Detection of Deception Research – Why Academic Studies Yield Such Poor Results

Most defense experts who testify on the issue of false confessions state that law enforcement investigators interrogate people whom they believe are lying to them based on the behavior that they displayed during the initial investigative interview. The experts go on to say that the majority of studies show that there are no reliable behavioral indicators of truth and deception. Consequently, investigators oftentimes interrogate people who are actually innocent, which then leads to false confessions.

In most detection of deception research there appears to be a fundamental lack of understanding of how verbal and nonverbal behaviors exhibited by a subject during an interview are evaluated by practitioners in real life settings. Most academics conducting research seem to work on the underlying presumption that there is a behavior – verbal and/or nonverbal – that is unique to deception. There is not. Any attempt to evaluate a subject’s behavior for indications of deception must be considered in the context of the situation and the potential influence of a variety of factors. To do otherwise would be a fruitless endeavor.

Here are a few of the principles of behavior symptom analysis as practiced in the field that academic researchers fail to consider.*

*There are no unique behaviors associated with truthfulness or deception.* The behavioral observations an investigator makes of a suspect do not specifically correlate to truth or deception. Rather, they reflect the subject’s internal emotional state, cognitive processes, and internal physiological arousal experienced during a response. The emotional states most often associated with deception are fear, anger, embarrassment, indignation, or hope (duping). The cognitive processes may reveal concern, helpfulness, and confidence versus offering an unrealistic explanation for the crime, being defensive, or being overly polite. There are also internal physiological responses that cause external behavioral responses such as a dry throat, skin blanching, pupillary dilation, or blushing. Observed in isolation, certainly none of these behaviors should cause an investigator to conclude that a subject is telling the truth or lying.

In real life situations investigating a subject’s involvement in criminal behavior or whether or not they are concealing relevant information or intelligence, behavior symptom analysis involves the study of inferences made from the subject’s behaviors. Within the scope of detecting deception, there are two broad inferences that are made through behavioral observations. The first involves inferences of guilt or innocence, that is, “Did this person engage in a particular criminal act?” The second involves inferences of truth or deception, that is, “When this person says such and such, is he telling the truth?” For case-solving purposes, it is important to appreciate the distinction between “guilt” and “lying.” Consider the following exchange during an interview:

Q: “Have you ever thought about having sexual contact with your step-daughter?”

A: “Well sure. Anybody in my position would have those thoughts.”

This suspect’s verbal response to the investigator’s question is truthful. Yet, the content of the response infers guilt with respect to sexually abusing his step-daughter.
To appreciate the nature of these inferences, it must be understood that communication occurs at three distinctly different levels:

1. **verbal channel**—word choice and arrangement of words to send a message
2. **paralinguistic channel**—characteristics of speech falling outside the spoken word
3. **nonverbal channel**—posture, arm and leg movements, eye contact, and facial expressions

*Evaluate the consistency between all three channels of communication.* When a suspect sends behavioral messages that are consistent within all three channels of communication, the investigator can have greater confidence in his assessment of the credibility of the subject’s response. However, when inconsistencies exist between the channels, the investigator needs to evaluate possible causes for this inconsistency.

*Evaluate paralinguistic and nonverbal behaviors in context with the subject’s verbal message.* When assessing the probable meaning of a subject’s emotional state, the subject’s paralinguistic and nonverbal behaviors must always be considered in context with the verbal message. Consider the following two examples:

**Question (Q 1):** Mike, have you ever been questioned before concerning theft from an employer?

**Response (R 1):** Well, um, two years ago I worked at a hardware store and they had an inventory shortage so all of the employees were questioned and, in fact, I did take some things from there. [Subject crosses his legs, looks down at the floor, and dusts his shirt sleeve.]

**Q 2:** Joe, did you steal that missing $2,500?

**R 2:** No, I did not. [Subject crosses his legs, looks down at the floor, and dusts his shirt sleeve.]

These two subjects displayed identical paralinguistic and nonverbal behaviors during their responses. However, the interpretation of the behaviors is completely different. In the first example the subject is telling the truth, but he feels embarrassed and possibly even threatened in revealing his prior theft. In the second example the verbal content of the subject’s response does not explain the accompanying nonverbal behaviors, so the investigator should consider these behaviors as reflecting possible fear or conflict—emotional states that would not be considered appropriate from a truthful subject, given the content of the verbal response.

*Evaluate the preponderance of behaviors occurring throughout the interview.* One of the findings learned through the research described below (NSA Study) is the importance of rendering opinions based on evaluating the subject’s behavior throughout the course of an entire interview. When evaluators were only exposed to individual questions within the interview, their accuracy was considerably less than when evaluating the subject’s responses to all 15 interview questions. Similarly, the confidence of assessing behavior over a five-minute interview will be considerably less than if the behavioral assessments
were made over a 30- or 40-minute interview.

Establish the subject’s normal behavioral patterns. Certainly there are non-deceptive reasons for a suspect to exhibit poor eye contact, respond to questions quickly or slowly, to scratch themselves, yawn, clear their throat, or change their posture. Before any of these behaviors can be considered a criteria of deception, the investigator must first establish what the subject’s normal behavioral patterns are. Consequently, at the outset of each interview the investigator should spend several minutes discussing nonthreatening information (perhaps casual conversation or collecting biographical information) so as to establish a behavioral baseline for the particular subject. Then, as the interview progresses and the subject exhibits behavioral changes when the issue under investigation is discussed, these changes may take on added significance.

Unfortunately most detection of deception research to date does not take any of these concepts and principles into consideration.

Academic research studies typically reach the conclusion that “most verbal and nonverbal cues do not appear to be related to deception at all and that those that are only show a weak relationship with deception.” The majority of the studies that were used to reach this conclusion were laboratory studies in which students committed mock crimes. Laboratory detection of deception research studies do not produce helpful results for a number of reasons:

- The subjects had low levels of motivation to be believed (in the case of innocent suspects) or to avoid detection (in the case of guilty suspects).
- The interviews of the subjects were not conducted by investigators trained in interviewing criminal suspects.
- The studies did not employ the type of structured interview process that is commonly utilized by investigators in the field.
- In most studies there was no attempt to establish behavioral baselines for each suspect so as to identify unique behaviors within a particular individual.
- The research was based on the faulty premise (as mentioned above) that there are specific behavior symptoms that are unique to truth or deception.
- There was little consideration given to evaluating behaviors in context. For example, identifying whether specific nonverbal behaviors are appropriate given the verbal content of the suspect’s response, identifying the consistency of a suspect’s statements across time and with known evidence, and so on.

On the other hand, when researchers attempt to design studies which more closely approximate the setting of real life field interviews, they show a marked increase in the ability of researchers to detection deception. Consider the following:

- High-stake lies are detected at higher rates than low-stake lies.

place “they performed significantly better than chance and significantly better than 40 + years of research suggests they would. Clearly, knowledge of the environment in which deception occurs facilitates accurate deception judgments beyond what is possible based on observations of nonverbal leakage.”

- When an investigator understands the context in which an interview is taking place (for example the case facts and background information) accuracy in the assessment of a subject’s behavior symptoms greatly increases.

(In their research paper entitled, “Detecting True Lies: Police Officers’ Ability to Detect Suspects’ Lies,” (Journal of Applied Psychology, 2004) the authors asked 99 police officers to “judge the veracity of people in real-life high-stakes situations.” The authors describe this study as unique because they tested “police officers’ ability to distinguish between truths and lies in a realistic setting (during police interviews with suspects), rather than in an artificial laboratory setting.” The results were that “the “accuracy rates were higher than those typically found in deception research.”

- Accuracy in detecting deception with real-life suspects is significantly higher than suggested by studies that use subject’s in a mock crime scenario.

(Strategic Use of Evidence During Police Interviews: When Training to Detect Deception Works. Law and Human Behavior, 2006 the authors report that trained interviewers “obtained a considerably higher deception detection accuracy rate (85.4%) than untrained interviewers.” Also see “Police Officers’ judgments of veracity, tenseness, cognitive load and attempted behavioral control in real-life police interviews,” (Psychology, Crime & Law, 2006)

- Training and experience in the field of behavior symptom analysis significantly increases the ability to detect true and false statements.


In the 1990s, John E. Reid and Associates was awarded two federal grants from the National Security Agency (NSA) to specifically investigate behavioral differences between truthful and deceptive.


In those two studies a total of 80 video-taped interviews of actual suspects were prepared under different conditions; this permitted trained evaluators to evaluate the subject’s
verbal, paralinguistic, and nonverbal behaviors separately and together. In the latter study, when evaluators were exposed to all three channels of communication together, their average accuracy, excluding inconclusive opinions, was 86% for truthful suspects and 83% for deceptive subjects.


There is no doubt that if future detection of deception research better mirrors the situations in which field investigators assess subject credibility, and take into account the principle of behavior assessment as outlined above, they will undoubtedly demonstrate the value of evaluating a subject’s behavior during the investigative interview.

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