers are likely to include publishing the pattern in the media, since it would be hard to identify specific potential victims (i.e., individuals who own these types of vehicles and have modified them) and conducting a bait operation in the area of incidents 6, 7, and 8 since they are the most recent and have occurred in a very small area (see Figure 10.6). However, implementing this latter response would depend on whether the police had access to a vehicle matching the descriptions of those that had been targeted.

Figure 10.6  Auto Theft Hot Product Map
SOURCE: Map and pattern information courtesy of the Port St. Lucie (Florida) Police Department.

Residential Burglary Patterns

Burglaries occur at both businesses and residential environments, and although one offender may target both types of places over a period of several weeks, the lack of suspect information makes it difficult to link such crimes together. This, and the fact that there are different opportunities for burglary at commercial and residential locations, is why residential and commercial burglary crimes are normally examined separately.

Key characteristics for identifying residential burglary patterns are the type of residence and proximity. Again, the goal of responding to property crime patterns is to educate potential victims and deter offenders. Because opportunities for burglary vary by types of residences, patterns are often distinguished by single-family,
multifamily, mobile home communities, etc. Proximity (hot spots) is important because often residences in close proximity to one another share characteristics, so crime prevention recommendations will be the same. In addition, directed patrol by police officers is done most effectively in a focused area. Commonalities in time of day and day of week can be important for residential burglary patterns when they are very specific; however, crimes occurring on different days and times would not necessarily be eliminated from a pattern when they occurred at the same type of residence in the same area. Lastly, MO is important in residential burglary patterns mostly when it is very specific. The fact that suspects entered one home through the sliding glass door and another in the same area through an open window would not prevent a crime analyst from linking these together.

Example: Residential burglary hot spot, Tempe, Arizona. Over a 6-week period, 48 burglaries, 4 criminal damages, and 4 criminal trespasses occurred at residences in Beats 31 and 32 (see Figure 10.7). Forty of the incidents occurred at single-family residences and in residential yards. Thirty-two incidents involved no forced entry—more specifically, entry was made through unsecured front doors, arcadia doors, garages, or windows. Common property removed included computers (15 incidents) and bicycles (10 incidents). Two peak periods for these incidents were Friday through Monday, from 10:00 p.m. to 4:00 a.m., and Monday, Wednesday, and Friday, from 10:00 a.m. to 1:00 p.m. There have been several eyewitness descriptions of suspects that include: (a) two white males, mid- to late 20s, thin or medium build; (b) white male, 30 years old, 5 feet 6 inches tall, 220 pounds, with a full beard; and (c) two Hispanic males, late teens to early 20s, 5 feet 3 inches tall, thin build. Suspect vehicle descriptions include: (a) gray/beige sport utility vehicle, and (b) black, newer four-door sedan.

Based on the information provided by this pattern, responses by officers are likely to include direct contact with residents through reverse 911 (versus door to door), since it is such a wide pattern area, as well as contacting the neighborhood associations and block watch groups to disseminate information through their newsletters or meetings. Information about the pattern as well as crime prevention advice about locking doors and windows and securing property in yards and garages during both the day and night would be most relevant. Because several of the same homes have been victimized twice, the police may take extra care to educate the residents who were victimized on preventing crime to their homes. In addition to contacting current and potential victims in the pattern area, police may also conduct directed patrol and make field contacts of suspicious persons in the area. Lastly, because of the high number of incidents, the police may also disseminate information to the general public through the media.

**Commercial Burglary Patterns**

Key characteristics for identifying commercial burglary patterns are similar to residential burglary patterns—type of business and proximity. Commercial burglaries are somewhat different than residential burglaries because there are far fewer targets, so in some cases commercial burglaries will be linked by type of business (hot
target) across a larger area (e.g., electronics stores, medical offices). In some cases, the type of business coupled with a very specific MO can lead an analyst to identifying a series of commercial burglaries (e.g., entering through air conditioning vent on roof or cutting through the wall of the next business in a plaza). Specific to commercial burglaries, alarm calls for service can also be examined to determine if there might have been burglary attempts at neighboring businesses of those within the pattern—indicated by the burglary alarm call. Although there may be little to no information beyond the date, time, and location of the alarm, this could indicate other nearby places that offenders are targeting unsuccessfully.

Example: Commercial burglary series, Fort Pierce, Florida. Eight incidents related to burglaries of offices in a medical plaza occurred over 9 days (see Figure 10.8). The incidents occurred on Tuesdays, Fridays, and Sundays, at night. In six of the incidents, the suspect entered the office by breaking the front window and forcing an interior door open. Two incidents were attempts, as the suspect was not able to gain entry. Two locations were hit twice, and property was taken in only three of the incidents. Property taken included currency, clothing, and laptop computer equipment. Importantly, this pattern is both a hot target (e.g., medical offices) and a series (e.g., determined by specific MO, focused area, and time frame).

Based on the information provided by this pattern, response by officers is likely to include contacting owners of businesses in this plaza directly, both to provide
crime prevention advice but also to solicit information about the crimes and possible suspects. Another response might be to conduct surveillance of the area at night on Tuesdays, Fridays, and Saturdays. Since six of the eight incidents happened in one building, the police might also recommend that the property owners install video cameras around that building for unmanned surveillance; however, it would take time to purchase and install such equipment, making that more of a long-term response recommendation.

Example: Commercial burglary hot target, Fort Pierce, Florida. Over a 10-week period, 10 incidents of commercial burglary occurred at night to closed retail locations with cash drawers (e.g., gas stations, electronics stores, beauty supply stores) (see Figure 10.9). The suspect either broke the front or rear glass door/window to gain entry. Currency was taken in only three of the cases. In two cases, video surveillance showed a suspect wearing a bulky black hood covering his face, head, and neck, white gloves, a bulky dark gray jacket, black pants, and black shoes. He appeared to have entered the store and used a tire iron to pry the cash draw open.

These crimes were linked by the similarity of the businesses (e.g., retail locations, large glass doors/window, cash drawers), the MO of the crime, and the fact they are on either of the two major roads in the area. Because the crimes cover a significant time frame (10 weeks), police responses might focus on informing the public with general media attention as well as contacting retail businesses along these roadways,

![Figure 10.8 Commercial Burglary Series Map](image-url)

**Figure 10.8 Commercial Burglary Series Map**

SOURCE: Map and pattern information courtesy of the Fort Pierce (Florida) Police Department.
with large windows/doors and cash drawers. Crime prevention advice would focus on target hardening doors and windows, removing cash from the premises at night, and ensuring that video surveillance equipment is installed and working. Directed patrol and surveillance would not be realistic because of the large area and time period in which the crimes occurred.

**Other Patterns**

This chapter discusses patterns primarily in the context of persons and property crimes, but other types of patterns concerning people are also identifiable, such as repeat offenders and victims. The important consideration here is that in tactical crime analysis the activity described in these patterns is recent.

There are two different types of repeat offender patterns. The first is the known individual and the second is a group of individuals who share characteristics. Known individual repeat offender patterns are primarily found through an examination of known offender and field information (FI) card databases. Individuals are identified either inductively (e.g., one case is used to look for additional cases in which the person is involved) or deductively (e.g., looking at all the arrestees in the last month and finding the person with the most arrests). Group repeat offender patterns are typically found by looking at individual crimes and published crime patterns and seeing some shared characteristics in terms of offenders. For example, if suspects in two different robbery patterns are described as belonging to one particular gang, the crime analyst may look in the database for other crimes during that time, in that area, that mention that gang.
Similarly, there are two different types of repeat victim patterns—individual repeat victims and groups of repeat victims who share characteristics. Individual repeat victim patterns would be found by examining the database of victims and looking for repeat victims for a particular type of crime or all crimes together (e.g., a person who was the victim of a two burglaries and an auto theft). Groups of repeat victims would be identified by examining individual crimes and published crime patterns and looking for common characteristics of victims. One example is recent activity of elderly people being robbed at grocery store parking lots. Another is the theft of women’s purses out of vehicles at gas stations and convenience stores.

**Conclusion**

The goal of this chapter is to show how to identify meaningful patterns that police can use to develop effective problem-solving responses. Crime analysts must understand what responses police employ for the various types of patterns in order to provide information helpful for problem solving. The examples here cover only a snapshot of all the possible patterns that can be identified during the crime analysis process; it is impossible to show all the possibilities that might arise. The most important point of this chapter is that analysts must think critically about the purpose of the information they are providing and use their knowledge of the crime type, the community, and their own department’s responses to identify meaningful patterns.

**SUMMARY POINTS**

This chapter illustrates how crime analysts identify meaningful patterns that are useful for police. The following are the key points addressed in this chapter:

- Pattern identification in tactical crime analysis is guided by the distinction between persons crime and property crime patterns.
- Persons crimes are those crimes in which people are the targets of the crime. The crimes commonly examined for persons crime pattern analysis are robbery, stranger sexual assault, indecent exposure, and public sexual indecency.
- Property crimes are those crimes in which property is the target. The crimes commonly examined for property crime pattern analysis are theft from vehicle, auto theft, residential burglary, and commercial burglary. Incidents of theft from buildings, criminal trespass, grand theft, and criminal damage are also examined as they relate to these other crimes or as they indicate overt vandalism and theft of property.
- The types of responses police employ for patterns are fairly straightforward and focus on arresting and deterring offenders as well as on crime prevention. They include directed patrol, field contacts, surveillance, bait operations, clearing cases, contacting potential victims directly, reverse 911, and contacting the general public.
- Directed patrol is focusing police patrol in the areas and times in which a pattern is occurring.
- Field contacts are when officers make direct contact with people in the pattern area while conducting directed patrol.
Surveillance requires police to watch and wait in a particular area at a particular time for a crime to happen in order to make an arrest.

Bait operations requires a situation where people or property that have been targeted in a particular pattern are put out as “bait” for offenders. Police then directly observe the “bait” or have electronic monitoring that allows them to arrest the offender or record offenders committing the crimes when the bait is taken.

Once an arrest is made related to a pattern, the pattern can be used to clear the other cases in the pattern.

Police contact potential victims directly and provide information about details of the pattern, crime prevention advice, and contact information for the police.

Reverse 911 is technology that allows the police to call residents and businesses in a pattern area and leave a recorded message about the crime pattern and crime prevention advice.

Police provide pattern information to the public to encourage the public to provide additional information (“tips”) on known crimes, report crimes that have not yet been reported, and to protect themselves. Offenders might also be deterred from continuing their offending when seeing this information.

Police responses to persons crimes focus on enhancing the investigation and facilitating the arrest of the suspect(s), because the pattern will contain suspect descriptions and specific MO information.

Police responses to property crime patterns are focused on deterring offenders and encouraging victims to protect their property, because the likelihood of arresting suspects for property crime is much lower than for persons crime.

A crime analyst needs to take both the classification and the nature of the activity into account in order to identify patterns.

Unless the offender is arrested and confesses, there is no way to be sure that a particular offender has committed all crimes with the same MO characteristics. The examination of MO characteristics and physical descriptions is not always clear. The analyst must be aware that situational circumstances may result in offenders altering their MO and that characteristics based on witness descriptions are often problematic.

Examination of persons crimes focuses on linking crimes through suspect actions and description to develop series and spree patterns.

Key characteristics of robbery patterns are the actions of the suspect(s) during the crime and the type of victim or place.

Key characteristics of sex crime patterns are the actions of the suspect(s) during the crime and the type of victim.

Examination of property crimes focuses on linking crimes primarily through the types of crime, type of place, and proximity in location and time. The types of patterns typically found are sprees, hot spots, hot targets, and hot products.

Key characteristics of theft from vehicle patterns are primarily based on the type of place where the cars are located (businesses versus residence), proximity of the thefts, and time of occurrence.

Key characteristics for vehicle theft are proximity (hot spot), time, and type of place (e.g., residences versus commercial plaza).

Key characteristics for identifying residential burglary patterns are the type of residence and proximity.

Key characteristics for identifying commercial burglary patterns are similar to residential burglary patterns—type of business and proximity.

Known individual repeat offender patterns are primarily found through an examination of known offender and field information (FI) card databases. Group repeat offender patterns are typically found by looking at individual crimes and published crime patterns and seeing some shared characteristics in terms of who the offenders are.

Key characteristics for identifying commercial burglary patterns are similar to residential burglary patterns—type of business and proximity.
Individual repeat victim patterns would be found by examining the database of victims and looking for repeat victims for a particular type of crime or all crimes together (e.g., a person who was the victim of a two burglaries and an auto theft). Groups of repeat victims would be identified by examining individual crimes and published crime patterns and looking for common characteristics of victims.

**EXERCISES**

**Exercise 1**

Describe how you would go about identifying a convenience store robbery pattern both inductively and deductively. Be specific about which characteristics of the crime are most important and how you would search a database to identify cases within the pattern. Do the same for a commercial burglary pattern.

**Exercise 2**

For this exercise, use a pattern bulletin provided by the instructor, or go to the International Association of Crime Analysts Web site (www.iaca.net/AnalystProducts.asp) and download a crime pattern bulletin. Imagine you are sergeant in the patrol division and have just received this crime pattern bulletin. Develop an appropriate response strategy. You may use several responses, but be specific about when, where, and how they will be implemented.