

Criminal Profiling

Granfalloon and Gobbledygook

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READING THE CLAIMS OF CRIMINAL PROFILERS and watching popular television programs like *Criminal Minds* can leave one with the impression that Criminal Profiling (CP)—the task of inferring demographic and personality details of an offender from his or her crime scene actions—is a well-practiced and reliable investigative technique. Over the past three decades, CP has gained tremendous popularity as a media topic, an academic area of study, and a tool for police investigations worldwide. However, as we demonstrate in this article, the acceptance of CP by many police officers, profilers, and the public is at odds with the absence of scientific evidence to confirm its reliability or validity. We think this confusion has arisen for two related reasons. The first is that people have developed a biased picture of CP because they typically hear only about its glowing successes. The second, related, reason relates to what we know about cognition and the manner by which people process information, which typically serves to support the credibility of CP.

The 5 W's of Criminal Profiling

1. What is profiling? When CP was originally popularized by the FBI, a profile consisted primarily of a list of very basic characteristics (e.g., age, previous convictions) that were likely to be possessed by the unknown offender of the crime(s) under consideration.¹ Profiles were generally used to narrow a list of potential suspects, focus investigations, and construct interview techniques.² In more recent years, the potential forms that a profile can take and the ways in which it can be used within a criminal investigation have expanded to include suggestions regarding resource prioritization, case management, strategies for dealing with the media, and so

on.³ (To view a profile, see <http://www.brgov.com/TaskForce/pdf/profile.pdf>.) Notwithstanding these developments, the core focus of CP remains the derivation of inferences about an unknown offender's characteristics. Yet, a 2001 study regarding the content of criminal profiles found that only 25% of statements in profiles were inferences about offender characteristics. Of that 25%, 82% of the inferences were unsubstantiated, 55% were unverifiable, 24% were ambiguous, and 6% contained opposing alternatives.⁴

The specific process that profilers use to make their inferences appears to be shaped by their training. Profilers who emphasize a clinical/psychological perspective draw on their psychological training, knowledge and experience with criminal behavior, and possibly their intuition, as they make their inferences. At its worse, this type of CP appears to differ little from what “psychic detectives” allegedly do when helping law enforcement agencies catch criminals or find missing persons.⁵ In fact, you can probably take any article or book written on psychic detectives and replace the term “psychic detective” with “criminal profiler” and the argument would continue to make perfect sense. By contrast, statistically oriented profilers claim to base their inferences on the statistical analysis of data, which comes from offenders who have previously committed crimes that are similar to those being investigated.

2. Who are profilers? Surprisingly, there is no consensus about who is qualified to be a profiler. Some have maintained that a profiler is anyone who labels themselves a profiler and has engaged in the practice of constructing a profile for a criminal investigation,⁶ whereas others have argued that only individuals who have considerable investigative experience should be

profilers.⁷ Although some attempts have been made to regulate and accredit profilers (e.g., The International Criminal Investigative Analysis Fellowship), there is no recognized regulatory body that provides a professional CP designation. Thus, those presenting themselves as profiles may vary widely in their level of experience and education.

3. *When is profiling used?* The use of profilers has typically been limited to certain low-volume crimes such as sexual assaults committed by strangers and homicides that appear to lack a motive. Profiles are seen to be most useful in these types of cases because offenders are more likely to exhibit psychopathology such as psychopathy, schizoid thinking, and sadism.⁸ This is assumed to increase the degree to which offenders behave consistently across their crimes and other aspects of their lives.⁹ It is also the case that a profiler may be consulted at various stages of the investigation.¹⁰

4. *Where is profiling used?* It appears that the majority of CP occurs in the United States through the FBI, with the most recent estimates indicating that CP is being applied in approximately 1000 cases per year.¹¹ CP is also being used heavily in the United Kingdom, with 242 instances of CP advice being reported between 1981 and 1994.¹² Although exact estimates of CP prevalence in other countries are not directly available, its use has been documented in Sweden, Finland, New Zealand, South Africa, Germany, Canada, Ireland, Malaysia, Russia, Zimbabwe, and The Netherlands.

5. *Why is profiling used?* The most obvious reason why police officers use CP is that they believe it “works”. Indeed, survey results indicate that some officers believe profiles are operationally useful, often because they reinforce their own opinions, further their understanding of the offender, and/or focus the investigation.¹³ Of course, it is also possible that some officers may use CP simply because they believe they have “nothing to lose” by consulting a profiler, and/or they are forced to do so in order to satisfy judicial requirements to exploit *all* available investigative options to solve the crime.

Police Officers' Opinions of Criminal Profiling

The few surveys that have assessed police officers' opinions about CP suggest they generally find CP useful for their investigations. An early survey found that solving cases was attributed to CP advice in 46% of the 192 instances where FBI profiling was requested.¹⁴ Similarly, a 1993 study found that 5 out of 6 surveyed police officers in The Netherlands reported some degree of usefulness for advice given by an FBI trained profiler.¹⁵ Likewise, a 1995 study found that 83% of a sample of 184 police officers in the United Kingdom claimed that CP was operationally useful and 92% reported that they would seek CP advice again.¹⁶ Consistent with these results, a 2001 study showed that a significant portion of police officers in the United States believe that CP has value.¹⁷ Finally, a 2007 survey of Canadian police officers found that 66% of the officers believed that it contributed to their investigation. Moreover, most officers reported that the profiler made accurate predictions.¹⁸

Putting CP to the Test

Despite the fact that police officers hold these views, a review of the CP literature reveals that: (a) the majority of CP approaches are based on an outdated theory of personality that lacks strong empirical support, and (b) professional profilers have a dismal performance record when the accuracy of their profiles have been examined.

Is CP based on an empirically supported theory?

In a similar way to a theory of personality (the classic trait theory) that was popular in personality psychology up until the late 1960s,¹⁹ the overwhelming majority of CP approaches assume that criminal behavior is determined by underlying dispositions (i.e., traits) within offenders that make them behave in a particular way.²⁰ The assumptions that emerge from this theory are fundamental to CP. For example, the trait theory leads to an assumption that offenders will exhibit similar behaviors across their offenses because traits, rather than situational factors, are the determinants of their behavior. Perhaps more important for the practice of CP, the theory also suggests that offenders will display similar behaviors in their crimes and in other aspects of their lives (e.g., in their interpersonal relationships).

The sole reliance on trait-based models of profiling is fundamentally flawed. Criminal profilers do not seem to recognize that a consensus began to emerge in the psychological literature some 40 years ago that it was a mistake to rely on traits as the primary explanation for behavior.²¹ Situational factors contribute as much to the prediction of behavior as personality dispositions. This is likely to be equally true when predicting criminal behavior.

The importance of situational factors is apparent when one considers research in the profiling domain. For example, offenders rarely display high levels of behavioral consistency across the crimes they commit.²² A similar picture emerges when evaluating the degree to which offenders exhibit consistency across their crimes and other aspects of their lives. At best, small pockets of consistency have been identified, whereby a specific crime scene behavior is found to relate to a specific background characteristic. For example, a 1997 study found that rapists who forced entry into premises were four times more likely to have prior convictions for property offenses than those who did not engage in that behavior.²³ In

general, profilers seem to ignore this empirical research.

Profilers also appear to be oblivious to research in closely related fields. For example, despite a massive effort to identify predictors of consistency in offender samples within community and prison settings, research has failed to turn up anything of value to criminal profilers. While it is possible to make reasonably accurate predictions of criminal behavior with respect to recidivism,²⁴ these inferences are based on the analysis of behaviors beyond those exhibited at an offender's crime scene. Indeed, the well-established predictors of criminal behavior (e.g., anti-social attitudes, cognition) are not the sorts of variables typically focused on by profilers (e.g., crime scene behaviors), which raises unanswered questions about why profilers might expect that behaviorally-based profiling approaches will be effective.

Can professional profilers make accurate inferences? Within the CP domain, negligible quantitative differences have been found between the predictive ability of "professional profilers" and "non-profilers". The accuracy of profiler inferences has been tested by comparing the performance of so-called professional profilers with that of non-profiler groups in mock profiling scenarios.²⁵ In a typical experiment, profilers and non-profiler groups are asked to review details of a solved crime and make inferences about the likely offender (via a multiple choice questionnaire). Inferences are typically divided into four categories: cognitive processes (e.g., whether or not offender exhibits remorse), physical attributes (e.g., presence of facial hair), offense behaviors (e.g., whether the offender removed items from the crime scene), and social history/habits (e.g., alcohol consumption). The results from these four categories are also combined to form an overall profile performance measure. The accuracy of these inferences is then checked against the actual perpetrator's physical characteristics, thoughts, and behaviors.

Two 2007 meta-analyses of these studies were revealing.²⁶ The first analysis compared the predictive accuracy of a group of self-labeled profilers and experienced investigators against non-profilers (e.g., college students and psychologists). The profilers/investigators were found to be more accurate than non-police personnel on

an overall measure of profile accuracy ($r = .24$) and on the physical attribute category ($r = .10$). On the other hand, the predictive accuracy of the profilers/investigators was marginally worse or no better than the non-profilers when it came to inferences of cognitive processes ($r = -.06$), offense behaviors ($r = .00$), and social history/habits ($r = -.09$).

In the second analysis, the experienced investigators were included in the non-profiler group. In this analysis, the results favored the profilers across all five predictor categories, but the differences were not large enough to be statistically significant. The best result came when the overall profile was considered ($r = .32$). However, even if this most optimistic of results could be replicated, it warrants consideration that many variables included in this analysis of profilers' expertise are well known in the criminological literature (e.g., the likelihood that a serial offender will be of a particular age, have particular convictions, suffer substance abuse problems, etc.). This means, and we hasten to emphasize this point, that any police professional with a good knowledge of the criminological literature should be able to achieve this level of success simply by relying on base rate information. In other words, success in CP does not appear to be based on specialized knowledge of the peculiarities and idiosyncrasies found at a given crime scene.

Why do People Believe that Criminal Profiling Works?

Given the state of affairs with CP research, one can only wonder why police officers and the public would have faith in such a dubious technique. Below are eight potential reasons. The first four relate to how information about CP is presented to people. The second four relate to how people might process that information.

1. *The power of anecdotes.* CP accounts in books, magazines, law enforcement bulletins, and peer-reviewed journal articles often rely entirely on a "case in point", "case study", "actual case," or "success story" to illustrate how profiling is useful in catching a criminal. For instance, a 2007 study found that 60% of the CP literature relied on anecdotes as a source of evidence.²⁷ But anecdotes are inadequate for effectively validating CP for at least three reasons. First, in attempting to convince others that profiling works, a profiler can surely find at least one anecdote in which a profile

appears to have helped investigators. Second, anecdotal evidence from any source may exaggerate the actual usefulness of a profile in various ways. Third, profiling anecdotes are prone to be distorted in some way to make them more entertaining and informative.

2. *Repetition of the message that "profiling works."* Repeating the message that "CP is an effective investigative tool" or "police officers seek profilers' input" can contribute to the CP illusion because people tend to believe messages they hear repeatedly. The 2007 study noted above found that the message "profiling works" is clearly stated in 52% of the 130 profiling articles reviewed, whereas only 3% of articles unequivocally stated that profiling does not work. As previously argued, that positive message is unsupported by the research on the predictive ability of profilers.²⁸

3. *Counting the hits and discounting the misses.* Profilers create the impression that their inferences are highly accurate by over-emphasizing their correct inferences.²⁹ When all the necessary and pertinent information is not explicitly reported, readers may form beliefs based solely upon the information that is presented to them. Findings from psychological research suggest that the exclusive presentation of correct inferences can lead people to overestimate the accuracy and potential utility of profiles. It is therefore not surprising that reading articles about profiling might lead people to conclude that it is a viable tool.

4. *Profilers are not "experts."* Experts are people who have professional competence in a specialized area. People have a tendency to accept information that is reported to them by supposed experts. However, problems can arise when people wholeheartedly believe in the power of an expert's "specialized knowledge" when that knowledge has little foundation. In practice, profilers present themselves as experts by implying that they possess accumulated wisdom, investigative and behavioral science experience, and training and/or knowledge of abnormal behavior that provide them with the necessary skills to collect and analyze crime scene information and peek inside the criminal mind. In addition, research has shown that police officers tend to believe that profiles written by supposed experts are more accurate than those written by other consultants, even when identical information

appeared in both profiles.³⁰ The problem with this state of affairs is that there is little evidence supporting the proposition that profilers' possess specialized skills that warrant labeling them as experts.³¹

5. *Humans are pattern-seekers.* Humans attempt to find order and meaning in the uncertain world and then form beliefs that can guide future behaviors.³² In attempting to find useful patterns, however, people sometimes find patterns that are meaningless. When information is presented in such a way as to make us believe that CP works, it is no wonder that this is the conclusion that is reached. The information, however, may be biased in several ways. Profilers may wish to inflate their own usefulness (self-serving bias) and may actually be more confident in their abilities than is warranted (over-confidence); people might believe that a profiler's advice solved an investigation because they are unaware of, or do not consider, the rest of the police work that was involved in the case (attribution error); profilers, police officers, and the public are prone to make errors whenever they partake in after-the-fact reasoning; and, perhaps most important, there may be a tendency to seek evidence that supports an existing belief that CP works and ignore or filter out evidence that contradicts such a belief (confirmation bias).

6. *Vague profiles fit any case.* The inferences in some profiles are so ambiguous, vague, and/or general that the profile (like horoscopes) can appear to describe any suspect.³³ This is problematic for both practice and research. For example, in a case with multiple suspects, profiles that contain many ambiguous inferences may not assist in the elimination of the innocent. It is also possible that interpreting ambiguous statements (and subsequently using that interpretation to guide investigative decision-making) may contribute to the arrest of an innocent suspect and thus the release of, or the cessation of a search for, the actual criminal. In this latter regard, readers should be reminded of the frequent reporting in the media of wrongful convictions. Regarding research, it is difficult to retrospectively determine and report the actual accuracy of profiles if they can be interpreted to fit many individuals. Moreover, ambiguous inferences are not falsifiable, thus the profiler can never be shown to be wrong.

7. *Imitation.* People tend to believe things or do things a certain way because they were believed or done that way by others in the past.³⁴ In fact, a large amount of what we know is naturally acquired from other people's behavior and instructions. Thus, those who observe other people using CP are likely to both use it and believe it works, even if the initial user does not hold this belief. Police officers may believe CP is a good investigative technique because they observe other police officers using it. Police officers spend time with other officers, communicating various skills and proper policing behaviors through both formal and informal teachings. Through police culture, profiling advocates (e.g., those officers trained to use CP) can directly and/or indirectly instruct other officers that CP is effective. In any case, it is unlikely that any of the other officers would have access to all of the information needed to properly determine whether CP works.

8. *Mistaking fiction for fact.* Because people are generally intrigued by the criminal mind, profiling activities tend to generate a lot of public fascination. The increasing number of books, films, and television programs that deal with profiling, as well as the recent growth in college and university courses that address profiling issues, supports this observation. Exposure to primarily fictional accounts of CP unfortunately means people may base their beliefs upon those accounts; especially since people are not very adept at remembering the source of information that they acquire during routine daily activities.³⁵

Conclusion

There is a growing belief that profilers can accurately and consistently predict a criminal's characteristics based on crime scene evidence. This belief is evident from the fact that CP is becoming increasingly prevalent as an investigative technique and that positive opinions of CP are being communicated in the published literature. Such a belief is premature because the technique has yet to be theoretically or empirically supported. Belief in this unscientific policing practice appears to be due to the erroneous information that police officers (and the public) receive about CP and the way that this information is processed. Since profiling has the potential to mislead criminal investigators, it is a practice that must be approached with the utmost caution. □

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