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# CONCLUSION: RECOMMENDATIONS FOR PRACTICE

Although the development and testing of a science of profiling, described in chapters 11 and 12, will add to the existing body of offender literature and allow a better understanding of the role of motive, personality, and behavior in the commission of crimes, the immediate concern for profiling practitioners is how to use this information to improve criminal investigations in the field. There are two sets of answers to this question. First, there are recommendations for profiling practice that will apply once findings from the scientific model of profiling are available. Second, there are recommendations to assist profiling practitioners while studies of profiling are underway.

## APPLICATION OF FINDINGS FROM A SCIENTIFIC MODEL OF PROFILING

There are two main ways to apply findings from profiling research to profiling practice. The first method involves combining known data and then making decisions or predictions based on experience, judgment, or discussion with others. This is quite similar to what goes on in college admissions committees. Profiling professionals have used this type of clinical judgment in the past to assess individual cases and make recommendations

to law enforcement agencies. The second way to make decisions related to profiling is to apply actuarial methods to cases to generate predictions about offenders that may inform investigations. Actuarial (or statistical) methods use formal algorithms or equations to make decisions or predictions, without involving clinical judgment.

As described in Part I of this book, reliance on the first approach to profiling (i.e., clinical judgment) is fraught with problems, not the least of which is its low rate of accuracy (Holmes & Holmes, 1996; Copson, 1995, cited in Canter, 2000). Despite these problems, however, intuitive judgments have been tolerated and even embraced in profiling because of the creative and artful nature of the field's origins and because there has been no scientific alternative available. As findings from a science of profiling become available, it will be possible to construct actuarial tools for making predictions about offenders rather than relying on impressionistic judgment.

The decision to choose actuarial methods over clinical methods is not without controversy. The argument for using actuarial methods was thoroughly articulated by Grove and Meehl (1996), who demonstrated the superiority of actuarial over clinical methods in generating accurate predictions. The reader is referred to their article for a comprehensive discussion and convincing resolution of the actuarial–clinical controversy, but there are two points Grove and Meehl raised that should be considered here because they are particularly relevant to profiling.

First, a distinction must be made between *data collection* and *data combination* (Meehl, 1996). Profiling practitioners may feel that if they are confined to using equations or algorithms to make predictions about an offender, then important qualitative information gleaned from the case information or crime reconstruction will be excluded from analysis and predictions about offenders. This need not be the case. As described in chapter 12, the data recommended for use in testing a scientific model of profiling includes a range of information. Some of this will consist of quantitative information (e.g., number of arrests), but much of it is related to qualitative aspects of motive, personality, and behavior. The clinical–statistical distinction relates, then, not to the nature of the information that is collected and deemed relevant to investigation but rather to the manner in which that information is combined to generate predictions about second-level behaviors. Many of the qualitative variables that have been historically important to profiling (e.g., staging, modus operandi behaviors, interaction with victim) can and should be included in causal models to determine their relevance to predicting second-level offender behaviors. The weight of that information and the nature of its relationship to other information about motive, personality, and behavior, however, are best determined by actuarial methods in any given profiling case.

The second point from Grove and Meehl's (1996) discussion that is related to profiling addresses a concern that profiling practitioners may have with regard to applying statistical figures that deal with aggregate information (i.e., group or nomothetic data) to predictions that relate to individual offenders (i.e., idiographic data). If the type of research proposed in chapter 12 involves studying groups of offenders, how can those findings be applied to individual offenders? Would it not be more accurate to consider each individual's case information and make decisions without relying on these general statistics? And are there not particular offense characteristics—such as the unique posing of a body at a crime scene—that would be so significant to a profiler that it would trump the more general predictions that would be generated by a statistical tool?

The first two questions reflect the faulty assumption that whereas statistics can give only probabilities or aggregate results, dealing with a unique individual and applying clinical judgment will allow profilers to predict exactly what that individual will do. This is simply not the case. As discussed in chapter 6, even nonscientific profilers describe their profiles as reflecting a more general type of individual that may have committed a given crime. These profiles are then almost invariably applied to individuals to demonstrate the accuracy of the predictions contained in them. Thus, even in profiles that are derived from individual cases, predictions are made in terms of the likely characteristics of the offender, and these likelihoods or probabilities are then applied to the individual offender. If actuarial methods and artful profiling methods are essentially using the same procedure, the question becomes whether these predictions about offenders are best generated by an actuarial tool or by an individual profiler. As indicated previously, research suggests that actuarial predictions are equal or superior to individual, clinical judgments the vast majority of the time (Grove, Zald, Lebow, Snits, & Nelson, 1996, cited in Grove & Meehl, 1996).

The third question addresses the issue of whether there are certain facts about an individual that might be so rare but so important that actuarial tools may not account for them, and their presence would override any actuarial predictions. For example, an actuarial tool might predict that an unknown offender who has committed five rapes over the past month has an 80% chance of committing a sixth rape today. However, on the basis of a crime reconstruction from the fifth offense, the profiler knows that the offender was unsuccessful in completing the fifth rape because the victim defended herself by using her car keys to inflict injuries on the offender's eyes that rendered him blind. Faced with this information, it would certainly be a mistake to rely on the actuarial prediction. The problem is that most predictions regarding aspects of motive, personality, and behavior do not contain the types of near-certainties in the previous example. Predictions

of second-level offender behavior involve a consideration of motive, personality, other behaviors, and situational factors. In this context, clinicians are not adept at selecting situations in which a variable is sufficiently rare and important as to override the relevant actuarial equation, and actuarial methods are thus still superior to clinician judgment in generating accurate predictions (Grove & Meehl, 1996).

The scientific model of profiling described in chapters 11 and 12 represents a significant departure from current profiling practice, and the application of its findings through actuarial methods is likely to meet with a certain degree of resistance. Profiling practitioners, however, will not be the first group to respond with skepticism to the assertion that actuarial methods are almost always superior or equal to clinical judgment. As Grove and Meehl (1996) pointed out, objections are raised by practitioners across many branches of social science, and these objections often stem from a lack of understanding of the principles involved in actuarial prediction and a reluctance to depart from the traditional theories and approaches of their disciplines. If the goal of profiling, however, is to generate accurate predictions about offenders to assist in identifying and apprehending them, profilers must be willing to embrace a science of profiling and consider the evidence in support of actuarial prediction. Given the potential impact of the accuracy and inaccuracy of profiling predictions on both victims and offenders, it is time to improve profiling through the application of science.

## RECOMMENDATIONS FOR THE CURRENT ART AND SCIENCE OF PROFILING

As the field of profiling awaits findings from the testing of a relevant scientific model, law enforcement investigators must continue to investigate crimes to the best of their ability, and profiling practitioners must still attempt to contribute to these criminal investigations. Given that there is currently very little science on which to rely, what can profiling practitioners do to maximize their contributions to investigation and reduce the negative consequences that can result from error? The main recommendation that can be made is for profiling practitioners to follow the scientific model of profiling described in chapter 11, using it as a road map for how to think about profiling inferences in an organized fashion. At each tier of the profiling model there are different sets of hypotheses that can be generated and offered to law enforcement for consideration in an investigation. Although profilers must be careful to state the limitations of these hypotheses, because the science to support definitive predictions about offender characteristics is still largely unavailable, offering law enforcement investigators a

structured way to relate evidence, behavior, motive, and personality to generate leads for investigation may represent a significant advance over the current, artful state of profiling.

### Tier 1: Crime Scene Evidence and First-Level Offender Behaviors

According to the scientific model of profiling, Tier 1 represents the inferences involved in crime reconstruction. This tier of inferences is crucial to any criminal investigation, because in essence it provides a determination of what happened during the course of the crime. The basis for inferences in Tier 1 should therefore be clearly rooted in the forensic evidence and the analyses of evidence provided by forensic scientists and witness accounts. In addition, the logic linking inferences about evidence and first-level offender behaviors should be as precise as possible, because the determination of first-level behaviors will guide subsequent predictions about motive, personality, and second-level behaviors. Profiling practitioners should rely on this logic to attempt to create a narrative of first-level behaviors and a timeline that describes the temporal order of the first-level behaviors in a given crime. These inferences should be cross-checked so that each inference both explains, and is explained by, the evidence. For example, returning to Figures 11.2 and 11.4, if the evidence includes a body that is left on a remote lakeshore accessible only by car, a logical inference would be that the offender must have driven the body to the dump location. Likewise, if there is a complete absence of fingerprints at a burglary crime scene, a logical inference would be that the offender wore gloves during the offense. These inferences both explain the location of the dead body and the absence of fingerprints, respectively, and the inferences are supported by the available evidence. It is also important, however, to consider any plausible alternative inferences and make law enforcement agents aware of these alternatives. For example, it could be that the offender in the murder scenario traveled from one side of the lake to the other by boat, rather than driving from the nearest town straight to the area of shore where the body was found. In a similar manner, it could be that the offender in the burglary scenario did not wear gloves but was instead careful to wipe his fingerprints from every surface he touched before leaving the scene. In the case of plausible alternatives, the profiler should consider the types of evidence that would be required to support the relevant inferences. For example, if the offender in Figure 11.2 transported the body by boat, one might expect to see evidence on the shore of a boat having come and gone. Likewise, if the offender in Figure 11.4 wiped his fingerprints, one might expect to find evidence of at least one smeared print, or other oily residue from the fingers that might have remained on surfaces in the house. Where there are alternative scenarios, the

profiler can certainly communicate an opinion about which seems more correct, while presenting to law enforcement all plausible scenarios for their consideration.

### Tier 2: Motive, Personality, and First-Level Offender Behaviors

Once logical determinations have been made about first-level offender behaviors through crime reconstruction, profiling practitioners should consider the potential relationships of these behaviors to aspects of motive and personality. What kinds of hypotheses can be generated with regard to the influence of motives and personality characteristics on first-level crime behaviors? In the murder example, the offense might be motivated in part by the desire to force the victim to cooperate with a robbery. In addition, the personality characteristics of the offender might include a certain amount of hostility and impulsivity, particularly because the murder was unplanned. Because of the limitations of the current profiling research literature, the inferences made in Tier 2 must be stated as hypotheses. Nonetheless, practitioners should still make an effort to derive these hypotheses logically and ensure that they are consistent with the inferences made in Tier 1. For example, it would not be logical to predict that the offender in the Figure 11.2 murder scenario had passive personality characteristics. Although it might be possible that the offender is less aggressive in other realms of his life, the evidence and first-level behaviors do not support this as a viable hypothesis in the context of Tier 2 of this offense.

### Tier 3 and Beyond: Motive, Personality, and Second-Level Offender Behaviors

Given the first-level offender behaviors and the hypotheses about motive and personality generated from the information in the crime reconstruction, what predictions might be made about second-level offender behaviors? If the steps leading up to Tier 3 have been logical, and if the information contained in the inferences about first-level behaviors (i.e., motive and personality) have been correct, what other offender behaviors might follow from these inferences? For example, if the offender who committed the robbery depicted in Figure 11.4 was indeed motivated by financial need and had hostile personality characteristics, what might this individual do in his noncriminal life that would assist law enforcement agents in identifying and apprehending him? Perhaps his motive of financial need would predict the second-level behavior of being unemployed, which might in turn predict not having graduated from high school and having a history of delinquency as a juvenile. In addition, perhaps his hostility would predict the second-level behavior of having committed assaults in the past, which

may in turn predict the second-level behavior of arrest history. As with the predictions in Tier 2, these predictions must be stated as hypotheses because there is currently no research literature to demonstrate many, if not most, of the relationships that would link aspects of motive and personality to second-level offender behaviors. As previously discussed, however, the hypotheses in Tier 3 must still derive logically from the predictions in Tiers 1 and 2. Thus, in the robbery example depicted in Figure 11.4, it would not be logical to predict that the offender would be gainfully employed at a 9-to-5 job, with no experience or knowledge about police investigations. The fact that the offense was committed during the day appears to refute the former prediction, and the care taken to avoid leaving fingerprints belies the latter prediction.

### Applications of the Scientific Model of Profiling for Practice

Across the three tiers described previously, the scientific model of profiling can be used as a road map to generate hypotheses for investigation in a logical and organized manner. By following the structure of the model, one can organize profiling inferences into three main tiers, with each tier reflecting a particular type of relationship between crime variables. Tier 1 contains hypotheses linking crime scene evidence to first-level offender behaviors. Tier 2 relates first-level behaviors to aspects of motive and personality. Finally, Tier 3 involves the derivation of second-level behaviors from motive, personality, and other behaviors.

Use of the three-tier model and the presentation of profiling inferences to law enforcement agencies in the context of this model has three main benefits over current nonscientific profiling practices. First, by using an organized system for considering hypotheses and providing the logical links between the hypotheses and inferences leading up to second-level behaviors, profiling practitioners will assist law enforcement agents in understanding the relevance and role of behavioral and psychological information to a conceptualization of crime. By organizing inferences into the three tiers of the scientific model, profilers will be able to demonstrate to law enforcement where and how aspects of motive and personality become important and how to use information about crime events to make predictions about the second-level offender behaviors that may assist law enforcement in capturing the offender.

Second, by making the steps involved in generating predictions about second-level behaviors explicit, profiling practitioners will be able to track the trajectory of their hypotheses through the three tiers of the scientific profiling model and make adjustments in the face of new information. For example, in the murder example from Figure 11.2, the remote location of the body led to the prediction of the first-level behavior of driving to the

body dump site. This first-level behavior subsequently led to the prediction of the second-level behavior of having access to a vehicle. Suppose that new information became available to suggest that a boat had been used to bring the body to the remote area of shore from across the lake—an area that is populated with homes. This would contradict the inference that the offender had to drive to dump the body and thus must have had access to a car. Because the progression of inferences has been described explicitly, however, it is possible to go back to the source of the inference about having access to a vehicle and change it. Thus, the first-level behavior of navigating a boat would be added to the crime reconstruction. This would in turn lead to different predictions about second-level offender behaviors. For example, one might predict that the offender has sailing experience or owns a boat. One might also predict that the offender lives in the neighborhood on the opposite lakeshore. The benefit of using the scientific model of profiling as a road map is that the paths of inferences can be traced and adjusted in the event that new information becomes available.

Third, by conceptualizing profiling predictions as hypotheses and making the derivation of those hypotheses as logical and explicit as possible, profiling practitioners will be providing profiling researchers with important empirical questions that can be examined in the service of creating and testing causal models. For example, whether hostile personality characteristics predict assaultive behavior and prior arrest history in homicide offenders is an empirical question. Likewise, the hypothesis that a motive of financial gain predicts unemployment and a history of delinquency in robbery offenders can be modeled and tested. By continuing to generate new ideas, and by transforming the clinical observations made in practice into testable research hypotheses, profiling practitioners can contribute greatly to bridging the gap between profiling science and practice and to ultimately improving law enforcement investigations.

### Limitations of the Scientific Model of Profiling for Practice

Although profiling practice continues to evolve in tandem with a science of profiling, it is important to consider the current limitations of profiling knowledge and identify boundaries for profiling expertise. First, as previously discussed, profiling predictions should be presented to law enforcement as working hypotheses rather than conclusive statements. The logic of these profiling predictions should be clearly communicated to law enforcement agents, and it should be made clear that these predictions may change in the face of new information or contrary research findings. Second, profiling practitioners should become familiar with the most current offender literature and incorporate research findings into their practice whenever possible. In the same way that observations from practice can inform research

studies, the findings from these studies should in turn be applied to profiling practice. Profiling practitioners should be clear to law enforcement agents about which aspects of their predictions are informed by research and which are based on clinical or logical inferences. Third, profiling expertise should be offered only in the investigation phase of criminal offenses, to generate leads and assist law enforcement agents in narrowing down the field of potential suspects. The state of the profiling research literature limits the expertise that profiling practitioners have to offer, in that it is not currently possible to express profiling predictions as certainties, or to even assert the strength of the causal relationships that are at the heart of these profiling predictions. This limitation to current profiling knowledge should not prohibit practitioners from suggesting new avenues for investigation or strategies (e.g., recommending the use of the three-tier model) for organizing evidence and behavioral information. It may even be possible for practitioners to suggest strategies for interrogation, such as a consideration of the types of questioning styles that might be more likely to elicit responses from offenders with particular sets of personality characteristics. Beyond investigation, however, in phases of the criminal justice system that are focused on establishing the guilt of a particular offender through prosecution and the levying of punishment through sentencing, profiling practitioners should refrain from characterizing their predictions as expertise, and profiling inferences should not be offered as proof to demonstrate the truth of any particular version of crime events or offender actions. There is currently no evidence in the offender literature to support the conclusive matching of an offender to a hypothesized crime reconstruction or set of offender characteristics, and there are no current indicators to suggest that profiling practitioners can or should apply hypotheses about second-level behaviors to individual suspects in the context of demonstrating guilt. Although it might be an appropriate risk to make certain investigative decisions, such as following a potential lead, on the basis of profiling predictions that may or may not be correct, the risks involved at the prosecution stage of a crime, to both victims and alleged offenders, are substantial. Providing potentially inaccurate information at trial, in the guise of expertise, could have devastating consequences. Profiling practitioners should therefore take great care to clearly state the limits of their expertise and refrain from participating in the phases of the criminal justice system for which they have no expertise to offer.

## THE ART AND SCIENCE OF CRIMINAL PROFILING

There is today both a long-standing art and emerging science of criminal profiling. Although the continued development of a science of profiling may seem at first to be a gradual process of departing from the nonscientific

profiling practices criticized in Part I of this book, it is in fact an effort to strengthen profiling by providing evidence for its truths and identifying and refuting its weaknesses. There would be no science of profiling without the vision of the early profilers, and it is the promise of applying scientific findings to investigation that gives the scientific model of profiling its current purpose. With this in mind, we hope that profiling scientists and practitioners will collaborate in an effort to secure funding and resources for conducting the comprehensive research that is so needed in the profiling field and will carry out empirical studies of the hypotheses that have emerged from profiling practice. Armed with these findings, profilers will have a substantial and sustained contribution to make to criminal investigations.