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Evaluating the use of data-based offender profiling by researchers, practitioners and investigative journalists to address unresolved serial homicides

Enzo Yaksic

Abstract

Purpose – *The purpose of this article is to improve the use of evidence-based practice and research utilization in the offender profiling process. The use of offender profiling has been met with increasing resistance given its exaggerated accuracy. The “Investigative Journalist/Expert Field Micro Task Force” model, a collaborative method that incorporates offender profiling and is designed to address unresolved serial homicides, is introduced and evaluated alongside recommendations on attaining adherence.*

Design/methodology/approach – *The model was field tested in 17 instances. The measures used by the Federal Bureau of Investigation to gauge the usefulness of their case consultations, whether their input helped catch the offender, offer new leads, move the case forward, provide new avenues or give new ideas, were used to evaluate the model.*

Findings – *The model established likely patterns of serial murder activity among strangulations of women in Chicago, Cleveland, and Panama and resulted in convictions of suspects in Louisiana and Kansas City. This model is valuable when used to parse modern-day offenders from those who committed unresolved homicides as the latter display different behaviors that can make investigations difficult endeavors. Results from the field tests mirror those from the literature in that profiling alone did not result in the capture of serial killers. Instead, profiling was used in conjunction with other efforts and mainly as a means to keep the investigation moving forward.*

Originality/value – *Unresolved homicides are at a point of crisis and represent a significant but largely unaddressed societal problem. The success of this model may compel law enforcement to restore faith in offender profiling.*

Keywords Collaboration, Investigation, Law enforcement, Profiling, Serial homicide, Cold case

Paper type Research paper

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At the height of the serial murder phenomenon, Federal Bureau of Investigation (FBI) Special Agent profilers of the Behavioral Analysis Unit (BAU) consulted with the expert fields^[1] (EF) to establish itself as the “one-stop-shop” for the resolution of homicides committed by serial homicide offenders (SHOs). Although their output comprised nearly half of articles on offender profiling (OP) (Fox and Farrington, 2018), that total began to decrease to zero about 15 years ago after:

- a symposium on SHOs (Morton and Hilts, 2008);
- the topic was coopted by the entertainment industry (Yaksic, 2019a); and
- a decline in SHOs (Yaksic *et al.*, 2019a, 2019b, 2019c).

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As mass murder becomes increasingly prevalent (Berkowitz *et al.*, 2019; Weise and Woodyard, 2019), the FBI has disinvested from the SHO search (Miller, 2015). Investigative journalists (IJs) have since teamed with the EF to find SHOs responsible for unresolved (cold) homicides. Such consultations use data and evidence-based OP within the Micro Task Force (MTF) model, a collaborative environment beneficial to law enforcement organizations (LEOs). This report recounts 17 field tests where data and evidence-based OP was used in conjunction with the IJ/EF MTF model in the search for SHOs and evaluates the process.

Unresolved homicides are at a point of crisis (Stein *et al.*, 2017) and represent a significant but largely unaddressed societal problem (Adcock, 2017). Although LEOs have had success in apprehending SHOs[2], scientists are urged to re-emphasize the value of scholarship in solving these types of problems (Nature, 2019) and do so through the use of OP to aid in criminal investigations. This method has fallen out of favor since Muller (2000) identified several process failures. Eastwood *et al.* (2005) recommend that OP be used sparingly given that the validity of profilers' predictive abilities is not empirically supported (Gladwell, 2007; Matthews, 2018), whereas Jackson, Wilson and Rana (2011) warn that scrutiny and criticism will follow those that use OP. Profilers are reluctant to validate OP because of a misplaced belief that demand equates to evidence that it works (Chifflet, 2014) is conducted in isolation and lends itself to profiteering (Seymour, 2019) so little guidance on how to use it exists. Treading on territory laid by the original profilers presents practitioners of OP with a dilemma; emulate the old ways or introduce new ideas and be ostracized for straying from the established principles. LEOs also argue that catering to the personalities associated with OP[3] make closing unresolved homicides more difficult. Still, the IJ/EF MTF model is necessary given that wider efforts to understand and apprehend SHOs have been discouraged and curtailed (Yaksic, 2018)[4].

Because collaborations with the BAU became less common, the EF embarked on efforts to close unresolved homicides[5] by adapting the work of "citizen sleuths" (Halber, 2014; Warzel, 2014) and IJs (Crombie, 2018; Olsen, 2017). The IJ/EF MTF model formed when serial murder began to grow in popularity alongside shrinking newspaper readership. The BAU equates communicating with the media with a quest for recognition and refers to those that do as "talking heads" that insert themselves in investigations (Morton and Hilts, 2008). Criticisms surrounding the use of media reports to develop OP undercut the benefits of today's IJs who uncover minute details of criminal events. Even though the EF have been exposed to serial murder, including the offender's thought patterns, desires, methods of operation and behavior, their qualifications are unduly judged and compared with investigators – an ironic phenomenon given that profilers either do not outperform or only slightly outperform the general population when predicting offender characteristics (Reynolds *et al.*, 2019).

The EF has become adept at applying data to the investigation of SHOs[6] (Keatley, 2018) in response to Dowden's (2005) call to use sophisticated methodology. The IJ/EF MTF model is a valuable resource because unresolved homicides committed by SHOs occurred before their evolution and display of new behaviors (Yaksic, 2019b) which can confuse modern LEOs. The practice of data and evidence-based OP places unknown offenders into a typology that includes education level, socioeconomic background and social capabilities using information from captured SHOs (Aamodt *et al.*, 2019) alongside the Murder Accountability Project's (MAP) Supplementary Homicide Report (SHR) file (Hargrove *et al.*, 2017), demographic data and characteristics from the surrounding population[7]. Using these methods, IJ/EF MTFs established likely patterns of SHO activity among strangulations of women in Chicago (Sweeney and Figueroa, 2018), Cleveland (Dissell, 2017), missing girls in Panama (Kryt, 2017) and

have pursued since convicted murderers across Louisiana ([Mitchell, 2016](#)) and Kansas City ([Cummings et al., 2018](#)).

Origin of the investigative journalist/expert field micro task force model

The IJ/EF MTF model was devised as an adaptation of the Cold Case Review Conference (CCRC) system ([Innes and Clarke, 2009](#)), an effective model with demonstrated results in the UK, that applies the concept of Investigative Psychology ([Canter and Youngs, 2003](#)) to use the knowledge amassed by experts involved in the Atypical Homicide Research Group (AHRG) to cold case homicides. Because LEOs rely on journalists to get their messages to the community in the age of social media, joint cooperation is critical as those relationships provide an invaluable service in terms of broadcasting what is needed from the public to close a homicide. [Innes and Clarke \(2009\)](#) note that CCRCs are multi-disciplinary endeavors involving several specialist roles and that one should be a Behavioral Investigative Advisor (profiler).

The IJ/EF MTF adapts the CCRC model by combining the efforts of journalists with those of a profiler as the integrity of the former aids in overcoming the viewpoint of some LEOs that behavioral analysts are akin to soothsayers. [Woodworth and Porter \(1999\)](#) suggest that a profiler may offer benefits regardless of how the profile matches the offender and that they should be regarded as a knowledgeable person who can provide a different perspective. Because the nature of the interaction between police and practitioners shapes the opinions given regarding offender characteristics ([Canter and Alison, 2016](#)) it is important to have third party involvement, namely, an IJ, to offset the unbalanced relationship between pragmatic LEOs and eager practitioners. Because Investigative Psychology packages psychological principles in ways that are useful to the investigator, it can aid LEOs that [Snook et al. \(2007\)](#) have identified as using more commonsense rationales than scientific ones.

There are three stages of using the IJ/EF MTF model:

1. An IJ takes an interest in a cold case homicide, interviews parties with pertinent information, and contacts the AHRG.
2. The AHRG reviews the known facts and agrees to assist in the case.
3. The LEO working the case is contacted by the AHRG and relationship building begins between the two teams.

[Corey et al. \(2009\)](#) emphasize the importance of such cooperative endeavors with the potential to maximize the benefit of each specialty involved. The level of effort required to complete the model varies depending on the amount of available information, how many cases are involved in the potential series, and the willingness of the LEO to supply primary source documentation for review. The AHRG remains involved until a behavioral analysis is completed and reviewed.

During today's true crime boom, LEOs are capitalizing on the exposure journalists can create for cold cases. IJs not only create in-depth reporting on the cold case but also spotlight the detective working to bring about a resolution, a process to which many have since become accustomed ([Bessex, 2019](#); [Goffard, 2019](#)). This method has improved relations between the two groups as LEOs are less likely to view IJs as entities with the primary aim of exposing flaws in the initial investigations but rather as allies in the quest to resolve the homicides. Because IJs conduct a thorough review of all publicly available information and interview witnesses, material obtained from LEOs are initially treated as secondary sources. The merger of the IJ's research with the primary source documents from LEOs then leads to fuller, more detailed profiles.

Canter (2011) believes that Investigative Psychology has established a scientific framework for drawing inferences about offenders' characteristics from criminal actions that can be made based on how the offender deals with a victim and the source and target of a crime which combine to generate a style of offending that predicts important features of a criminal. Woodworth and Porter (1999) note that Investigative Psychology places information within the context of psychological theory and empirical knowledge. By mining this literature to support aspects of the behavioral analysis in the current research, the IJ/EF MTF model becomes a separate process from the FBI method of profiling which Canter and Youngs (2003) call a flawed approach. The assumption that there is consistency over the same type of situations also places the IJ/EF MTF model in line with principles of case linkage (Woodhams *et al.*, 2010) which has shown great promise in recent years.

Although Woodworth and Porter (1999) proclaimed that empirical data regarding SHOs have begun to accumulate to reveal behavioral patterns, a statistically derived profile for SHOs is elusive given that no central database existed until 2014 (Boyne, 2014; Briggs, 2015). Because Mittal and Singh (2016) recommend using computer programs and other information databases to make the process of profiling more standardized for use by LEOs, as Briggs (2015) points out has yet to occur, the profiles highlighted in the current research were partly generated as output from the Consolidated Serial Homicide Offender Database (CSHOD) (Aamodt *et al.*, 2019), making them statistically derived and evidence based Yaksic (2015).

The cases involved in this study were the result of a non-random sample and included based on availability. Thematic analysis was conducted where patterns in the data were identified and interpreted using themes, specifically those related to serial homicide (e.g., subjugation). The behavioral analysis herein is supported by logic provided by Canter (2011) in that inferences are made by searching a database for similar information in solved crimes and establishing the characteristics of known offenders. What was done is defined as inductive profiling, a process based in the study of criminals that have already been identified (Mittal and Singh, 2016).

The investigative journalist/expert field micro task force and the pursuit of serial homicide offenders

The following vignettes represent efforts by IJ/EF MTFs to demonstrate that an SHO suspect was responsible for a series of unresolved homicides[8].

Felix Vail. Fact pattern: Mary Vail was thought to be a victim of drowning but when both Sharon Hensley and Annette Craver disappeared after being romantically linked to Vail, the IJ/EF MTF analyzed hours of surreptitiously collected audio recordings and reviewed Vail's journals (Mitchell, 2016).

Analysis: Vail is a detached observer, referring to himself as a scientist studying the anatomy of the ego; an entity whose mission is to overtake our electrical life force, or spirit, the limiting factor of the human species. Vail hopes to reach a state of "free brain awareness" where total autonomy, self-governance and spiritual enlightenment can be attained. The offender is handicapped by a preference for abstract thought, an immensely inflated sense of self-worth and a tendency toward megalomania. He boasts about a range of abilities granted by being privy to the brain's remaining "ninety-percent." His desire to tap into the consciousness of strangers signifies his quest for absolute omniscience. To anticipate underlying motives, Vail has conducted body language research and has become a student of psychology; measuring and profiling to determine when the truth is falsified. For him, the worst thing in the world is to be undermined. The strangeness of the adult world, namely, the distinction between what is thought and what is spoken, has confused Vail. This dissonance manifested as a schism between intellect and emotion and an inclination to understand the concept of dualism that has dominated his existence and

decisions. Vail takes pride in thinking “outside the social parameters” to which others are programmed. He cares not for what is deemed permissible by society and openly disregards the illegality of his prior actions. Although Vail relishes his outsider status, he is keenly aware that perception is afforded more attention than actuality. To avoid sending “red flags,” he pretends to be influenced by the disapproval of others, thriving on the cons that he perpetuates. Growing up on a farm with sharecroppers and orderlies instilled in Vail a penchant for dehumanization. As no woman could equal him emotionally, mentally or spiritually, they existed merely to be used.

Result: The IJ/EF MTF conferenced with an FBI Major Case Specialist and BAU Unit Chief who reached out to local authorities in Louisiana. After that meeting, authorities promptly reopened Mary Vail’s case which led directly to Vail’s arrest for murder.

Robert J. Gross. Fact pattern: Gross targeted what he called “acquaintances” but by conventional standards, the victims were mainly girlfriends[9]. Data on the various ways that SHOs escape apprehension when facing mounting evidence against them and the multitude of things that contribute to their gestation over their life course was discussed in the IJ/EF MTF. Gross was accused of committing assaults, burglaries, arsons and several murders, crimes that occurred in seven counties on both sides of the Missouri/Kansas state line and dated back to the 1960s (Cummings *et al.*, 2018).

Analysis: In the 1960s, LEOs were not well versed in the indicators of future violence. The EF now understands that stalking (Groves *et al.*, 2004), sexually motivated burglaries and early history of breaking into homes and stealing women’s undergarments, as Gross did, can be a strong indicator of future violent behavior (Warren *et al.*, 2013). Anger is also understood to be a critical component of predicting future dangerousness. Gross was a vengeful and jealous person whom many feared because of his outbursts that included beatings and his willingness to go to extraordinary lengths to take revenge for the smallest perceived slight. Gross allegedly murdered a woman he was having an affair with and her husband and nearly killed another woman, but law enforcement neglected to charge Gross. Gross had a series of brushes with the law that lead to arrests, but detectives could not collect enough evidence that would support a prosecution. A pair of women’s stockings with eye holes cut out, two pairs of handcuffs and a length of rope was recovered from in his garage. These items support the IJ/EF MTF’s stance that Gross is a viable SHO suspect (Warren *et al.*, 2013).

Result: Gross was arrested in 2017 after a series of stalking incidents and a sexual assault. Efforts to link him definitively to homicides are ongoing.

Incorporating data and evidence-based offender profiling in the search for unknown serial homicide offenders

Two databases were used in the search for SHOs, the CSHOD (Aamodt *et al.*, 2019) and MAP’s SHR file (Hargrove *et al.*, 2017). The sheer number of unresolved homicides in Cleveland, Chicago and Panama were flagged and increase the likelihood that at least some of them are linked. More substantive work was completed to add a measure of validity to such claims.

Seminole heights killer (offender unknown during active series). Fact pattern: An offender had killed four people in the Seminole Heights neighborhood of Florida over a two-month time span. Law enforcement had no leads or suspects except for a grainy security camera video. OP was used to generate a document that was shared with the Chief of Police Dugan. Dugan was not receptive to outside assistance (Rosario, 2017). A representative from the BAU later claimed that the OP was inaccurate and unnecessary. Because the alleged killer, Howell Donaldson, represents a newer breed of the offender, a serial/spree hybrid now called a rapid sequence homicide offender (Yaksic, 2019c), a profile of Donaldson’s

activities was based on data on how these offenders behave and interact with the community.

Analysis: The offender was thought to reside within a few blocks of the crime scenes and travel by foot or bicycle, moving quietly. The silence afforded by such stealth-like techniques can contribute to this offender's ability to ambush his victims. The mode of transportation suggests a younger person, 21 to 35 years. The killer probably has a personal relationship with the area. The disparity between the offender's perceived lower status may be driving his motivations to victimize those from other statuses. Because at least two of the killings happened later in the day or at night, the timing could indicate that the offender is used during the daylight hours in some menial capacity based on his potential age range. This offender may not be physically capable of venturing out onto the streets every day and could be restrained by responsibilities typical to all youthful offenders. Though predicting race is difficult in such a diverse area, the killer is likely from a minority group (Lester and White, 2014). The murderer is not mentally ill but enjoys outsmarting LEOs and is reacting to a set of internal processes that he may have verbalized to acquaintances or relatives. The Seminole Heights killer seems to match a pattern seen in recent years – younger, spree-like serial murderers who are more motivated by anger than sexual desire (Yaksic, 2019c). Forensic evidence linking these homicides should be plentiful as youthful offenders rarely take countermeasures to ensure that crime scenes are sanitized (Yaksic et al., 2019a, 2019b, 2019c). Serial offenders do not always complete their intended crimes and as such all shootings within at least the past six months should be analyzed for potential linkages (Osborne and Salfati, 2015). The offender may contact law enforcement to confess if the pressure to capture him does not dissipate. The victimization of others while they are completing everyday tasks, while not the offender's primary motivation, rounds out a snapshot of an individual with a disdain for constructs such as wealth and stature.

Result: Donaldson surrendered by asking a coworker to hold onto the murder weapon. Donaldson's cell phone had been in the vicinity of the killings at the relevant times. The utility of the OP is debatable but the community was said to have been aided by it (Sampson, 2017).

Austin bombings (offender unknown during active series). Fact pattern: For three weeks the "Austin Bomber" wreaked havoc, killing two and injuring four more when five package bombs exploded. Law enforcement thought that the first victim was not the intended target and stated that the device was meant for a suspected drug dealer or that the victim constructed it and accidentally detonated it (McGaughy and Wang, 2018).

Analysis: This offender will be a lone Caucasian male who uses the cover of darkness to mask his presence in a predominately African American neighborhood. Similar to other serial murderers, this offender resides within the periphery of the targeted detonation sites which would allow for the surveilling of the targeted locations beforehand to learn routines and calculate risk of being seen by witnesses while upholding the duties and responsibilities expected of him in his private life (Canter et al., 2000). The close temporal aspect suggests that the offender was growing in confidence and sophistication and desired to accomplish his goals expeditiously (Yaksic, 2019c). Serial killers that use explosive devices score within the superior range of intelligence quotient testing (Crockett, 2016). For this reason, it is highly likely that the individual engaging in this series has obtained at least a college-level degree. The attacks were unlikely to have been solely motivated by discontent with the current demographic environment of East Austin. If the goal was to create widespread panic and terror, several more devices, triggered simultaneously and spread over a greater area, would be necessary. The singular nature of the placement of each device and the interactive triggering mechanism suggests that the operation is not a coordinated effort. Training in tradecraft would provide the technical skill and focus necessary to assemble and transport explosive devices without detonation. The

offender is patient and regimented, two personality traits that would shine through in daily life and be noticeable by those in the offender's orbit. Commitment to carrying forth multiple attacks suggests the preparation and stockpiling of components and compounds used to assemble the weaponry. Although these activities were conducted in secret, acquaintances may notice odd behavior and decisions to place a preference on being alone when given other alternatives. The use of enhancements such as ball bearings and sharp objects suggests that the devices were designed to kill (Trojan *et al.*, 2019). The offender was most likely not in the area when the devices detonated. The use of the South by Southwest® convention to deviate suspicion suggests a socially aware offender who displays forethought. This trait would be apparent in other aspects of the offender's life alongside rigid thinking and stern behavior patterns. A desire for revenge for real or perceived injustices likely played a role in convincing the offender that it was time to act on his grievances against victims that were not selected at random.

Result: Conditt was linked to the devices based on purchases made at a local hardware store. He was visible on a surveillance camera at a store where he mailed some of the devices. The profile accurately surmised that there was no connection to the African American church community. The profile inaccurately pinpointed the age range of Conditt as 45-50 years old using Theodore Kaczynski as a model for that aspect of the profile given that so few serial bombers exist.

Strangulation homicides in Chicago (offender unknown and homicides cold). Fact pattern: in all 51 unresolved homicides have occurred over 17 years where the victims were strangled and their bodies dumped in vacant buildings and alleys (Sweeney and Figueroa, 2018).

Analysis: The brutal nature of the slayings, the race of the victims and their struggles with drugs and prostitution increase the likelihood that SHOs are responsible for some of these homicides (James and Proulx, 2016). There are clusters of strangulations across three police districts. MAP applied algorithmic capabilities to establish the fullest list of victims possible. Risk Terrain Modeling, a geographic crime forecasting tool (Caplan *et al.*, 2011), was used to narrow down the possible points of the offender's egress with a focus on the railway system as a means of entry and escape.

Result: This work captured the attention of upper-level LEO commanders and is still ongoing.

Homicides of sex workers in Cleveland (offender unknown and homicides cold). Fact pattern: Two clusters of killings of approximately a dozen sex workers in Cleveland since 2004 and one trio of more widely dispersed killings of older women were unveiled by MAP (Dissell, 2017). The algorithm hit on at least 20 of the unsolved cases in Cleveland and East Cleveland, including five, later determined to involve women with histories of prostitution. It uses factors such as geography, the method of killing and the age and gender of the victim to highlight unsolved killings that have higher odds of being the work of a serial killer.

Analysis: Serial murderers often prey on those leading high-risk lifestyles. Such offenders count on victims not being missed (Quinet, 2011). The offender in at least some of these cases likely lives and works in the community from which victims are selected (Warf and Waddell, 2002).

Result: Efforts to link the homicides are still ongoing. This work captured the attention of several upper-level commanders in the police department.

The missing girls of Panama (offender unknown and homicides cold). Fact pattern: The disappearances of tourists Kris Kremers, 21 years, and Lisanne Froom, 22 years, who hiked up from the resort town of Boquete into the Talamanca Cordillera were investigated. There were more than two dozen other unsolved killings and disappearances in this same region of Panama over the last eight years – with more than two-thirds since 2014. Victims include visitors from at least three European countries, as well as local women and children, and

most recently American citizen Catherine Johannet, 23 years, who was murdered in February of 2017 (Kryt, 2017).

Analysis: Mapping technology found that the overwhelming number of murders and disappearances happen in Chiriqui. One factor that might be involved is that the main tourist corridor in Panama runs between Bocas and Chiriqui. The suspect(s) could be either a tourist or related to the tourist industry. Backpackers may have a different mindset and less recognition of fear than those balking at the idea of venturing to a foreign country. Some are so good-natured and headstrong that they willingly overlook bad qualities and hallmarks of psychopathy in others. It is doubtful that tourists and others open to these experiences would suspect that a guide is luring them to their death any more than they think about meeting their demise in the exploration of a dense forest. An adept and successful serial murderer understands this aspect of victimology to a degree that recognizing such a mentality among tourists means they incorporate the act of targeting them as part of their method of operation (Yaksic *et al.*, 2019a, 2019b, 2019c). Although there are burgeoning markets for organs, drugs and humans that often get comingled with serial homicide, truly predatory individuals generally abide by methods and motives that are idiosyncratic and personal to them and often shine through during an investigation of the crime scene (Balemba *et al.*, 2014). The presence of technology in Panama nowhere nearly matches that in the USA and would, therefore, provide an excellent arena for someone whose goal is to cause harm to others. Panama, and areas like it, maybe viewed by outsiders as the quintessential hunting ground and attract wayward men from other countries with a desire to kill without boundaries. Globetrotting serial killers are the rarest form, though, as most offenders kill within tight geographic zones in which they feel a comfortable familiarity (Aamodt *et al.*, 2019). It is not possible for one or two offenders to be responsible for 36 disappearances/murders and, as such, these cases are probably not all linked together. Spending even three days with a potential victim is generally enough time for an offender to calculate the likelihood of their success in evading capture if they choose that person to kill. It is not uncommon for serial murderers to victimize those in close tangential contact or proximity to them or people that they know can be traced back to them; it is a myth that serial murders target perfect strangers (Hickey, 2015). The notion of juxtaposing the search for paradise with the dark realities of the world is intriguing as that dichotomy also mirrors the front-facing image that serial killers present to compel others to look past suspicions of what potential dangers lay within their depths. In other words, presenting two sides of the same whole is a hallmark of serial murder and the offenders that engage in these behaviors (Pettigrew, 2020).

Result: Linkages between the missing are still being investigated. To perform a proper analysis of the four clusters that appear in the map, we would need to know unequivocally that each disappearance resulted in a homicide. Until then, any determination would be speculative. It is also imperative to determine if these locations were dumpsites or where the abductions occurred. It is not possible to develop a fully satisfactory conclusion that could bring resolution to these cases at the current time.

Indigenous women of Canada (offender unknown and homicides cold). Fact pattern: Indigenous women have been preyed upon in Canada for decades but what proportion are killed by SHOs has been an open question (Baum and McClearn, 2015).

Analysis: Indigenous women in Canada are roughly seven times more likely than non-indigenous women to die at the hands of serial killers and at least 18 aboriginal females were victims of convicted serial killers since 1980. If the scope is broadened to include cases with a probable suspect, then the number rises to about 35. And if the scope is further expanded to include speculative cases, the number rises to about 77. The analysis concluded that aboriginal women are overrepresented among the victims of Canadian serial killers (Aamodt *et al.*, 2019).

Result: The National Inquiry into Murdered and Missing Indigenous Women and Girls recently found that 4,000 indigenous women and girls who were murdered or disappeared across the country in recent decades are victims of a “Canadian genocide” ([National Inquiry into Missing and Murdered Indigenous Women and Girls, 2019](#)).

Disproving the existence of a serial homicide offender using data and evidence-based offender profiling

In two instances, data disproved theories related to supposed SHO activity. The discovery of an SHO in one county or state is usually accompanied by inquiries regarding the scope of the offender's crimes under the assumption that LEOs rarely uncover the total number of victims and that SHOs never divulge the full details. Some experts posit that offenders are responsible for scores of additional victims without evidence to support such claims ([Arntfield, 2019](#)).

Missing persons of St. Anthony (deaths open at time of inquiry). Fact pattern: Four people went missing over 15 years period in or near the town of St. Anthony of the Canadian province of Newfoundland ([Whiffen, 2017](#)).

Analysis: The disappearance of these individuals cannot definitively be classified as homicides. It can be comforting to believe that LEOs must find only one individual responsible for a myriad of offenses. The circumstances of these disappearances are not overtly similar and are most likely not connected.

Result: Law enforcement is still determining if foul play was involved in these disappearances.

Drowning men of Boston (deaths open at time of inquiry). Fact pattern: Between 2009 and 2016, 11 men were located in waterways ([Andersen, 2017](#)).

Analysis: From the available media reports, it was determined that alcohol is often the main factor when bodies of young men turn up in city waterways, not a serial killer. The vast majority of these deaths were accidents or suicides. The phenomenon of men that have drowned was addressed by the Center for Homicide Studies ([Drake et al., 2012](#)) which called for LEOs to reject the theory.

Result: Surveillance video often shows men from the time they leave a bar or club to the moment they enter the water. No connections between the deaths have been found. According to the Boston Police Commissioner, there have been far more people rescued after falling or jumping into the water than those that resulted in death ([Andersen, 2017](#)).

Active homicides with diminishing leads

In two instances, homicides were close to becoming “cold” in that investigative avenues had diminished. The behavioral analysis provided by the IJ/EF MTF kept interested in the series alive.

Indian creek murders of South Kansas city. Fact pattern: Six men were killed by firearm on or near trails in attacks as they walked dogs, visited parks or walked down the street over a year. Law enforcement stated that there was no physical evidence linking the homicides ([Montgomery et al., 2017](#)).

Analysis: An analysis of victimology and where the killings took place led the IJ/EF MTF to determine that the deaths were more than likely connected ([Beasley, 2004](#)). The seclusion provided by the trail eliminated the need to create a ruse to isolate the victims. The layout affords the offender the opportunity to remain hidden and stalk potential victims as he decides the course of action most beneficial to him given the surroundings and circumstances. The offender would have been overly cautious and cognizant of the escape routes. These conditions are ideal for a SHO ([Kraemer et al., 2004](#)).

Result: Fredrick Demond Scott, 23 years, was apprehended because of surveillance video on a bus showing him following one of the victims. Forensic evidence later linked him to the homicides.

Shootings of three women in St. Louis. Fact pattern: The homicides of Amanda Legare, Sandra Reckmann and Bridgett Williams in St. Louis may be connected given the proximity of time and geography (Griffith, 2019).

Analysis: If one perpetrator is responsible for the homicides, the victims may have been coaxed to accompany the offender to these locations with the promise of a transaction for services. It is quite possible that the offender shared an acquaintance type relationship with these victims and is known to his neighborhood as a common thug; someone that should not be trifled with and to be avoided given their grievance-based viewpoint of the world (Yaksic, 2019c). Law enforcement will be aware of a linkage when analyzing the ballistic evidence as serial offenders tend to use the same weapon across their series when they use firearms (Beasley, 2004).

Result: The homicides remain unresolved, but the analysis has urged a deeper look at linkages.

Real-time threat assessments: measuring the scope of an offender's crimes

Real-time threat assessments are performed to inform the public about the potential danger they face from aspiring serial murderers (Yaksic *et al.*, 2019a, 2019b, 2019c) as well as experienced offenders. This process differs from OP in that assessments are shared openly with the public[10]. Such assessments, built on systematic data analysis, can help others make sense of ongoing tragedies and provide guidance on avoiding becoming a victim. Because the FBI does not maintain a database of SHOs[11] their OP and threat assessments would not be based on a computation of previous homicide series but rather the investigator's intuition. The following vignettes detail attempts to gauge the likelihood that offenders are responsible for homicides beyond those known to LEOs and if they represent a threat to others outside of initial targets.

Mary Rice Fact pattern: The question arose regarding Rice's complicity in William Boyette's crimes. Before the pair allegedly started on a weeklong, multi-state killing spree that left four women dead, Boyette was known to have a violent history. He was arrested for the beating of a previous girlfriend and the stabbing of yet another (Kennedy, 2017).

Analysis: Boyette exemplifies a new subgroup of killer that has become prevalent since a decline in SHOs. The spree-serial hybrid is a dangerous mix of the cold, calculated attacks of a serial killer and the emotive unpredictability of a spree killer (Yaksic, 2019c). The pair, if they acted in the way police allege, followed what is a generally predictable series of events. What started as a premeditated killing of the woman who stood up to the violent offender ended with desperation and the knowledge that it was not going to end peacefully. Rice many have been groomed to be a submissive accomplice for some time by a man who had an established ability to both commit crime and get away with it. An adverse childhood can be a risk factor to future criminality but it is not necessarily Rice's beacon of innocence (DeLisi *et al.*, 2017). Not everybody who suffers childhood abuse has become a killer. She, given other circumstances, may have been another person but the fact she was surrounded by so much criminality decreased the odds that she was going to be able to escape this lifestyle. SHOs typically have gained confidence through their lives with a series of lesser offenses and do not see killing as an end goal but rather a stop on a continuum (Trojan and Salfati, 2011). Historically, spree killers are in such a frenzy that they do not even plan on their escape. Given that these victims were targeted, it is unlikely that there are others.

Result: It is as yet unknown if Rice was a conscious partner or if other victims were killed.

Dwight Lamon Jones. Fact pattern: Stephen Silverman Law requested an assessment of the danger that Jones posed after he had killed six people over five days. The victims of the initial shootings were a noted forensic psychiatrist, two paralegals, and a counselor; all were shot within 24 h of each other and within a 10-mile radius. The victims were linked to divorce proceedings where Jones was the subject (Phillips and McMillan, 2018). Jones came to believe that his ex-wife, psychiatrists, lawyers and the judicial system rigged a divorce and custody case to steal his son from him.

Analysis: Jones is unique in that he cycled through the methodical calculation of the serial killer, the vengeful nature of the mass murderer and the swiftness and exigency of the spree killer rather quickly over the span of a week but he had time to formulate his plans over nine years of dormancy. Revenge is an emotion that becomes more powerful as time passes in those with defects of character. The offender is sustained by rumination and fantasy as each process empowers him during the planning phase of his series (DeLisi et al., 2018). Serial killers motivated by a desire for revenge are angry and resentful individuals who believe they are settling a grievance for perceived or actual wrongs and blame others and the systems they represent for their problems (Myers et al., 2006). For those whose personality is geared toward externalizing blame, all of the negative events that occur around them are labeled by the individual as happening to them, a state of mind where they become convinced that their own actions have no bearing on the outcome (Murray, 2017). Of the serial murderers, 15 per cent have been motivated by sustained anger with a further 20 per cent of those killers targeting their victims for the sole purpose of exacting revenge (Aamodt et al., 2019). Individuals like Jones lack the coping mechanisms to dissipate their toxic and destructive nature. They are patient and persistent, two qualities that function unfortunately well when paired with resentment, animosity and hostility. Jones was specifically targeting those that represented the systems of care and justice that he was attempting to rally against. He believed he was failed in a manner that adversely affected his livelihood and was being held accountable for something he felt was unjust. This was not a delusional offender but one that operated as logically as possible for someone that resorts to homicide to settle a grievance. Those that share a tangential relationship to his chosen victims did have an elevated risk of being victimized. Additional precautions such as extra security and varied routines should be taken. Spree-type offenders rarely stalk their victims but rather take the most direct route to remedy their emotional state (Yaksic, 2019c). These individuals were killed at their places of employment meaning that he would not be privy to the address of their residences. These were not random crimes and the likelihood of this offender killing indiscriminately was fairly low unless cornered.

Result: The analysis correctly stated that Stephen Silverman would not be targeted.

Nathaniel Sebastian. Fact pattern: The offender made a statement regarding being a fan of John Wayne Gacy after the discovery of his mother buried under his front porch which raised concerns that he may be responsible for more victims (Specker, 2017).

Analysis: Because the world is becoming more data-driven, the ubiquity of cell phones makes it easier to track people and while social media might give a killer new ways to lure a victim, it also makes it harder for people to simply disappear (Yaksic et al., 2019a, 2019b, 2019c). Connectivity, in general, makes it easier for authorities to spot a pattern of killings spread across multiple jurisdictions (Yaksic et al., 2019a, 2019b, 2019c). In this case, no similar homicides were reported in the area over five years.

Results: No other homicides have been attributed to Sebastian at this time.

Jemma Lilley. Fact pattern: Lilley had developed a fascination with serial killers from a young age and wrote a novel whose protagonist was a serial killer. Along with a partner, she killed Aaron Pajich by stabbing him but was caught on surveillance camera while entering their residence with him. The offender potentially represents a new breed of the offender, one fueled by an obsession with fictional murderers and “murderabilia” (Clarke, 2017).

Analysis: In an age where modern society is saturated with entertainment glorifying the serial murderer it is no surprise that young minds will attempt to emulate what they consume. This obsession clouds their judgment as they base their dreams on fictional offenders endowed with special abilities and powers which ensures that any semblance of their own self-preservation is overlooked as they assume they can carry out their crimes in the same manner as their idols. Surrounding oneself with such objects aids in the eventual morphing of what was once a passive idea into homicidal ideation, daily intrusive thoughts so all-consuming that action becomes a foregone conclusion (DeLisi *et al.*, 2017). Serial killer wannabes typically spend an inordinate amount of time entrenched in the ethos of what they believe it means to be a serial killer and their careers are interrupted by any number of factors – ill-conceived plans leading to a failure to follow through, ineptness, immature grasp of consequences and missteps that raise suspicion of witnesses (Yaksic *et al.*, 2019a, 2019b, 2019c). Increased pressure from LEOs and better technology, also forces serial killers to behave in ways not typical to how they operated in the past (Yaksic *et al.*, 2019a, 2019b, 2019c). Tracking instances of serial homicide over the past few decades has revealed that there are far more fans of serial killers and wannabes than actual offenders from year to year (Yaksic *et al.*, 2019a, 2019b, 2019c).

Result: Lilley became so obsessed with what she thought a serial killer should be that she was unable to achieve longevity. No additional victims have been uncovered to date.

Brendt Christensen. Fact pattern: Christensen lured Yingying Zhang into his car as she waited for a bus and then raped, choked and stabbed her to death. He then claimed to be a serial killer with 12 other victims (Associated Press, 2019).

Analysis: For someone who purports to be a seasoned killer, Christensen devoted lots of time researching the topic by downloading an article, “Beyond the Grave – Understanding Human Decomposition,” and a paper on “The Criminal Mind of Serial Killers,” and he visited an “Abduction 101” fetish forum. The contents of Christensen’s internet search history demonstrate his lack of knowledge of basic things that proficient serial killers with high body counts would know. Actual serial killers demonstrated more patience than Christensen (Williams, 2017), who happened upon Zhang and pulled up to her during the day along the streets lined with surveillance cameras.

Result: There is only a minuscule chance Christensen killed before and should be categorized as a wannabe serial killer. Wannabes are compelled by a mixture of emotions and hubris, aspects of their personality that lead to their apprehension before they come close to achieving their goals.

Results from evaluating the investigative journalist/expert field micro task force consultations

As Woodhams *et al.* (2019) called for the study of practitioner accuracy in decision-making aided by statistical models, Table 1 measures the outcomes identified by FBI analysts Scherer and Jarvis (2014). The FBI uses these outcomes internally to gauge the usefulness of case consultations and was adapted here to evaluate the success of the behavioral analysis featured in the IJ/EF MTF model. The “Help Catch Offender” domain consisted of steps taken to ensure that the OP was used to direct LEOs through a specific set of actions that the offender was eventually apprehended. The “Move Case Forward” domain consisted of providing new data related to names of victims and the locations of homicides that LEOs had overlooked as being part of a larger pattern of offenses. The “Offer New Leads” domain consisted of advice on where the offender might strike next given that the series was active at the time of inquiry. The “Provide New Avenues” domain consisted of advice on how to pursue SHOs that specifically target Indigenous women. The “Give New Ideas” domain consisted of advice on whether or not the homicides were connected to an overarching pattern.

Table 1 Evaluating the impact of investigative journalist/expert field micro task force consultations on serial homicide investigations

Type of inquiry	Case status at the time of inquiry	Offender name or moniker	How was consultation beneficial?	Evaluation of OP accuracy
Offender known	Unresolved	Felix Vail	Help catch offender	Full
		Robert Gross	Move case forward	Full
Offender unknown	Active	Seminole Heights killer	Help catch offender	Mixed
		Austin Bomber	Offer new leads	Mixed
Suspected SHO activity	Unresolved	Strangulation homicides in Chicago	Move case forward	Unknown
		Homicides of sex workers in Cleveland	Move case forward	Unknown
		Missing girls of Panama	Give new ideas	Unknown
		Indigenous women of Canada	Provide new avenues	Mixed
		Missing persons of St. Anthony	Give new ideas	Unknown
		Drowning men of Boston	Give new ideas	Unknown
	Active	Indian creek trail of South Kansas City	Give new ideas	Mixed
		Shootings of three Women in St. Louis	Give new ideas	Unknown
Threat assessment	Active	Mary Rice	Other	Unknown
		Dwight Lamon Jones	Other	Full
		Nathaniel Sebastian	Other	Unknown
		Jemma Lilley	Other	Unknown
		Brendt Christensen	Other	Unknown

New Ideas were given in 29 per cent of instances, the Case Moved Forward in 18 per cent of instances, input was helpful to Catch the Offender in 12 per cent of instances, New Leads were offered in 6 per cent of instances and New Avenues were provided in another 6 per cent of instances. In 29 per cent of instances, the threat assessments assuaged the stress experienced by the community after offenders made inferences that more victims would be found, marked as “Other”. Each IJ/EF MTF consultation was beneficial in that the collaboration provided what the instigator requested.

The accuracy of OP was rated as “Unknown” in six instances (75 per cent) when SHO activity was suspected given that an offender has yet to be apprehended. The accuracy of OP in four instances (80 per cent) was rated as “Unknown” given that the additional victims claimed by the offender and discussed in the threat assessment have yet to materialize. The accuracy of OP was rated as “Full” in one threat assessment (20 per cent) and both instances where the offender was already known (100 per cent). The accuracy of OP in two instances where SHO activity was suspected (25 per cent) was rated as “Mixed” given that an offender was apprehended and the OP matched some elements. The use of OP in two instances where the offender was unknown (100 per cent) was rated as “Mixed” given that an offender was apprehended and the OP matched some elements.

When the status of a case at the time of the inquiry was “Active”, the accuracy of the OP was rated as “Full” in one instance (11 per cent), “Mixed” in three instances (33 per cent) and “Unknown” in five instances (56 per cent). When the status of a case at the time of the inquiry was “Unresolved”, the accuracy of the OP was rated as “Full” in two instances (25 per cent), “Mixed” in one instance (12.5 per cent) and “Unknown” in five instances (62.5 per cent). OP performs moderately better if the case is active, perhaps because more information is available to form impressions.

Recommendations

Because the IJ/EF MTF model is a new mechanism for bringing attention to and resolving “cold cases”, adherence to the following steps is recommended:

- The IJ/EF MTF model is not designed to deliver a suspect but rather to describe the type of offender that may be responsible for a series of homicides.

- Expectations should be tapered as soon as possible. OP functions best when narrowing down a suspect pool or keeping LEOs engaged in finding a resolution to a homicide.
- A working relationship with LEOs should be immediately established. Efforts of the IJ/EF MTFs can only complement their work.
- The reputation of all involved parties should be vetted and verified given the number of individuals that misrepresent themselves.
- The instinct to overprovide in the OP should be minimized especially if details are scant.
- Those that wish to insight fear by inflating the level of risk a community may be under merely to justify the need for additional attention should be admonished and avoided.
- Serial criminals might read about what others think about them and alter their strategies. It is critically important to limit discussion of modus operandi in public postings.
- Feedback is often expected under strict deadlines and with little notice. Creating a profile of an unknown offender in “thirty minutes or less” can only lead to failure.
- Real-time threat assessments should be used to free up resources for other tasks and to ensure that no additional victims are likely to be attributed to an offender.

Discussion

As the Netflix series *Mindhunter* demonstrates, OP has been maligned since its inception. One expert proclaimed that OP has no real-world value, wastes police time and risks bringing the profession into disrepute (Sample, 2010). Similarly, White *et al.* (2011) found that OP was used in only 4 per cent of cases and that its popularity is based on the *perception* of its usefulness rather than the opinion held by LEOs. Hodgkinson *et al.* (2017) also argue that LEOs have relied on OP to give the impression that they are in command and that only the media believes it will lead to the capture of the offender. Neither Kurkjian (2016) nor Brookman *et al.* (2018) listed OP as a means of how SHOs were apprehended or as a tool used to impact which homicide cases are resolved. Still, the FBI insists that this research uses the wrong metrics to determine the accuracy of profiles and that 68 per cent of respondents to their survey thought that “moving a case forward” was sufficient enough to deem the consultation a success (Scherer and Jarvis, 2014).

Results from the 17 experiences using OP[12] under the IJ/EF MTF model reported herein do mirror those from the literature in that OP alone did not directly result in the capture of an SHO (Canter and Youngs, 2003). Instead, OP was used in conjunction with other efforts and as a means to keep the MTF moving forward. Although IJ/EF relationships have ushered in the application of data to unresolved homicides, there is still resistance from LEOs regarding the actionability of findings. In one instance, patterns unknown to police were identified but were summarily rejected as being from an “armchair detective” (Rosario, 2017). In another, police rejected the assistance of an IJ/EF MTF after the model was disparaged by a representative of the FBI BAU[13]. MAP was ignored after trying to convince an LEO that an SHO was operating in the area, an individual that was subsequently arrested years later (Kolker, 2017; Wilkinson, 2017).

Canter and Alison (2016) note that while practitioners are eager to assist LEOs, few are aware of how to contribute to OP. Police-academic relationships cannot coexist unless LEOs understand what can be gained from collaborating and accept that the product may not be initially useful. Canter (2011) describes the outcomes of the Investigative Psychology process as existing beyond giving some useful indications of the features of an unknown

criminal. [Canter and Youngs \(2003\)](#) note that Investigative Psychology focuses on knowledge that can be applied and is able to feed into many aspects of police training and become integrated into LEO procedures. The IJ/EF MTF model is based on the same principles and is designed to adapt to LEOs' needs and be used under a variety of circumstances to answer a wide breadth of questions.

[Canter and Youngs \(2003\)](#) urge that principles and procedures be adopted where processes can be developed which then become part of the investigative practice. This method negates the need to have experts involved once the system is in place. For that reason, there is no cost behind the IJ/EF MTF model because LEOs must conduct most of the investigative fieldwork without assistance. The IJ/EF MTF is not an effort put forth by a consultant agency and it is not recommended that those entities be a part of the LEOs' efforts to resolve cold cases. The stereotype of the fame-seeking consultant only undermines the reputation of the IJ/EF MTF model. Pairing a behavioral analyst with an IJ not only adds credence to the non-profit goals of the IJ/EF MTF model but protects against criticisms before they occur.

Because IJs are often more aware of what transpires in their communities than public officials, the IJ/EF MTF model benefits LEOs primarily by identifying which homicide cases are likely to have living relatives interested in seeking justice and new witnesses with relevant evidence. The model is predicated on the initial efforts of IJs to locate and research cases that have the highest likelihood of solvability if they were to be reopened and to recruit a behavioral analyst to assist in the research process. This tactic minimizes the amount of frivolous information that LEOs must wade through or spend time negating and delivers a small team of dedicated people directly to LEOs. Other models are time intensive as they require LEOs to actively hire an analyst and engage in rapport building while gauging their trustworthiness.

In the instances detailed in the current research, feedback from the AHRG sometimes refocused the investigation to singular suspects while other times recommended that SHOs were likely responsible for the crimes under consideration. This evaluation cannot definitively state that all LEOs should adopt the IJ/EF MTF model as results from these collaborations did not always create meaningful change. [Canter and Alison \(2016\)](#) note that scant attention is paid to the limitations behind offender profiling and that obsession with outcomes – rather than understanding those limitations – makes for poor practice. As such, the present research aimed to provide an honest evaluation of instances where offender profiling proved useful in the criminal investigative process and those where it did not. Although [Snook et al. \(2007\)](#) proved that profilers do not decisively outperform other groups when predicting the characteristics of an unknown criminal, [Wilson et al. \(1997\)](#) suggest that as an investigative technique for assisting in the solution of serial crimes, profiling offers promise and insight often not available through traditional investigative avenues. [Woodworth and Porter \(1999\)](#) stated that the majority of profiles did provide a clearer focus.

Conclusion

[Wilson et al. \(1997\)](#) discuss the three different approaches to profiling: Diagnostic Evaluations, Crime Scene Analysis and Investigative Psychology. Diagnostic Evaluations are an individualistic approach carried out primarily by mental health workers who diagnose the probable psychopathology and/or personality type likely to have committed the crime. Crime Scene Analysis is used by the FBI's BAU as a formalized sub-discipline and reduces human behavior to observable parameters which are thought to lead to characteristics of the unknown offender. Investigative Psychology draws upon psychological literature that can aid in the contribution to the psychology of investigations. So far, though, the strengths of offender profiling have been assessed by anecdotal success stories disclosed by LEOs or sensationalized by the media ([Wilson et al., 1997](#)). This paper aimed to honestly evaluate the OP process and its modern use in the context of embracing its limitations and without

attempting to convince LEOs that it should supersede other investigative avenues. [Snook et al. \(2007\)](#) point out that little is known about the effects of profiling on police decision-making and call it a pseudoscientific technique. In their research on which factors are associated with successful cold case investigations, [Davis et al. \(2014\)](#) did not consider profiling among the useful avenues to resolve a cold case. These critiques are due to FBI BAU profilers that encourage the subjective perspective and embrace the “art dimension” of profiling which leads to speculation ([Woodworth and Porter, 1999](#)).

[Canter \(2011\)](#) proclaims that OP has been bogged down with implications that the product of the process has something to do with special qualities possessed by the profiler. [Woodworth and Porter \(1999\)](#) point out that profilers are often characterized as “insightful outsiders or eccentric intellectuals” who can solve crimes based on intuition. [Canter and Alison \(2016\)](#) outline an alternative to the lonely infallible profiler who succeeds where LEOs have failed because their knowledge elevates him or her above regular detectives. The IJ/EF MTF model is designed to eliminate the involvement of analysts that espouse these qualities and remove opinions that trump those of detectives as they will always understand the communities where the crimes were committed far better than outside advisors. The IJ/EF MTF model disallows reliance on the “art dimension” of profiling and advocates for the neutralization of attitudes that might unnecessarily conflict with those held by the case’s detective. [Woodworth and Porter \(1999\)](#) may be correct in their assessment that a combination of the FBI’s method of profiling and the empirical and inductive method proposed by Investigative Psychology may lead to increased reliability and validity for profiling given that the most compelling use case of profiling to date is made by [Johns, Downes, and Bibles \(2005\)](#) where the authors demonstrate how the process was used to bring about a positive resolution to a serial homicide series.

There is a long way to go in incorporating data and evidence-based OP into SHO investigations, but it is seemingly worthwhile given the results of the evaluation as these endeavors are understood to be difficult and time-consuming ([LePard et al., 2015](#)) affairs where tips can oftentimes number into the thousands ([QlikTech, 2011](#)). Used as a last resort, the IJ/EF MTF model would decrease this burden on LEOs, narrow the scope of their inquiry, provide a substantive layer of review, and may lead to increased reliability and validity for profiling or – at the very least – inspire a newfound respect for the process in the modern age.

Notes

1. First conceptualized by [Christin \(2017\)](#) and defined here as civilian researchers and practitioners.
2. After reducing the evidentiary threshold to link homicides ([LePard et al., 2015](#)).
3. Especially after revelations that a practitioner fraudulently claimed to have interviewed SHOs ([Cain, 2019](#)).
4. For example, the Atypical Homicide Research Group existed for a number of years ([Boyne, 2014](#)) with university sponsorship until infighting brought its dissolution. The combination of serial killer data into a central repository also initially failed because of a rejection of open science.
5. Without official endorsement from governing bodies such as the International Criminal Investigative Analysis Fellowship.
6. A process once based solely on the investigator’s individual experience and intuition.
7. Although [Bennell et al. \(2012\)](#) warn of the assumptions made by those using data to link crimes together, these efforts are continually improved by techniques such as machine learning ([Bellows, 2019](#)).
8. The profile was only generated after the killer was identified in the cases of Felix Vail, Robert Gross and those where a threat assessment was performed. The profiles of Vail and Gross served as a confirmation that the identified parties likely could have committed the crimes based on their personalities as there was still no evidence of their guilt at the time.

9. Gross maintained a definition of 'girlfriend' that runs counter to that held by the majority of society as he viewed those relationships as transient and alterable at a moment's notice, much the same as an acquaintance.
10. The secrecy surrounding OP is maintained to protect the reputation of the profiler in case they are wrong (Koen, and Bowers, 2018).
11. Confirmed by way of a request from the FBI BAU-2 for full access to the CSHOD
12. The author is not a criminal profiler and acknowledges that such profiles are a supplement to investigations carried out by LEOs. They are not designed to trump their efforts but rather enhance their ability to do their job. As the author noted during the search for the Seminole Heights Killer, "Tampa police seem to be doing everything right. It's usually gumshoe police work that is going to land these guys – and it usually does."
13. Message posted to Atypical Homicide Research Group electronic mailing list.

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Enzo Yaksic founded the Serial Homicide Expertise and Information Sharing Collaborative (SHEISC) after 10 years of researching serial homicide where he acts as the database coordinator. As a contributor and reviewer for the Radford/FGCU Serial Killer Database Research Project, he worked to help establish the largest repository for information on atypical homicide offenders. His current work with the Murder Accountability Project aims to educate Americans on the importance of accurately accounting for unsolved homicides within the USA by using the Supplementary Homicide Report to help uncover suspicious clusters of potential serial homicide activity. Enzo Yaksic can be contacted at: yaksic.e@alumni.neu.edu

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