Chapter 11: Case Linkage

Case linkage or case analysis refers to the process of determining whether or not there are discrete connections between two or more previously unrelated cases through crime scene analysis. It involves establishing and comparing the physical evidence, victimology, crime scene characteristics, modus operandi, and signature behaviors for each case under review. It has two purposes: the first is to assist law enforcement with finite resources by helping to establish where to allocate resources, and the second is to assist the court in determining whether there is sufficient behavioral evidence to suggest a common scheme or plan.

Modus Operandi

*Modus operandi* (MO) is a Latin term that literally means *method of operating*. A criminal’s MO is made up of choices and behaviors intended to assist in the completion of the crime. It reflects how the offender commits the crime. It is separate from the offender’s motive or signature aspects, as these have to do with why the offender commits a crime.

The signature aspect is the general emotional or psychological themes that the offender satisfies when committing an offense and is inferred from the signature behaviors.

The collection, storage, and examination of a criminal’s MO, whether on arrest cards or in computer databases, is relevant to investigations for the following reasons:

- Investigative linkage of unsolved cases by modus operandi;
- Suspect identification by comparing known criminal modus operandi with the modus operandi evident in unsolved cases;
- Routine comparison of arrestee modus operandi with the modus operandi evidence in unsolved cases;
- Development of investigative leads or suspect identity in unsolved cases by virtue of accumulating modus operandi information;
- Suspect prioritization or elimination;
- Clearance of unsolved cases.

To the criminal profiler, MO is further relevant because it can provide information about the offender. This includes choices, procedures, or techniques that can be characteristics of or reflective of the following:

- A particular discipline, trade, skill, profession, or area of knowledge (criminal and noncriminal);
- Knowledge particular to the victim, suggesting contact or a prior relationship;
- Knowledge particular to a crime scene, suggesting varying levels of familiarity.

Investigating Criminal Behavior

Law enforcement have long believed that understanding the methods and techniques used by criminals to commit crime is the best way to investigative, identify, and ultimately apprehend them. This has traditionally required that the best detectives become encyclopedias of knowledge; it has also demanded that they learn from and utilize the knowledge and experience of criminals to inform their investigations.

In France, Eugene Francois Vidocq had been working as a spy and was later appointed as an investigator leading a group of detectives who were former criminals.

Vidocq and his group were paid based on the number of arrests they made, bringing in more than 750 in their first year. This led some to believe that Vidocq and his colleagues were the perfect solution to the problem of crime, because they understood how criminals operated, had insights into
their methods and operations, and were using that knowledge for the good of the state. Others believed that Vidocq and his detectives had committed most of these crimes themselves and then framed others for their work. He was later removed from office for instigating a crime for the purpose of uncovering it.

Whether he was a master detective or a master criminal, a philosophy of investigation emerged: to understand criminals, detectives need to understand the methods criminals use to commit crimes.

**Elements of MO**

A criminal’s MO comprises learned behaviors that can evolve over time. An MO can be refined as a criminal becomes more experienced, and it can become less competent over time by virtue of a criminal’s deteriorating mental state or increased use of controlled substances.

In either case, MO behavior is functional in nature. It serves (or fails to serve) one or more of three general purposes:

1. Protection of identity: wearing a mask during a daytime bank robbery; covering a victim’s eyes during a rape; wearing gloves during a burglary; killing a witness to any of the above; etc.
2. Successful completion of the crime: using a gag to silence a victim; using a weapon to control a victim; making a list of potential victims with pertinent information; etc.
3. Facilitation of offender escape: use of a stolen vehicle during the commission of a crime; disposal of a vehicle after the commission of a crime; tying up living victims to prevent their escape and attempts to get help; etc.

General types of MO behaviors can include:

- Number of offenders
- Amount of planning before a crime
- Offense location selection
- Route taken to offense location
- Presurveillance of a crime scene(s) or victim
- Involvement of a victim during a crime (non–fantasy-related)
- Use of a weapon during a crime
- Use of restraints to control the victim during a crime
- Nature and extent of injuries to the victim
- Method of killing the victim
- Nature and extent of precautionary acts
- Location and position of the victim’s clothing
- Location and position of the victim’s body
- Items taken from victim or crime scene(s) for profit or to prevent identification
- Method of transportation to and from the crime scene(s)
- Direction of escape/route taken from the offense location

An offender’s MO is not the same thing as the offender’s motive, which is the reason for committing the crime. Motive is evidenced by signature behaviors that suggest overall signature aspects, or the theme of the offense. Signature behaviors are not necessary for the successful completion of the crime.

**Influences on Modus Operandi**

An offender’s MO is learned and therefore dynamic and malleable. This is because an MO is affected by time and can change as offenders learn or deteriorate. Offenders may realize that some of the things they do during a crime are more effective and may subsequently repeat them in future
offenses, further refining their MO.

MO may also change owing to a deteriorating mental state, because of the use of controlled substances, or because of increased confidence that law enforcement will not be able to successfully apprehend them. These circumstances can cause a criminal’s MO to become less skillful, less competent, more careless, and even irrational.

Over the course of their career, criminals may incorporate behaviors that reveal something about their identity, character, or experience. The ways that offenders learn how to become more skillful may include the following:

**Education and Trade Materials**
Criminals have access to the same learning opportunities as any other citizen. Professional journals, college courses, textbooks, and other educationally oriented media available at the library or via the Internet can provide offenders with knowledge that may be useful to refining their MO.

**Trade or Professional Experience**
Offenders may have been or may be currently employed in trades or professions that utilize special knowledge or require proficiency with special techniques. Such knowledge may find its way into an offender’s MO and be reflected in the offense.

**Criminal Experience and Confidence**
As offenders commit more of the same type of crime, they may become more proficient at it. They act more confidently, are better able to handle the unexpected, or may tailor their precautionary acts to the type of crime they are committing.

**Contact with the Criminal Justice System**
Being arrested may teach an offender valuables lessons about how to avoid detection by law enforcement in the future. Ironically, a prison term may be referred to as “going to college” because younger, less experienced offenders have a chance to learn from older, more experienced offenders who already have a great deal of knowledge.

**The Media**
Some offenders monitor investigations into crimes by paying close attention to media accounts in the newspapers and television. It is important that investigators and profilers pay close attention to the media regarding when information is released, for that may influence the future behavior of serial offenders.

**Offender Mood**
An offender’s mood can influence his or her aggression level and subsequent reactions to a victim and crime scene influences. This may in turn lead to the amount of planning and control evident in an offense.

**X-Factors**
An x-factor is any unknown or unplanned influence that can affect crime scene behavior during an offense. The successful completion of any offense depends on the event conforming to the offender’s fantasies or expectations. The presence of any number of x-factors may force the offender to improvise or to make a hasty retreat, resulting in an interrupted/incomplete offense or an offense gone wrong.

**The De-Evolution of MO**
MO behavior does not always evolve. Because of a deteriorating mental state, the use of controlled
substances, or increased confidence that law enforcement will not be able to apprehend them, an offender’s MO can de-evolve over time to become less competent and less skillful.

**Offender Signature**

In general terms, the term *signature* describes distinctive behaviors committed by offenders that serve their psychological or emotional needs. Through an analysis and interpretation of a particular offender’s signature behaviors, in connection with MO and victimology, profilers may be able to link cases and develop an understanding of an offender’s motive for committing the crime.

**Definitions**

The term *signature* is used in legal circles to describe an unusual, distinctive criminal MO.

An offender signature is a pattern of distinctive behaviors that are characteristic of, and satisfy, emotional or psychological needs. The first part of an offender signature is the general signature aspect of a crime, which is the overall emotional or psychological needs that the offender satisfies when committing an offense. These include:

- Profit
- Anger or retaliation
- Reassurance or experimentation
- Assertiveness or entitlement
- Sadism

The second part of an offender signature is that signature aspects are evidenced by signature behaviors, which are acts committed by an offender that are not necessary to commit a crime but indicate the emotional or psychological profile of the offender. The problem for the profiler is to distinguish between offender signature and MO.

To address the issue of whether a behavior is an MO or signature, profilers must look for behavioral patterns and convergences. They must not fall into the trap of interpreting meaningless behaviors based on averaged meanings from unrelated offenses. They must further not fall into the trap of interpreting a single behavior outside of the context of the facts in a given case.

**Psychodynamics and Offender Signature**

Not all offenders are the same. They have different histories, likes, and needs. Similar behaviors committed under similar circumstances by different offenders will not necessarily be for identical or similar motivations.

As an offender’s fantasy behavior develops over time, so does the need to live out those fantasies. When a violent sexual fantasy is acted out, the act fuels the fantasy in the mind of the offender and causes it to evolve. The process is complementary and can facilitate the evolution of fantasy, signature behavior, and signature aspect over time.

**Signature Behavior**

The distinctiveness of an offender’s needs can be manifested by a pattern of signature behavior. These signature behaviors, therefore, are reflective of the underlying personality, lifestyle, and developmental experiences of an offender. While signature behavior is potentially distinct to a particular offender, a specific pattern of signature behaviors and the needs that they represent can be used to distinguish between crime scenes and potentially between offenders.

**Recognizing Offender Signature**

An offender’s signature is often referred to as a “calling card” or “trademark,” which evokes the
vision of a static, inflexible psychological imprint of offender behavior on the crime scene.

There are important limitations to the concept of offender signature that need to be understood. Many offenders do not have to engage in personal expressions of emotions that are distinct to their personality. While there may be some similarities, it is inappropriate to suggest that two crimes with a similar signature alone are psychologically “identical”. The terms identical and match can be misleading to those who do not understand the psychology of offender motive.

The term match may be used to suggest identical, shared characteristics between two things. By their nature, crime scenes and crime scene behavior cannot be precisely the same across offenses, even when they are the work of the one offender.

There are many variables to consider when interpreting signature behaviors. Profilers must realize that it may not always be possible to link or unlink cases with signature for the following reasons:

• An offender may not always leave a signature behind;
• An offender may engage in precautionary acts that conceal the evidence of signature behaviors;
• Evidence of offender behavior may be lost, overlooked, or destroyed by forensic personnel and criminal investigators.

The repetition of a behavior across multiple offenses is not enough to make it signature in nature. The following may be generally true of signature behavior:

1. Takes extra time to complete, beyond more functional MO behavior;
2. Unnecessary for the completion of the crime;
3. Involves an expression of a need or emotion;
4. May involve an expression of fantasy.

If a behavior satisfies these criteria, then it is signature in nature.

When asked to make inferences about offender signature, profilers may not have all the facts of the case, or they may be working from flawed assumptions. A criminal profiler will consider the following factors:

• Whether the amount of behavioral evidence is competent and sufficient to make an interpretation of offender signature;
• Whether the amount of behavioral evidence is fully representative of the offender’s needs;
• Whether the behavioral evidence suggests a signature that is part of an escalation or evolution in an offender’s fantasy continuum, or whether the offender signature appears to be relatively fixed over time.

It is most appropriate to explain the nature of an offender’s patterns of signature behavior, subsequent case linkages, signature aspects, or other inferences in terms of an appropriate level of confidence. Understanding offender signature is an important investigative tool and an integral part of understanding offender fantasy and motivation.

Interpreting Behavioral Linkage

Despite the claims of some examiners, there is no evidence to demonstrate that behavior alone can be used to infer case linkage with any certainty. Furthermore, while there are some similarities between cases, it is the nature of the dissimilarities that are of greater importance in rendering the final linkage conclusions. Linkage analysis that fails to account for dissimilarities should be considered inadequate at best.
To convey linkage similarities in a way that is meaningful and does not mislead with respect to certainty, a number of confidence statements are provided:

- Behavioral dissimilarity
- An investigative link
- Behavioral commonality
- A probative link

**Behavioral Dissimilarity**
This means that the behavioral evidence has been examined and it is dissimilar. For example, in two different cases, one offender may shoot the victim in the head while in another case the victim is killed with ligature strangulation. This would be evidence of behavioral dissimilarity.

**Investigative Link**
This is a general class connection between one or more cases that serves to inform the allocation of investigative resources. Such a link is not conclusive but requires further investigation. This description is of interest, because it should be applied to investigate further connections, such as those of victimology, MO, signature behavior, and the physical evidence.

**Behavioral Commonality**
This is present when behavioral evidence has been compared, and they are similar but not necessarily distinctive. Behavioral commonality is not unique.

**Probative Link**
A probative link is a connection between one or more cases that is sufficiently distinctive to support the inference that the same person is responsible. Physical evidence, such as DNA and fingerprints, may also provide a probative link.

Unless the examiner has unequivocal and articulable evidence that the same individual did or did not commit the crimes examined, an opinion to this effect should be avoided. The examiner should also avoid the temptation to use case linkage to address the ultimate issue. Whether or not the same person is responsible for different offenses should be left up to the trier of fact.

**KEY TERMS**

**Behavioral commonality**: When behavioral evidence components have been compared across two or more cases and they are similar but not necessarily distinctive.

**Behavioral dissimilarity**: When behavioral evidence components have been compared across two or more cases and they are dissimilar.

**Case linkage / Linkage analysis**: The process of determining whether or not there are discrete connections between two or more previously unrelated cases through crime scene analysis.

**Interrupted / Incomplete offense**: A crime that does not contain enough MO behaviors to complete the intended offense.

**Investigative link**: A general class connection between one or more cases that serves to inform the allocation of investigative resources. Such a link, as the name suggests, requires further investigation; it is not conclusive.

**Lovemap**: A developmental representation or template in the mind and in the brain depicting the idealized lover and the idealized program of sexuoerotic activity projected in imagery or actually
engaged in with that lover.

*Modus operandi (MO):* A Latin term that means *method of operating.* It refers to the manner in which a crime has been committed and is comprised of the choices and behaviors that are intended to assist in the completion of a crime.

*Offender (Behavioral) Consistency Hypothesis:* A faulty assumption of profiling that inaccurately predicts whether offenders will show consistency (or similarity) in their criminal behavior across their series of crimes. It is a premise that erroneously allows for greater certainty with respect to case linkage opinions.

*Offender signature:* A pattern of distinctive behaviors that are characteristic of, and satisfy, emotional and psychological needs; comprised of signature behaviors and the overall signature aspect evident in the crime scene.

*Offense gone wrong:* A crime that contains unintentional, unplanned MO behavior, which increases the offender’s risk of being identified or apprehended, or their criminal status.

*Probative link:* A connection between one or more cases that is sufficiently distinctive to support the inference that the same person is responsible (i.e., in terms of behavior, distinctive modus operandi and signature behaviors, and signature aspects across multiple cases argued to evidence a probative link). Physical evidence, such as DNA or fingerprints, may also provide a probative link.

*Signature aspect:* The general emotional or psychological themes that the offender satisfies when committing an offense. It is inferred from the signature behaviors evident.

*Signature behaviors:* Those acts committed by an offender that are not necessary to commit the crime but that suggest the psychological or emotional needs of that offender. They are used to infer the signature aspects evident.

*X-factor:* Any unknown or unplanned influence that can affect crime scene behavior during an offense.

**QUESTIONS**

1. The collection, storage, and examination of a criminal’s MO has traditionally been relevant to investigations for which of the following reasons?
   a. Investigative linkage of unsolved cases by MO
   b. Routine comparison of arrestee MO with the MO evident in unsolved cases
   c. Suspect prioritization or elimination
   d. Clearance of unsolved cases
   e. All of the above*

2. Which of the following is not a general type of MO behavior?
   a. Number of offenders
   b. Amount of planning before a crime
   c. Offense location selection
   d. Verbally scripting a victim*
   e. Method of killing the victim

3. Which of the following does not influence MO?
   a. Educational and technical materials
   b. Unique development of fantasy-related needs over time*
c. Trade or professional experience
d. The media
e. X-factors

4. An influence on MO gained through proficiency at committing the same type of crime is known as:
   a. Educational or technical materials
   b. Criminal experience and confidence*
   c. Contact with the criminal justice system
d. Offender mood
e. X-factors

5. Behaviors that are characteristic of emotional and psychological needs are known as:
   a. Signature aspects
   b. Offender MO
c. Staging
d. Scripting
e. Signature behaviors*

6. Signature aspects may include:
   a. Profit
   b. Anger/retaliation
c. Reassurance/experimentation
d. Sadism
e. All of the above

7. Which of the following is not generally true of signature behavior:
   a. Takes extra time to complete, beyond MO behavior
   b. Unnecessary for the completion of the crime
c. Involves an expression of a need or emotion
d. May involve an expression of fantasy
e. Is largely functional in nature*

8. With regards to case linkage, which of the following is not an appropriate confidence statement?
   a. Unequivocal link*
   b. Behavioral consistency
c. Investigative link
d. Behavioral commonality
e. Probative link

9. An investigative link means that behavioral evidence components have been compared and they are dissimilar. **True or false?**

10. Unless the examiner has unequivocal and articulable evidence that a case is linked, an opinion on this issue should be avoided. **True or false?**

11. MO will always evolve. **True or false?**

12. Behavioral evidence is just as certain and inflexible as fingerprints and DNA with respect to connecting crime scenes. **True or False?**
13. A criminal’s MO comprises learned behaviors that can evolve and develop over time. **True** or **false**?

14. Case linkage involves the consideration of both __________ and __________ behaviors.

15. A rapist uses an unloaded gun to control a victim. The victim fights back violently, and the offender strikes the victim in the head using defensive force. The victim dies. This is an example of ___________________________.

16. Explain the difference between offender modus operandi and signature.

17. Explain the purposes of case linkage.

18. List and describe the confidence statements used to express the certainty of linkage.