Pseudoscientific Practices in Fraud Investigations: A Case Study

Vincent Denault

School of Criminology, University of Montreal

Kirk Luther

Department of Psychology, Carleton University

Joseph Eastwood

Faculty of Social Science and Humanities, Ontario Tech University

Cassandre Dion Larivière

Faculty of Social Science and Humanities, Ontario Tech University

Victoria Talwar

Department of Educational and Counselling Psychology, McGill University

Sébastien Béland

Department of Administration and Foundations of Education, University of Montreal

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Corresponding author:

Vincent Denault

École de Criminologie Université de Montréal

Pavillon Lionel-Groulx C. P. 6128, succ. Centre-ville

Montréal (Québec) H3C 3J7 Canada

vincent.denault@umontreal.ca

Authors' note:

The first author is a former member of the Association of Certified Fraud Examiners (ACFE), a former Certified Fraud Examiner (CFE), and a member of the Bar of Quebec.

Abstract

This case study addresses claims about nonverbal behaviors promoted, until relatively recently, by the Association of Certified Fraud Examiners (ACFE), an anti-fraud training organization representing over 90,000 practitioners globally. We assess whether those claims are (in)consistent with research findings, examine the potential adverse consequences of quietly moving away from pseudoscientific practices, propose strategies for how organizations should address individuals they previously trained with unfounded and debunked claims, and how to stay up to date with best practices in the future. We conclude by encouraging organizations to remain vigilant in seeking evidence of the effectiveness of their current practices and to apply critical thinking when adopting new training and programs.

Pseudoscientific Practices in Fraud Investigations: A Case Study

Human nonverbal behavior plays an important role in social interactions. Researchers worldwide have addressed the subject in countless peer-reviewed publications (Plusquellec & Denault, 2018). However, despite the extensive body of research, unfounded and debunked claims about nonverbal behavior remain widespread. For example, social and traditional media platforms often feature "body language experts" who claim that facial and bodily movements can be interpreted with the clarity and consistency of written and spoken language (Tait, 2021). However, research has consistently refuted the idea that nonverbal behaviors can be systematically and reliably decoded with such precision (Hall et al., 2019). Unlike nonverbal behavior, written and spoken languages have vocabularies and syntax rules, and the content they convey can often be assessed as true or false (Patterson et al., 2023). Nevertheless, "body language experts" continue to scrutinize facial and bodily movements, claiming to reveal insights into what celebrities and politicians are thinking but not saying. On platforms such as YouTube, such content garners millions of views (Denault & Zloteanu, 2023).

Unfounded and debunked claims about nonverbal behavior are not limited to public entertainment. Several organizations have promoted such claims. One example comes from the United States' Transport Security Agency (TSA). Specifically, the Screening of Passengers by Observation Techniques (SPOT) program was tested from 2003 to 2004, and implemented in 42 TSA-regulated airports in 2006 and 2007. By 2010, nearly 3000 Behavior Detection Officers (BDOs) operated in 161 TSA-regulated airports. Essentially, their role was to identify risks to transport safety based on the observation of behavioral cues (Government Accountability Office, 2010). For example, according to a checklist used by the TSA, blinking, face touching, fidgeting, and gazing were deemed relevant for identifying risks to transport safety (Winter & Currier,

2015). The TSA ended the program in 2017 following a scathing report from the Government Accountability Office (GAO). The TSA had provided the GAO with a list of 178 sources that, according to the TSA, supported the behavioural cues used in the SPOT program. However, after reviewing the 178 sources, the GAO concluded that 175 of them did not provide valid evidence:

> …we found that 92 percent of the sources TSA cited (163 of 178) in support of its revised list of behavioral indicators do not meet generally accepted research standards. These 163 sources represent news stories or opinion articles, reviews of studies, and original research that do not meet generally accepted research standards. Fifteen of the sources TSA cited do meet generally accepted research standards; however, we found that the evidence presented in 12 of these 15 sources is not applicable to the specific behavioral indicators TSA cited them as supporting (Government Accountability Office, 2017, pp. 5-6).

Another example of an organization promoting unfounded and debunked claims about nonverbal behavior comes from Canada. For several years, the Bar of Quebec, a professional body to which Quebec lawyers must belong so they can practice law, offered training in synergology – a pseudoscientific technique to "decipher the workings of the human mind" through detailed analysis of facial and bodily movements (Denault & Jupe, 2018). According to a training offered by the Bar of Quebec, for example, someone who "squeezes his/her lips, holds his/her right hand, recounts the past by looking to the right, scratches his/her neck back to the right, and makes low and limited movements" (Barreau du Québec, n.d., the authors' translation from French) is probably lying. This training ceased being offered in 2015 after La Presse, a Quebec newspaper, reported on the widespread use of this pseudoscientific technique (Lagacé,

2015, 2018a, 2018b). However, by this time, thousands of legal practitioners had participated in synergology training provided by the Bar of Quebec (Denault et al., 2020).

The adverse consequences of implementing unfounded and debunked claims about nonverbal behavior are significant, including when those in a position of power believe that someone is lying, when in fact they are telling the truth. For example, in police contexts, using unreliable cues to deceit can lead to coercive interrogations and false confessions; in security contexts, to racial and ethnic profiling; and in courtrooms, to wrongful convictions and mistaken acquittals (Denault et al., 2020). In other words, while "body language" analyses might be entertaining on social media, using unfounded and debunked claims about nonverbal behavior can lead to dire consequences. However, our understanding of the scope of training and programs promoting unfounded and debunked claims, and the consequences they may have in practice remains unclear because this issue is often shrouded in secrecy. Awareness of such training and programs often hinges on rare instances where this secrecy is breached. For example, if not for the leak of law enforcement documents, The Intercept (Smith, 2020) would not have reported on "body language" training and programs offered to police agencies across the United States. Even then, the specific content of the training and programs was not disclosed. Instead, the information about the unfounded and debunked claims promoted within law enforcement was afforded through training documents and promotional flyers.

Even when the content of "body language" training and programs is disclosed, the burden of disclosure often falls on the shoulders of a small number of people or organizations. For example, while part of the training content was addressed by Denault (2015) and Denault et al. (2015), the public would have known very little about the Bar of Quebec's synergology training without La Presse's report, and the same applies to the TSA's SPOT program. While The

Intercept (Winter & Currier, 2015) reported on part of the training content, little would have been known about TSA's SPOT program without the Government Accountability Office (GAO), and other organizations who investigated it, including the ACLU (2017). Though the Bar of Quebec's synergology training stopped in 2015 and the TSA's SPOT program stopped in 2017, these are likely just the tip of the iceberg regarding pseudoscientific practices.

The Case Study

This case study addresses claims about nonverbal behaviors promoted, until relatively recently, by the Association of Certified Fraud Examiners (ACFE). In May 2023, the "Interviewing Methods and Techniques" section of the ACFE's Fraud Examiners Manual featured a segment on Kinesic Interview and Interrogation Methodology, a section which had been around for at least 10 years. However, upon consulting the manual in April 2024, the segment had been removed. The ACFE had quietly moved away from the Kinesic Interview, without (to our knowledge) formally addressing the issue.

In the following sections, we first present the claims from the "Interviewing Methods and Techniques" section, and we assess whether those claims are (in)consistent with research findings. Following this assessment, we examine the potential adverse consequences of quietly moving away from pseudoscientific practices, without explicitly denouncing the potential harm the promotion of these practices could cause. Finally, we propose strategies for how organizations should address individuals they previously trained with unfounded and debunked claims, and how to stay up to date with best practices in the future. We conclude by encouraging organizations to remain vigilant in seeking evidence of the effectiveness of their current practices and to apply critical thinking when adopting new training and programs.

The ACFE and the Fraud Examiners Manual

The Association of Certified Fraud Examiners (ACFE) is considered the world's largest anti-fraud training organization representing over 90,000 practitioners globally (ACFE, n.d.; ACFE Global Fraud Conference, 2023). Nearly 60,000 of the 90,000 anti-fraud practitioners hold the Certified Fraud Examiner (CFE) credential (ACFE, n.d.), whereby they are trained to prevent, detect, and investigate fraud (ACFE, n.d.). The ACFE administers and oversees the examination required to obtain this credential, and publishes the Fraud Examiners Manual, which is described as "the definitive body of knowledge for the anti-fraud profession, providing comprehensive guidance for anti-fraud professionals that no other work can match" (ACFE, n.d.). This 2000-page manual reportedly contains the information needed to pass the exam required to obtain the CFE credential (ACFE, n.d.), and covers issues pertaining to financial transactions and fraud schemes, law, investigation, and fraud prevention and deterrence (ACFE, n.d.). Until relatively recently, three interviewing methods and techniques were described in the "Interviewing Methods and Techniques" section. The first, the PEACE Model of Investigative Interviewing ("Peace Model"), an acronym for (a) Preparation and Planning; (b) Engage and Explain; (c) Account; (d) Closure; and (e) Evaluation, aims to help eliciting quality information through an ethical information-gathering style interviewing (Snook et al., 2014). The second, the Cognitive Interview, aims to help eliciting quality information through a series of memory retrieval techniques (Fisher & Geiselman, 1992; Memon, 2006). Finally, the Kinesic Interview and Interrogation Methodology ("Kinesic Interview") aims to evaluate whether the responses of interviewees are deceptive, based on signs of deception. According to the ACFE, these methods could help fraud examiners "elicit factual and valuable information from subjects" (ACFE, 2023, p. 3)[1] and "improve the effectiveness of their interviews" (ACFE, 2023, p. 3).

[1] The page number of ACFE (2023) is based on a printed pdf version of the Interviewing Methods and Techniques section available online.

The ACFE, however, issued several warnings about the use of these techniques. Notably, they cautioned fraud examiners to consider that these methods and techniques do not work in all contexts, and "in instances where an interviewee is not receptive to a particular technique or method, interviewers should adapt and change tactics rather than continue applying the initial technique or method" (ACFE, 2023, p. 3). They also stated that interviewers must consider a variety of factors, including their experience, who the interviewees are, and selectively use parts of the interviewing methods and techniques. It should be noted that while the validity of the PEACE Model and the Cognitive Interview comes from extensive laboratory and field experiments (Bull, 2023; Izotovas et al., 2021; Memon et al., 2010), the same cannot be said for the Kinesic Interview.

The Kinesic Interview

In the "Interviewing Methods and Techniques" section, the Kinesic Interview is described as having been influential for decades among law enforcement. The aim of Kinesic Interview is "to assess the subject and their responses to questioning by reading that individual's body language and other manifestations of deception" (ACFE, 2023, p. 8). The Kinesic Interview relies on the assumption that "when most human beings experience stress or discomfort, which could be caused by deceit or concealment of facts, they will reveal this stress or discomfort through their body language" (ACFE, 2023, p. 9). Despite the clear reliance of the Kinesic Interview on the alleged role of stress or discomfort in interviewee's behavior, the section begins with a warning: to determine whether an interviewee is lying, fraud examiners should not make conclusions based on a single behavioral cue; they should instead take all forms of behavior into account when making such judgments.

From the outset, it should be reiterated that there is no such thing as a "language of the body" as promoted by "body language experts" (Hall et al., 2019; Patterson et al., 2023). While the ACFE's Fraud Examiners Manual might have referred to "body language" as a synonym for nonverbal behavior, the aim of Kinesic Interview, as described in ACFE's Fraud Examiners Manual, is "to assess the subject and their responses to questioning by reading that individual's body language and other manifestations of deception" (ACFE, 2023, p. 8). Such claims about "reading" facial and bodily movements run counter to research about nonverbal behavior. As Hall and colleagues (2019) highlighted, "there is no dictionary of nonverbal cue meanings, because contextual factors involving encoders' intentions, their other verbal and nonverbal behaviors, other people (who they are and their behavior), and the setting will all affect meaning" (p. 271).

Furthermore, the manual advises fraud examiners to look for signs of stress or discomfort "which could be caused by deceit or concealment of facts" (ACFE, 2023, p. 9). However, research strongly suggests that both liars and truth-tellers can experience stress, and deception detection techniques in face-to-face interactions using signs of stress are not supported by empirical research (Brennen & Magnussen, 2020). Finally, the "single behavioural cue" warning – not to make conclusions based on a single behavioral cue, but to instead consider all forms of behavior – is problematic. Research has demonstrated that "manifestations of deception" (commonly referred to as behavioral cues) are unreliable in face-to-face interactions (DePaulo et al., 2003; see also Luke, 2019). Efforts to enhance the accuracy of lie detection by considering several invalid cues are fundamentally misguided. Regardless, the ACFE's Fraud Examiners Manual lists three categories of signs to consider when "reading" an individual's body language to identify manifestations of deceit and concealment of facts:

(1) Self-initiated verbal statements that the interviewee initiates without prompting;

(2) Prompted verbal responses or statements made by the interviewee in response to structured questions asked by the interviewer;

(3) Nonverbal behaviour or body language, which includes body positioning movements, lack of movement, and observable physiological changes. (ACFE, 2023, p. 9)

Self-initiated Verbal Statements.

According to the ACFE, it should raise concern when interviewees make verbal statements on their own initiative as "generally, a dishonest person is much more likely to give more self-initiated verbal signs than a person who is telling the truth" (ACFE, 2023, p. 9). When in fact, research has shown that truth tellers are usually more forthcoming that liars (Vrij et al., 2018). Additionally, the manual claims that changes in speech pattern, tempo increases, frequent use of respectful and friendly words, hesitation before answering, or failure to answer questions "might be a subconscious attempt by the interviewee to dodge the line of questioning or suppress their guilty feelings" (ACFE, 2023, p. 9). However, these assertions lack empirical support, and ignore that many people have atypical communication profiles, including those with neurological conditions such as Autism Spectrum Disorder (ASD) and Developmental Language Disorder (DLD).

Prompted Verbal Responses.

According to the ACFE, guilty and innocent individuals are expected to respond differently when asked specific questions. The manual presents two such specific questions: the *punishment question* and the *crime existence question*. The *punishment question* relies on the assumption that, when asked what should happen to the criminal, innocent individuals will often advocate for harsh punishment, whereas guilty individuals will often suggest that the criminal

should receive fair treatment. The *crime existence question* relies on the assumption that, if individuals are asked whether they think a crime was committed, innocent individuals will generally answer "yes," while guilty individuals will generally answer "no." In the manual, this information is presented alongside the "single behavioural cue" warning: "No single response or behavior should be considered proof of deception, guilt, or innocence, but instead viewed collectively with other responses or behaviors and documented facts of a case" (ACFE, 2023, p. 10). However, these assertions also lack empirical support. Research on "behaviour-provoking questions" has also failed to substantiate the assumptions underlying the use of these questions (Masip & Herrero, 2013; Vrij et al., 2006).

Nonverbal Behavior/Body Language.

Finally, according to the ACFE manual, contradictions between the interviewee's verbal discourse and their nonverbal behavior "can provide the fraud examiner with numerous insights into the subject's true intentions or reveal stress and discomfort" (ACFE, 2023, p. 10). This claim is paired with a warning that fraud examiners should establish a baseline as a reference for the interviewee's normal behavior before seeking to interpret nonverbal behavior. They should then consider the baseline when drawing inferences from nonverbal behavior.

The aforementioned claim and warning are questionable. First, identifying contradictions between the interviewee's verbal discourse and their nonverbal behavior would require that facial and bodily movements have relatively stable and distinguishable meanings. However, as previously discussed, facial and bodily movements do not have vocabularies (Patterson et al., 2023). While the Basic Emotion Theory (BET) argues that specific emotions are associated with distinct muscle contractions, growing evidence challenges this argument:

> Essentially, BET has received substantial scrutiny and criticism in recent years but also from its inception given its overuse of forced-choice paradigms (i.e. presenting people with a list of emotion labels to answer questions), non-naturalistic stimuli (i.e. intense, static and pre-selected images of facial displays matching specific facial muscle activations), non-social contexts (i.e. images presented in isolation) and its overreliance on Western senders, receivers and notions of emotions (Crivelli & Fridlund, 2019; Zloteanu & Krumhuber, 2021). As argued by Fridlund (1994; see also Leys, 2017), landmark papers regularly cited in support of the universality of emotional reactions have long been shown to be quite limited, if not outright incorrect (Denault & Zloteanu, 2022, p. 9)

Second, the recommendation for fraud examiners to establish a baseline of nonverbal behavior, as presented in the Fraud Examiners Manual, is flawed from the outset. The manual provides no guidance regarding how, in practice, one should establish a baseline or assign different weight to various behavior. Furthermore, there is no evidence supporting the feasibility of systematically and purposefully establishing a baseline of nonverbal behavior to then detect deviations in facial or bodily movements in real-time face-to-face interactions while listening carefully to what others say (Bogard et al., 2024; Palena & Caso, 2021). Yet, several facial and bodily movements are subsequently presented as relevant to "read" an individual's body language and other manifestations of deception, such as the crossing of arms and legs. Other behaviors highlighted by the ACFE include breaks in eye contact, eyebrow movements, touching the face (nose and chin), blushing, movements of one's Adam's apple, and the exposure of carotid arteries.

However, gestures can differ across cultures for a variety of reasons, including cognitive diversity, linguistic diversity and gestural pragmatics (Archer, 1997; Kita, 2009; Naidu et al., 2025). For example, in some culture, elementary school children can learn to cross their arms while teachers are telling a story, and therefore, show that they are listening to the story. But according to the ACFE, "generally, such movements are defensive postures" (ACFE, 2023, p. 11). Postures can also differ across cultures (Kleinsmith et al., 2006). However, in the "Interviewing Methods and Techniques" section, the ACFE's only mention of culture relates to eye contact. According to the ACFE (2023),

> "While any of these breaks in eye contact can suggest a subject's deceit, the interviewer must remain keenly aware that what is considered an appropriate amount of eye contact differs greatly among various cultures. In some cultures, direct or prolonged eye contact is purposefully avoided because it can be interpreted as disrespectful or threatening." (p. 10-11)

Furthermore, the ACFE claims that, in addition to looking away, behaviors such as closing or covering the eyes, and turning or lowering the head "can indicate that a subject is uncomfortable with a line of questioning or their response to questioning" (ACFE, 2023, p. 10). However, even if truthful and cooperative, individuals experiencing anxiety might avert their gaze. Research has shown that gaze direction is not a reliable indicator of dishonesty (Wiseman et al., 2012; see also Lappi, 2015). The ACFE manual acknowledges that preference for eye contact is shaped by culture, but that personality types, mental health conditions and intellectual capabilities also play a role. Consequently, since the culture, personality types, mental health conditions and intellectual capabilities of interviewees are unknown to interviewers, any conclusion based on eye contact is speculative at best.

The ACFE further asserts that eyebrow movements "might be a deceptive reaction to the interviewer's questioning," (ACFE, 2023, p. 11) touching the face (the nose and chin) "are often nervous reactions to the threatening situation," (ACFE, 2023, p. 11) and blushing "is generally experiencing increased blood pressure, indicating pressure or stress" (ACFE, 2023, p. 11) In addition, "often, the subject's larynx will move up and down when they are concerned or nervous" (ACFE, 2023, p. 11; movements of the Adam's apple), and "often, the veins in a person's neck will become exposed when they become nervous" (ACFE, 2023, p. 11; exposition of carotid arteries). However, these interpretations lack empirical support, again, and the use of moderating words (e.g., might, often, generally) does little to warn readers about the lack of support for these claims. Such language allows a host of meanings and explanations without any contradiction (Denault & Zloteanu, 2023). These meanings and explanations are similar to what was promoted by the TSA's SPOT program, as shown in Table 1.[2]

Table 1

Similarities between cues from the Kinesic Interview and Interrogation and SPOT

Kinesic Interview and Interrogation (ACFE, 2023)	SPOT (Winter & Currier, 2015)
Breaks in eye contact	No or little direct eye contact
Touching the face	Repetitive touching of the face
Blushing	Facial flushing while undergoing screening
Movements of one's Adam's apple	Obvious "Adam's Apple" jump
The exposure of carotid arteries	Protruding or beating neck arteries

[2] While eyebrow movement is not in the SPOT Program checklist published by Winter and Currier (2015). However, this type of nonverbal behaviour was described as part of the SPOT program (Ekman, 2006; Florence & Friedman, 2010).

Finally, just as they began the Interviewing Methods and Techniques section, the ACFE ends the section with several warnings regarding the use of the Kinesic Interview (see Table 2).

Table 2

Warnings when using the Kinesic Interview and Interrogation Methodology (ACFE, 2023, p. 11)

1	“No single behavior, by itself, proves anything”
2	“Behaviors must be relatively consistent when the stimuli are repeated.”
3	“The interviewer must establish what is normal or baseline behavior for each subject and then look for changes from the baseline. These observed changes in the subject’s baseline behavior are diagnosed in clusters, not individually”
4	"Indicators of stress or discomfort should not be considered conclusive evidence of deception but should instead guide additional questioning or investigation related to the topic that was being discussed when the indicators occurred."
5	“Observing and interpreting behavior is hard work.”
6	“The subjects will watch the interviewers while the interviewers watch them.”
7	“Kinesic interviewing is not as reliable with some groups.”

However, the section provides no indication of when fraud examiners should consider behaviors to be relatively consistent, to be repeated, or how they should establish the baseline and what should be considered changes to the baseline. The section is also void of instructions on how clusters should be diagnosed. For example, when face and body movements should be included or excluded from clusters, and what their weight should be when considering changes to the baseline. These are a select few of the problems relating to warnings regarding the use of the Kinesic Interview. To the public, such warnings might suggest a sense of caution; in reality, they are impractical and largely impossible to apply. The same holds for the warning regarding the use of face and body movement to guide additional questioning and investigation. Flawed observations will result in flawed questions. Not to mention that paying attention to the interviewee’s face and body movement can compromise the quality of the questions asked by interviewers (Giorgianni et al., 2025). Finally, while it is true that “No single behaviour, by

itself, proves anything" (ACFE, 2023, p. 11) and "The subjects will watch the interviewers while the interviewers watch them" (ACFE, 2023, p. 11), observing and interpreting behavior as described in the ACFE's Fraud Examiners Manual is not merely challenging, it is, by the ACFE's own admission, an impossible endeavor: "Kinesic Interviewing is not as reliable with some groups" (ACFE, 2023, p. 11), without any additional explanation.

The Issue of Quietly Moving Away

The belief that you can "read" an "individual's body language and other manifestations of deception" (ACFE, 2023, p. 8) can foster overconfidence in one's ability to detect liars, without any actual improvement in accuracy – a recipe for disaster. Research has shown that such overconfidence can lead to coercive interrogations and false confessions (Kassin & Gudjonsson, 2004). Therefore, it is unsurprising that organizations, upon recognizing the adverse consequences of promoting unfounded and debunked claims about nonverbal behavior, may choose to move away from such practices, which is highly commendable. However, by quietly moving away from pseudoscientific practices without informing practitioners, those who think they have learned cutting-edge techniques will remain unaware of the true nature of what they were taught. That is, practitioners may never know they should discontinue what they learned during "body language" training and programs and continue to use pseudoscientific practices.

For example, when the TSA terminated the SPOT program, employees trained under the initiative transitioned into the screener workforce (e.g., conducting pat-down inspections, operating X-ray machines, metal detectors, checking carry-on items) and continued applying their training (Government Accountability Office, 2019). Similarly, the Bar of Quebec quietly ceased offering synergology training without (to our knowledge) formally addressing the issue,

neglecting to inform lawyers they previously trained to discontinue using the inaccurate information. Probably some of those lawyers are now judges.

Can we expect practitioners to recognize on their own that they were taught unfounded and debunked claims about nonverbal behavior? We argue that they should not have such a responsibility given the amount of time and resources needed to do so (Denault, 2023). In addition, practitioners may see no reason or have any interest to delve into the science themselves (e.g., scientific research often not written for a lay audience, articles behind paywalls). And if practitioners were provided with what they believed is an authoritative and credible training, then why should they question it? Further, even when organizations are aware that their practices are questionable, some may choose not to move away from them. Why does this occur? We propose four hypotheses.

The Ignorance of Adverse Consequences

First, even if organizations are aware that their practices are questionable, they may ignore the adverse consequences of "body language" training and programs because they are unaware of the current state of research on the adverse consequences of their practices. While some organizations may not have mechanisms to keep up-to-date on research that concerns them, including on how their practices may be beneficial or harmful, researchers also shoulder part of the responsibility if they fail to communicate their findings to those likely to benefit from them.

The Minimization of Adverse Consequences

Second, even if they are aware that their practices are questionable, organizations may minimize, or neglect the adverse consequences of "body language" training and programs. They may be aware of the current state of research on the adverse consequences of their practices, but regardless, those who decide what trainings are offered may believe, deep down, that the "body

language" training and programs work. They may focus on what is factually correct, and highlight that not everything is incorrect. In other words, practitioners should take some and leave some. However, how can organizations believe practitioners will take the beneficial content, and leave the harmful content, when the organizations themselves failed to do so.

Furthermore, even if statements such as "No single behavior, by itself, proves anything" and "Observing and interpreting behaviour is hard work" are factually correct, they allow negative fallout to be attributed to failure to heed the warnings. Such factually incorrect statements are no excuse for continuing to teach unfounded and debunked claims about nonverbal behavior given the adverse consequences of "body language" training and programs.

The Absence of Alternatives

Third, some organizations may perceive that there are no viable alternatives to solve their problems, and they may believe that some guidance (even though misinformed) is better than no guidance at all. This is another mistake. When guidance is misinformed, no guidance at all is likely better because of the significant difficulty of reducing the impact of misinformation once it is available (Lewandowsky et al., 2012).

The Implications of Moving Away

Finally, even if organizations are aware that their practices are questionable, they may fear the implications of admitting they made a mistake. Concerns about preserving their image and credibility, and the potential legal and financial repercussions of their past decisions, may explain why organizations often move away quietly from questionable practices and without transparency. For example, if organizations were to admit that, in the past, they espoused pseudoscientific practices, how would members of those organizations and the public react? Questions could arise regarding why the leadership failed to prevent the dissemination of

questionable practices in the first place. The organizations image and credibility could be damaged.

In addition, if the organization were to admit to teaching unsubstantiated and discredited claims about nonverbal behavior, they could face legal action – e.g., the specter of a class action could loom over the organizations if people who paid for teachings resent having paid for "body language" pseudoscience. Finally, damages to the organizations' image and credibility, and the legal ordeals could place the organizations in a fragile situation, not only for the cost to restore the image and credibility, and the lawyers' fees, but for the registration fees of members who would quit the organizations. For organizations whose budget is based on registration fees, their survival could be jeopardized.

Taking Accountability and Moving Forward

When organizations move away from unfounded and debunked claims, we contend that honesty and transparency are the best policies – the organizations' image and credibility depend on them. Since organizations typically issue certificates upon completion of training and maintain records of individuals who were trained, along with their current and former employees, they should directly contact individuals who were trained and ensure that they are properly informed. For practitioners who have continuing education requirements, who need to keep up to date to maintain their credentials, evidence-based training and programs should be mandatory. However, organizations should also openly address their decision, given that their authority likely contributed to the adoption of questionable practices in other settings and among people with whom they have no contact. For organizations that boast about their impact on civil society, the least they could do is acknowledge the damage they may also have caused, given their impact, and act accordingly.

While such an admission might be perceived as a failure and potentially harm the organization's reputation, it can also be framed as a significant milestone, an unequivocal commitment to better practices, to offer "cutting-edge" training, which could enhance their image and credibility. Organizations could take, one by one, the claims that they taught, point out the true nature of what had been taught, explain how they were wrong, and provide their members with the sources supporting their revised position, much like what we did above for The Kinesic Interview.

Subsequently, the organization could explain how nonverbal behavior is still integral to practitioners, and provide their members with the supporting evidence. For practitioners conducting investigative interviews, for example, nonverbal behavior plays a large role in rapport building (Tickle-Degnen, 2006), and stereotypes and prejudices about nonverbal behavior can influence decisions made during investigations (Denault et al., 2020). Finally, organizations should offer their members evidence-based alternatives, as the ACFE's Fraud Examiners Manual did with the PEACE Model of Investigative Interviewing and the Cognitive Interview Technique. While organizations cannot force people to use the evidence-based alternatives (unless otherwise required by law), their transparency could enhance their image and credibility, and give their members the opportunity to update their own practices.

Organizations moving away from unfounded and discredited claims should keep in mind that debunking misinformation is a daunting task (Lewandowsky et al., 2012), and acknowledge that the damage of misinformation is unlikely to be fully undone. However, these issues do not, and should not, prevent organizations from taking accountability and moving forward, but should instead serve as a reminder that organizations should have safeguard mechanisms to stay away from unfounded and debunked claims.

For example, organizations can work closely with researchers. This is to make sure they do not to replace questionable practices with other questionable practices, or do not reject adequate practices because they are unable to distinguish between beneficial content and harmful content. The latter happened in 2015, when the Bar of Quebec stopped offering training in synergology, but also decided not to recognize other continuous education addressing nonverbal communication, even if the subject is relevant for law practice (Denault & Dunbar, 2019; Denault & Talwar, 2024). Organizations should also work closely with researchers to offer their members evidence-based alternatives, and keep up to date on best practices.

For smaller organizations, or those with fewer financial resources, hiring a researcher may prove impossible. The limited resources does not mean that such organizations cannot maintain close contact with, and get help from, researchers. If organizations are interested in a topic, they can, for example, consult universities' media directory, and contact researchers who study the topic. Researchers are, for the most part, quite accessible, and are generally enthusiastic about sharing their writings with practitioners keen to promote science in the workplace. Organizations can also follow researchers on social media, where many of them share their work.

Conclusion

This case study addressed the unfounded and debunked claims about nonverbal behaviors promoted by the Association of Certified Fraud Examiners (ACFE) until relatively recently. However, the fact that the ACFE removed the section on Kinesic Interview from the Fraud Examiners Manual does not make this case study any less relevant. Members of the Association of Certified Fraud Examiners (ACFE) take on different roles, including auditors, lawyers, law enforcement officers, and investigators, in more than 180 countries (ACFE, 2025). Assessing whether the claims from the ACFE’s Fraud Examiners Manual section on Interviewing Methods

and Techniques are (in)consistent with research findings is important to better understand the practices of people whose decisions can have far-reaching consequences on the lives of others. This assessment also seeks to inform the practitioner and research communities of the scope of "body language" training and programs, and the consequences they may have.

While organizations moving away from unfounded and debunked claims about nonverbal behavior is highly commendable, it is fraught with important challenges. How organizations can navigate this issue while mitigating concerns about their image and credibility, and the potential legal and financial repercussions of their past decisions is not a simple question to answer. However, we contend that honesty and transparency are the best policies. If organizations move away from unfounded and debunked claims about nonverbal behavior, they should not do so quietly, because practitioners could keep using them, without any restraint, because they will remain unaware of the true nature of what they were taught.

On a final note, we do not know why the ACFE decided to quietly move away from unfounded and debunked claims, but there is no reason to question their good faith. To the best of our knowledge, the issue of quietly moving away from unfounded and debunked practices has not been addressed before, and as a result, there are no guidelines on how to proceed. Given that the ACFE is one of many organizations to have promoted the "body language" training and programs, and one of many to have quietly moved away from pseudoscientific practices, addressing this issue was long overdue.

References

ACFE (2023). Fraud Examiners Manual. Austin: Texas.

ACFE (2025). Who we are. https://www.acfe.com/about-the-acfe/who-we-are

ACFE (n.d.). The official website of the Association of Certified Fraud Examiners . https://www.acfe.com/

ACFE Global Fraud Conference (2023). About us. https://www.fraudconference.com/34annual/about.aspx

ACLU. (2017). Bad trip: Debunking the TSA's 'behavior detection' program. Retreived from. https://www.aclu.org/report/bad-trip-debunking-tsas-behavior-detection-program

Archer, D. (1997). Unspoken diversity: Cultural differences in gestures. *Qualitative Sociology, 20*(1), 79-105.

Barreau du Québec. (n.d.). Le langage corporel I: Décoder ce qu'on ne dit pas [Body language I: Decoding what we don't say]. Retrieved from http:// webpro.barreau.qc.ca/le-langage-corporel.html (retrieved on July 10, 2013).

Bogaard, G., van de Bovekamp, A. M., & Colwell, K. (2024). Assessing the efficacy of baselining in deception detection: A comparative analysis of the reality interview and structured interview. Acta Psychologica, 242, 104112.

Brennen, T., & Magnussen, S. (2020). Research on non-verbal signs of lies and deceit: A blind alley. *Frontiers in Psychology, 11*, 613410.

Bull, R. (2023). Improving the interviewing of suspects using the PEACE model: a comprehensive overview. Canadian Journal of Criminology and Criminal Justice, 65, 80–91.

Crivelli, C., & Fridlund, A. J. (2019). Inside-out: From basic emotions theory to the behavioral ecology view. Journal of Nonverbal Behavior, 43(2), 161–194. https://doi.org/10.1007/s10919-019-00294-2

Denault, V. (2015). Communication non verbale et crédibilité des témoins [Nonverbal communication and witness credibility]. Éditions Yvon Blais.

Denault, V. (2023). The transition to scientific research and the fallout of speaking publicly: Perspectives from a former proponent of "body language" pseudoscience. International Journal of Qualitative Studies in Education, 37(4), 1031-1045.

Denault, V., & Dunbar, N. (2019). Credibility assessment and deception detection in courtrooms: Hazards and challenges for scholars and legal practitioners. In T. Docan-Morgan (Ed.), The Palgrave handbook of deceptive communication (pp. 915-936). Palgrave Macmillan.

Denault, V., & Jupe, L. M. (2018). Justice at risk! An evaluation of a pseudoscientific analysis of a witness' nonverbal behavior in the courtroom. Journal of Forensic Psychiatry & Psychology, 29(2), 221–242.

Denault, V., Larivée, S., Plouffe, D., & Plusquellec, P. (2017). La synergologie, une lecture pseudoscientifique du langage corporel [Synergology, a pseudoscientific interpretation of body language]. Revue de psychoéducation, 44(2), 425–455. https://doi.org/10.7202/1039262ar

Denault, V., Plusquellec, P., Jupe, L. M., St-Yves, M., Dunbar, N. E., Hartwig, M., … van Koppen, P. J. (2020). The analysis of nonverbal communication: The dangers of pseudoscience in security and justice contexts. *Anuario de Psicología Jurídica, 30*, 1-12.

Denault, V., & Talwar, V. (2024). The use of demeanour to assess the credibility of child victims in sexual interference trials. Child Abuse Review, 33(3), 1–14. https://doi.org/10.1002/car. 2885

Denault, V., & Zloteanu, M. (2022). Darwin's illegitimate children: How body language experts undermine Darwin's legacy. Evolutionary Human Sciences. Advance online publication. 4. https://doi.org/10.1017/ehs.2022.50

DePaulo, B. M., Lindsay, J. J., Malone, B. E., Muhlenbruck, L., Charlton, K., & Cooper, H. (2003). Cues to deception. *Psychological Bulletin, 129*, 74-118.

Ekman, P. (2006). How to spot a terrorist on the fly. The Washington Post. https://www.washingtonpost.com/archive/opinions/2006/10/29/how-to-spot-a-terrorist-on-the-fly/e8f5865f-1dac-4c55-990f-459c1e8b3563/

Fisher, R. P., & Geiselman, R. E. (1992). Memory-enhancing techniques for investigative interviewing: The cognitive interview. Charles C Thomas, Publisher.

Florence, J., & Friedman, R. (2010). Profiles in terror: A legal framework for the behavioral profiling paradigm. *George Mason Law Review, 17*(2), 423-481)

Giorgianni, D., Vrij, A., Leal, S., & Deeb, H. (2025). The effect of the interviewer's cognitive load on the quality of the forensic interview. The European Journal of Psychology Applied to Legal Context, 17(2), 101-110.

Government Accountability Office. (2010). Aviation security: Efforts to validate TSA's passenger screening behavior detection program underway, but opportunities exist to strengthen validation and address operational challenges. Retrieved from https://www.gao.gov/products/GAO-10-763

Government Accountability Office. (2017). Aviation security: TSA does not have valid evidence supporting most of the revised behavioral indicators used in its behavior detection activities. Retrieved from https://www.gao.gov/products/GAO-17-608R

Government Accountability Office (2019). TSA has policies that prohibit unlawful profiling but should improve its oversight of behavior detection activities. https://www.gao.gov/assets/gao-19-490t.pdf

Hall, J. A., Horgan, T. G., & Murphy, N. A. (2019). Nonverbal communication. *Annual Review of Psychology, 70*, 271-294.

Izotovas, A., Kelly, C. & Walsh, D. (2021) The domains of PEACE: Examining interviews with suspected sex offenders. Journal of Police and Criminal Psycholog, 36, 743–757.

Kassin, S. M., & Gudjonsson, G. H. (2004). The psychology of confessions: A review of the literature and issues. *Psychological Science in the Public Interest*, *5*(2), 33–67. https://doi.org/10.1111/j.1529-1006.2004.00016.x

Kita, S. (2009). Cross-cultural variation of speech-accompanying gesture: A review. *Language and Cognitive Processes*, 24(2), 145-167.

Kleinsmith, A., De Silva, P. R., & Bianchi-Berthouze, N. (2006). Cross-cultural differences in recognizing affect from body posture. Interacting with Computers, 18(6), 1371–1389.

Lagacé, P. (2015). La synergologie, commode et reposante [Synergology, convenient and relaxing]. La Presse. Retrieved at http://plus. lapresse.ca/screens/69301fa8-b7f3-4658-91a2-58f4216630de%7C_0.html

Lagacé, P. (2018a). La pseudoscience du langage corporel [The pseudoscience of body language]. La Presse. Retrieved at https://www.lapresse.ca/actualites/synergologie/201809/18/01-5196999-la-pseudoscience-du-langage-corporel.php

Lagacé, P. (2018b). Synergologie: la responsabilité des institutions [Synergology: the responsibility of institutions]. La Presse. Retrieved at

https://www.lapresse.ca/actualites/synergologie/201809/18/01-5197006-synergologie-la-responsabilite-des-institutions.php

Lappi, O. (2015). Eye tracking in the wild: the good, the bad and the ugly. Journal of Eye Movement Research, 8(5). https://doi.org/10.16910/jemr.8.5.1

Lewandowsky, S., Ecker, U. K. H., Seifert, C., Schwarz, N., & Cook, J. (2012). Misinformation and its correction: Continued influence and successful debiasing. *Psychological Science in the Public Interest*, 13(3), 106–131.

Luke, T. J. (2019). Lessons from Pinocchio: Cues to deception may be highly exaggerated. *Perspectives on Psychological Science, 14*, 646-671.

Masip, J., & Herrero, C. (2013). 'What would you say if you were guilty?' Suspects' strategies during a hypothetical Behavior Analysis Interview concerning a serious crime. *Applied Cognitive Psychology*, 27(1), 60–70.

Memon, A. (2006). The cognitive interview. In O. Hargie (Ed.), The handbook of communication skills (3rd ed., pp. 531–550). Routledge.

Memon, A., Meissner, C. A., & Fraser, J. (2010). The Cognitive Interview: A meta-analytic review and study space analysis of the past 25 years. Psychology, Public Policy, and Law, 16(4), 340–372.

Naidu, E. S., Knowles, J. M., Adelson, J. L., Goldin-Meadow, S., & Gaither, S. E. (2025). Talk to the hand: Black and White cultural differences in gesture use.Journal of Experimental Psychology: General. Advance online publication. https://doi.org/10.1037/xge0001862

Palena, N., & Caso, L. (2021). Investigative interviewing research: Ideas and methodological suggestions for new research perspectives. *Frontiers in Psychology*, *12*, 715028. https://doi.org/10.3389/fpsyg.2021.715028

Patterson, M. L, Fridlund, A. J., & Crivelli, C. (2023). Four misconceptions about nonverbal communication. *Perspectives on Psychological Science.* Advance online publication.

Plusquellec, P. et Denault, V. (2018). The 1000 most cited papers on visible nonverbal behavior: A bibliometric analysis. *Journal of Nonverbal Behavior*, 42(3), 347-377.

Smith, J. (2020). The junk science cops use to decide you're lying. The Intercept. https://theintercept.com/2020/08/12/blueleaks-law-enforcement-police-lie-detection/

Snook, B., Eastwood, J., & Barron, W. T. (2014). The next stage in the evolution of interrogations: The PEACE model. Canadian Criminal Law Review, 18, 219-239.

Snook, B., Eastwood, J., Stinson, M., Tedeschini, J., & House, J. C. (2010). Reforming investigative interviewing in Canada. *Canadian Journal of Criminology and Criminal Justice*, *52*(2), 215–229.

Tait, A. (2021). Body language pseudoscience is flourishing on YouTube. *Wired.* https://www.wired.com/story/youtube-body-language/

Tickle-Degnen, L. (2006). Nonverbal Behavior and Its Functions in the Ecosystem of Rapport. In V. Manusov & M. L. Patterson (Eds.), The Sage handbook of nonverbal communication (pp. 381–399). Sage Publications, Inc.

Vrij, A., Leal, S., & Fisher, R. P. (2018). Verbal Deception and the Model Statement as a Lie Detection Tool. Frontiers in Psychiatry, 9(492).

Vrij, A., Mann, S., & Fisher, R. P. (2006). An Empirical Test of the Behaviour Analysis Interview. *Law and Human Behavior, 30*(3), 329–345.

Winter, J., & Currier, C. (2015). Exclusive: TSA's secret behavior checklist to spot terrorists. The Intercept. Retrieved from https://theintercept.com/2015/03/27/ revealed-tsas-closely-held-behavior-checklist-spot-terrorists/

Wiseman, R., Watt, C., ten Brinke, L., Porter. S., Couper, S. L. & Rankin, C. (2012) The eyes don’t have it: Lie detection and Neuro-Linguistic Programming. PLoS-One. 7(7), e40259- e40259

Zloteanu, M., & Krumhuber, E. G. (2021). Expression authenticity: The role of genuine and deliberate displays in emotion perception. Frontiers in Psychology, 11, 611248. https://doi. org/10.3389/fpsyg.2020.611248