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Science and “Enhanced Interrogation”

What Science Can Teach Us about “Enhanced Interrogation”

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Abstract

The recent Senate Select Committee on Intelligence report on the CIA Detention and Interrogation Program sheds light on the practice of “enhanced interrogation” while countering CIA claims about the effectiveness of these methods. This article relies on the science of interrogation to evaluate those claims. Five hypotheses about the (in)effectiveness of “enhanced interrogation techniques” are generated based upon empirical research on interrogation practices. The article concludes that evidence-based, non-coercive methods of interrogation are likely to be more, or equally, as effective as “enhanced interrogation” in obtaining accurate information from detainees.

In November 2014, the Senate Select Committee on Intelligence (SSCI) released a report on its inquiry into the Detainee and Interrogation Program conducted by the Central Intelligence Agency (CIA).¹ The report describes how the CIA detained 119 prisoners and subjected 39 of them to methods dubbed “enhanced interrogation techniques” (EIT). The approved list of EIT encompassed waterboarding, sleep deprivation, isolation, confinement in small spaces, body slap, face grab (holding the prisoner’s head immobile), facial slap, walling (pushing the prisoner against a flexible wall), sensory over-stimulation, and forced standing and other stress positions.² The report also points to evidence that the CIA repeatedly used EIT not approved by the Department of Justice or the White House Office of Legal Counsel, such as forced standing with arms shackled above the head, exposure to extreme cold when partially nude, and a more extreme version of walling (slamming a prisoner against concrete walls).³

The CIA repeatedly made claims to the White House, the Department of Justice, and the media that EIT were effective in providing intelligence that was used to save American lives and that this information could not have been obtained any other way.⁴ However, the SSCI report provides evidence that these claims may have been overstated.⁵ Following requests from White House officials, at least three attempts were made by the CIA to conduct studies of the effectiveness of EIT: a CIA Office of Inspector General Special Review, an internal review conducted by two CIA officers not employed within the Counterterrorism Center, and a review conducted by two non-CIA employees.⁶ The data reviewed in each case included interviews with CIA personnel and documents provided by the CIA. None of these evaluations provided substantive evidence to support the CIA’s claim that EIT are effective.

Any resolution of the disagreement about the effectiveness of EIT should center around evidence of their effectiveness in obtaining accurate, actionable intelligence from detainees. If

EIT are effective, above and beyond other interrogation techniques, as claimed by the CIA,⁷ then use of the techniques may be justified.⁸ However, if the techniques are ineffective, as maintained by the SSCI, then it would be difficult to justify their use. The purpose of this article is to 1) demonstrate that arguments supporting EIT effectiveness lack scientific rigor, 2) explain the scientific study of interrogation, and 3) apply interrogation research to generate hypotheses regarding EIT effectiveness.

Scientific Evaluation of Arguments Supporting EIT Effectiveness

The CIA's inference that EIT uniquely causes a source to reveal accurate, actionable intelligence is presumably derived from observations of detainees who were interrogated with EIT.⁹ Scientists regularly evaluate the validity of causal inferences formed through observation. The internal validity of a causal inference refers to how well a scientist has demonstrated that a cause has a unique impact on its effect.¹⁰ In order to infer that A causes B, it must be demonstrated that this relationship holds when other plausible causes for B are held constant. Without isolating the effect of EIT on detainee cooperation, it cannot be established that EIT had an independent effect; detainees may have cooperated in response to some other factor, such as length of detention or deteriorating health. Furthermore, the relative effectiveness of EIT over non-EIT interrogation methods cannot be established in the absence of observations of both methods while holding all other factors constant. Currently, there is no publicly available evidence that such observations have been made.¹¹

Valid causal inferences regarding the impact of EIT on source cooperation require counterfactual reasoning. Such reasoning involves answering the question, "Would detainees have provided less information in response to non-EIT interrogation methods than they did in response to EIT?"¹² Due to the complexity of human behavior, speculation regarding detainees'

behavior in such circumstances may be fraught with error. As a result, it is necessary to combine counterfactual reasoning with observation.

Experimentation is a research method that simulates counterfactual reasoning by enabling researchers to observe what happens in the presence or absence of some causal variable.¹³ An experiment designed to examine the effectiveness of EIT might proceed as follows. A randomly selected sample of high-value detainees is randomly assigned to either an EIT interrogation (the experimental group) or a non-EIT interrogation (the control group). The random assignment to groups ensures that the detainees in each group are equivalent with regard to all possible characteristics that might be related to source cooperation (e.g., length of detention, age, position in the terrorist group, religiosity, etc.). If the detainees in the experimental group provide more accurate, actionable intelligence than the detainees in the control group, then the causal inference that EIT increases source cooperation is supported. The control group provides the counterfactual (i.e., would detainees provide information if not interrogated with EIT?). Because the aggregate characteristics of the members of the control group are almost identical to the aggregate characteristics of the members of the experimental group, any differences between the two groups is likely attributable to the effect of EIT.¹⁴

In the absence of experimental research, any causal inferences made about the effectiveness of EIT are vulnerable to internal validity threats. However, any experiment in which participants are randomly assigned to receive EIT would be regarded by scientists as highly unethical.¹⁵ Nonetheless, a large number of research studies have been conducted on non-EIT interrogation methods providing the building blocks for a “science of interrogation.”

The Science of Interrogation

Interrogation can be considered both an art and a science.¹⁶ Those addressing the art of interrogation typically emphasize personality traits and skills unique to successful interrogators, qualities that cannot be taught but are either innate or may only be learned through experience. Hanns Scharff, who served as an interrogator in Germany during World War II,¹⁷ is a case in point. His remarkable success in eliciting information from American and British pilots has been attributed to his extremely likeable persona and naïve skill in using techniques later demonstrated through research to be effective. Although researchers have been able to identify aspects of Scharff's method which likely contributed to his success as an interrogator,¹⁸ it would be difficult to entirely reproduce his manner of interrogation because much of it was unique to Scharff's personal style of relating with others.

Although the art of interrogation is certainly an important element to consider when evaluating the effectiveness of interrogation techniques, this article is primarily concerned with the science of interrogation, which relies on evaluation through the scientific method, particularly experimentation. Most interrogation research is firmly rooted within the field of psychology. Interrogation has been defined as “the systematic questioning of an individual perceived by investigators as non-cooperative, within a custodial setting, for the purpose of obtaining reliable information in response to specific requirements.”¹⁹ This process of questioning is inherently interpersonal, making it an ideal subject to be examined by psychologists.²⁰ Such research is highly relevant for intelligence practitioners who would benefit from basing their practice on the latest scientific evidence. Additionally, psychological research findings can complement the literature on interrogation in the field of Intelligence Studies in a manner that can inform interrogation policy.²¹ Intelligence scholars writing on interrogation have

examined questions of ethics and lawfulness as they pertain to enhanced interrogation,²² reviewed policies on interrogation and rendition,²³ and used case studies to discuss the effectiveness of enhanced interrogation.²⁴

The study of interrogation in psychology began over 25 years ago, stemming from an interest in how law enforcement interrogation practices contributed to false confessions to crime.²⁵ Over time, psychologists began studying which interrogation tactics could increase the likelihood of a true confessions and, more recently, how these tactics could convince sources in intelligence interviews to provide accurate, actionable intelligence. This research has been conducted using two general categories of scientific methodology: observational or experimental field research and experimental, analogue research. Field research studies entail either observations of interrogations conducted in real-world settings or experimental comparisons of different interrogation techniques. Analogue research, on the other hand, involves experimentation with interrogation techniques in simulated interrogation settings. Such studies are typically conducted using college students as participants.

Both research methods have strengths and weaknesses. A strength of field research is that observations are made within the same context in which research findings are applied. Results of field research indicating that particular interrogation techniques are effective in one setting bolster confidence that such techniques are effective in a range of other settings. However, scientists conducting research in real-world settings struggle to maintain the control necessary to avoid threats to internal validity. For example, a researcher studying the effectiveness of an interrogation tactic in a real-world setting might find it difficult to control for other factors that might impact source cooperation, such as characteristics of the interrogator, level of rapport, and the setting of the interrogation. Another problem with field research arises

because ground truth (whether or not a source actually committed a crime or actually knows pertinent information) is often unknown. Conversely, a researcher conducting analogue research *can* control experimental conditions and ground truth *is* known. However, a common criticism of analogue research is that the findings may not be transferrable to real-world contexts because the studies are conducted in artificial settings. A solid program of research seeks to combine results from both analogue and field studies; if these findings converge, then greater confidence in the validity of the causal inference is warranted.

While empirical testing of causal inferences regarding EIT is, at best, difficult to accomplish, the large number of experimental and observational research studies conducted on other types of interrogation can inform hypotheses regarding the effectiveness of EIT. Such research provides insight about methods, other than EIT, which might be equally, or more, effective in inducing source cooperation. Table 1 summarizes the research findings supporting all five hypotheses [INSERT TABLE 1 HERE].

Hypotheses about EIT Generated from Existing Research

Hypothesis 1: EIT may increase the likelihood of a source providing false information.

According to the SSCI report, several detainees either fabricated information, retracted information, or provided low-quality reporting, including vague or repeated information, after being subject to EIT.²⁶ Several qualities of EIT may increase an individual's suggestibility or willingness to fabricate information, such as sleep deprivation, isolation, and interrogation pressure.²⁷

The SSCI report describes prisoners subject to EIT who were deprived of sleep for up to 180 hours.²⁸ Although no research has directly assessed the effect of sleep deprivation on

interrogation effectiveness, a robust area of study has examined the effect of sleep deprivation on cognitive functioning.²⁹ Sleep deprivation affects attentional processes associated with executive function, which is the ability to use the working memory system to selectively attend to information needed to engage in adaptive behavior. Impaired executive function worsens judgment and the ability to engage in tasks that require sustained attention, such as responding to questions in an interrogation. When deprived of sleep, a source may become suggestible to influence and unable to effectively plan responses to questions. Moreover, because sleep deprivation prevents consolidation of memory, a source may provide false information in response to leading questions and later be unable to remember the manipulative conditions under which he or she provided this information, leading to the source's subsequent belief that the false information is actually true.³⁰ Sleep deprivation, at best, likely degrades the quality of a source's reporting and, at worst, may increase the probability that a source provides false information.

The regular practice of extensive isolation of detainees, many of whom then experienced severe psychological symptoms is also described in the SSCI report.³¹ Observational studies of suspects subjected to law enforcement interrogations have found that isolation increases suspects' desire to escape the situation and suspects' uncertainty about the future, the latter of which significantly increases anxiety.³² These factors may compel a source to fabricate information in order to escape the situation.

EIT clearly put a great deal of pressure on detainees to cooperate, which may compel a source to provide false information. For instance, two CIA detainees subjected to EIT reported having fabricated information in order to reduce interrogator pressure and one detainee threatened to fabricate information in response to pressure.³³ In a study supporting a link between interrogator pressure and false confessions, subjects were led to believe that they were

participating in a high-stakes interrogation.³⁴ Those subjects who provided false confessions later reported that they did so in response to interrogation pressure, while those who provided true confessions reported that their feelings of guilt prompted them to confess.

Interrogator pressure may be related to an interrogator's bias regarding whether or not a source is guilty or has relevant information. An experiment showed that interrogators who were biased towards believing that a suspect was guilty chose to ask more accusatory questions and used more accusatory tactics than interrogators who believed a suspect was innocent.³⁵ Both groups of interrogators also tried harder to get confessions out of innocent suspects than guilty ones. Observers of these interrogations thought that guilt-presumptive interrogators exerted more pressure on suspects than innocent-presumptive interrogators and that suspects interrogated by guilt-presumptive interrogators were more defensive than suspects interrogated by innocent-presumptive interrogators. Thus, interrogators who are guilt-biased may be less able to distinguish between innocent and guilty suspects because their own actions induce behaviors in suspects that are indicative of guilt. If this dynamic occurs in actual police interrogations, then the onus shifts from the interrogator to find proof of guilt onto the innocent person to prove that he or she is not guilty. In conclusion, interrogator pressure that is fueled by interrogator bias may place a disproportionate burden on innocent detainees to provide information consistent with an interrogator's expectations, even if that information is false.

Interestingly, this relationship between bias and interrogation pressure was illustrated in some interrogations conducted by the CIA. For example, after using EIT for approximately two months with Abu Zubaydah, interrogators determined that he did not have the information sought by the CIA. However, CIA headquarters mandated continuing EIT because the goal had shifted from proving that Abu Zubaydah had relevant information to proving that he did *not* have

relevant information.³⁶ The bias originated with headquarters, who then required interrogators to impose pressure on Abu Zubaydah in the form of EIT. Abu Zubaydah was required to prove his *lack* of information in order to convince headquarters that its assessment of him was faulty.

False confessions, or fabricated information, may not be problematic if interrogators were able to distinguish between true and false statements. However, analogue and observational research has shown that individuals have difficulty doing so.³⁷ In one experiment, a sample of police officers and a sample of college students were asked to classify video- or audio-taped confessions given by inmates as true or false.³⁸ Accuracy in classification of confessions was not statistically greater than chance, meaning that participants would not have performed better had they guessed. , Police officers were less accurate than college students and more confident in their judgments. Specifically, they were more likely to judge a false confession as a true confession.

In conclusion, several qualities of EIT may increase the likelihood that sources provide false information: sleep deprivation, isolation, and interrogation pressure. This problem is compounded if interrogators are unable to distinguish true statements from false statements. When the information confirms previous beliefs of guilt-presumptive interrogators and corroborating evidence is not sought, then false information may be accepted as factual. The consequences of such a decision may be dire. For example, as described in the SSCI report, four detainees were captured and subject to EIT by the CIA primarily on the basis of reporting by a single source, who was later discredited for fabricating information.³⁹

Hypothesis 2: Rapport-building may be more, or equally, as effective as EIT in persuading sources to cooperate.

The SSCI report includes evidence that some individuals involved in interrogations recognized the effectiveness of rapport-building methods. Federal Bureau of Investigation (FBI) agents interrogated Abu Zubaydah using non-coercive, rapport-building interrogation methods *before* he was interrogated by CIA contractors.⁴⁰ One of them reported that the majority of the actionable intelligence he shared, including his identification of Khalid Sheikh Mohammed (KSM), was provided during periods when he was interrogated by the FBI.⁴¹ In the case of Muhammad Rahim, the importance of rapport-building was recognized after the fact; as part of an after-action review of his interrogation, recommendations were made to incorporate rapport-building in future CIA interrogations.⁴²

One of the arguments often employed to discount the utility of rapport-building methods is that EIT is necessary when a detainee holds information about an impending terrorist plot.⁴³ This “ticking-time bomb” argument holds that development of rapport is a lengthy process, whereas EIT can produce results more quickly.⁴⁴ However, accounts of interrogations in which EIT were used indicate that EIT are not an efficient means of obtaining information. Abd al-Rahim al-Nashiri was interrogated with EIT for two months and Razmi bin al-Shibh was interrogated with EIT for 34 days.⁴⁵ KSM, who was waterboarded 183 times,⁴⁶ likely did not give up all information that he held; in fact, he regularly fabricated information.⁴⁷ If there was, indeed, a ticking-time bomb in these cases, EIT would not have produced information quickly enough to prevent it from exploding. Conversely, FBI agents interrogating Abu Zubaydah using rapport-building methods were able to elude actionable intelligence in only a few days.⁴⁸

Rapport-building is considered an essential part of any interrogation or interview. Professionals who conduct police interviews or child sexual abuse interviews are frequently

advised to establish rapport before beginning to question a witness⁴⁹ and law enforcement officials recognize the importance of building rapport with witnesses and suspects.⁵⁰

Some researchers, using field research to examine the impact of rapport-building in law enforcement interrogations, have shown it to be generally effective in producing successful interrogation outcomes.⁵¹ An examination of police interviews of criminal suspects in Britain found a strong relationship between an interviewer's rapport-building skills and successful interview outcomes.⁵² Subsequently, the same researchers found that, although rapport-building during the initial stages of an interview had little effect on outcomes, those rapport-building behaviors which were maintained throughout the interview significantly improved outcomes.⁵³

The impact of rapport has also been investigated in experimental research in which participants enact the role of a cooperative witness.⁵⁴ In one experiment, participants were provided with misinformation about a mock crime event they had witnessed and were then interviewed about the event.⁵⁵ When rapport was developed with these witnesses, they provided significantly less inaccurate information than did witnesses with whom rapport was not developed. These results were later replicated using a similar experimental paradigm.⁵⁶

Rapport-building has also been studied in the context of intelligence interrogations.⁵⁷ Research has shown that interrogators who seek to build rapport can reduce sources' use of some counter-interrogation strategies and improve information yield.⁵⁸ Researchers have also found a positive relationship between interrogators' reports of employing rapport-building strategies with high-value sources and interrogators' reports of source information disclosure.⁵⁹

The use of EIT logically counteracts the development of rapport with a source. Once EIT has been initiated it will likely be difficult to subsequently use other strategies that depend upon

the development of rapport to be successful. This is probably why the Army Field Manual recommends interrogators build rapport and engage sources in direct questioning before transitioning to other approaches.⁶⁰ Contrary to this practice, on several occasions, CIA interrogators initiated EIT with detainees before trying other interrogation methods.⁶¹ Such practice not only prevents interrogators from assessing initial detainee cooperation in response to rapport-building strategies, but also precludes observations about the relative effectiveness of EIT versus other interrogation methods.

Hypothesis 4: Information-gathering interviews and other non-accusatory interrogation tactics may be more, or equally, as effective as EIT in persuading sources to cooperate.

Rapport-building has been identified as a crucial difference between interrogations described as “accusatory” and those described as “information-gathering” because it is not a typical feature of accusatory interrogations.⁶² Accusatory interrogations are characterized by control, psychological manipulation, and closed-ended confirmatory questions. These features also describe interrogations using EIT, in addition to physical manipulation. “Information-gathering” interrogations, on the other hand, are characterized by rapport, direct positive confrontation, and open-ended exploratory questions.

Some studies have examined the relative effectiveness of accusatory versus information-gathering interrogations. A meta-analysis conducted on twelve analogue and five observational field studies found that, while accusatory interrogations were effective in producing true confessions, they also produced false confessions.⁶³ Information-gathering interrogations, on the other hand, produced confessions that were more diagnostic in that there were a greater relative number of true, versus false, confessions. From the results of this meta-analysis it is possible to conclude that certain elements of EIT (those shared with accusatory interrogations) are less

effective than information-gathering interrogations in producing source compliance. However, it is still unclear whether or not the element of physical manipulation that is not shared with accusatory interrogations provides incremental improvement in EIT effectiveness.

Several types of information-gathering interrogations have been studied. One method currently used in Britain is based on the PEACE (Preparation and Planning, Engage and Explain, Account, Closure, and Evaluation) model.⁶⁴ In a field study, successful interrogation outcomes were predicted by skills related to 1) preparation and planning for the interrogations, 2) the “Engage and Explain” phase, particularly rapport-building, and 3) skills related to the “Account” phase, such as exploring obtained information, exploring motive, having a flexible interrogation style, and possessing conversation management skills.⁶⁵ The PEACE model appears to have potential for improving interrogation outcomes but requires further study, particularly under more controlled conditions, to fully demonstrate its effectiveness.

Information-gathering interviews can incorporate specific tactics to increase the likelihood of source cooperation. One interrogation tactic that has been extensively studied is confronting sources with the strength of the actual evidence against them. This was one of the only tactics successful with KSM; interrogators regularly presented him with information already known to the CIA and asked for confirmation of the information.⁶⁶

There are a number of ways in which an interrogator can use evidence to his or her advantage. The Army Field Manual lists an approach called “We Know All,” which entails asking a source questions about information already known to an interrogator; when the source resists answering, the interrogator provides the answer.⁶⁷ The desired outcome of this approach is that the source cooperates with the interrogator because he or she assumes that the interrogator

already knows all of the information (even though the interrogator only knows a portion of the information). There have been no published studies on the effectiveness of this approach.

Bull has developed an interrogation model, GRIMACE (Gathering Reliable Information prior to the interview, Motivating an Account, Challenging Effectively), which offers another way to incorporate evidence during an interrogation.⁶⁸ This model reflects the findings of laboratory and field research examining the ideal point during an interrogation to reveal evidence. Bull argues that revealing evidence too soon can advantage the source because he or she can fabricate a narrative of events, which includes the evidence, making it difficult for interrogators to differentiate between true and false statements. The GRIMACE model might allow interrogators to compare a source's version of events with evidence that has been obtained about a crime; inconsistency between the suspect's statement and the evidence is an indication of deception.

Another method similar to GRIMACE, the Strategic Use of Evidence (SUE) tactic, has been supported by an extensive program of research. In the first experimental study examining this technique, participants who were either innocent or guilty of a mock crime were interrogated.⁶⁹ In half of the interrogations, evidence against the participant was presented at the beginning of the interview; in the other half, evidence was presented after the participant provided a free narrative of the event and answered open-ended questions about the event. Observers who watched video recordings of the late-disclosure interrogations were more accurate in determining which deceptive statements were actually deceptive than observers who watched the early-disclosure interrogations. Later studies have replicated this effect and found that the greater accuracy of judgments of late-disclosure versus early-disclosure interrogations is attributable to greater statement-evidence inconsistency among guilty, but not innocent,

participants who take part in the late-disclosure interrogations. Interestingly, guilty subjects participating in the late-disclosure interrogations overestimated their success in convincing interrogators of their innocence, indicating that they were not aware that the SUE technique improves lie detection accuracy.⁷⁰

Although SUE has improved accuracy in differentiating between guilty and innocent suspects, it failed to improve the number of confessions obtained from guilty suspects.⁷¹ One variant of SUE, called SUE-Confrontation, was shown to improve the number of admissions to participation in a mock crime.⁷² In this study, interrogators held information about the first two phases of a mock crime, but not about the last phase. In the SUE-Confrontation condition, interrogators confronted participants each time a statement was inconsistent with the evidence. Participants in this condition were more likely than participants in early-disclosure or no-disclosure interrogations to believe that the interrogator held information about the last phase of the mock crime and they were more likely to admit to elements of the last phase of the mock crime.

Another variant of the SUE technique, SUE-Incremental has been shown to be effective in increasing the number of within-statement inconsistencies over the basic SUE technique and early-disclosure interrogations.⁷³ In the SUE-Incremental interrogation, evidence was disclosed incrementally, rather than all at once; the weakest, least specific evidence was disclosed first and the strongest, most specific evidence was disclosed last. Participants taking part in this interrogation were most likely to contradict their previous statements. In summary, the SUE technique seems to be an effective means for discriminating between guilty and innocent individuals and eliciting information from sources. Although it has not been tested with real-world interrogations, one study did train police officers to use the technique effectively.⁷⁴

Granhag and colleagues offer another way to use evidence during an interrogation through a method called the Scharff Technique, which is based on the interrogation style of Hanns Scharff. Scharff was extremely adept at non-coercive elicitation, wherein prisoners were unaware that they provided him with important information.⁷⁵ The Scharff Technique includes four components: 1) the interrogator maintains a friendly approach, 2) the interrogator does not pressure the source for information, 3) the interrogator maintains the illusion of already knowing all of the information being discussed with the source, and 4) the interrogator does not ask direct questions, but merely requests that the source either confirm or disconfirm information.⁷⁶

In a series of four studies, the authors demonstrated that participants interviewed using the Scharff Technique generally provided more new information (information not revealed by the interviewer) than participants interviewed using the Army Field Manual Direct Approach.⁷⁷ Additionally, these participants perceived the interviewer to have more information than what was perceived by participants taking part in interviews using the Direct Approach. Furthermore, participants undergoing interviews using the Scharff Technique were generally less able to discern the intelligence requirements of the interviewer than participants undergoing interviews using the Direct Approach. Finally, and most importantly, participants taking part in interviews using the Scharff Technique generally underestimated the amount of information that they provided to the interviewer, while participants taking part in interviews using the Direct Approach generally overestimated the amount of information that they provided to the interviewer. This last point is especially important because the crux of elicitation is that interviewers are able to obtain relevant, new information from a source without the source's awareness. In the most recent study investigating the Scharff technique, the researchers found that the difference between the amount of information provided during interviews using the

Scharff Technique and information provided in interviews using the Direct Approach was greatest for the most resistant sources.⁷⁸ In other words, the Scharff Technique was most effective for the most recalcitrant sources.

In conclusion, research findings indicate that information-gathering interrogation methods which incorporate rapport-building can be effective in inducing cooperation from a resistant source. There is also evidence that information-gathering interrogations can be more effective than accusatory interrogations in producing diagnostic confessions. One effective interrogation tactic is providing sources with evidence obtained by interrogators. However, the success of this tactic depends upon the interrogator having acquired information about the source and the context in which he or she was captured. The importance of this pre-interrogation planning is emphasized in the Army Field Manual.⁷⁹ Its significance was also demonstrated in the case of the interrogation of Muhammed Rahim who was interrogated by the CIA using EIT; the after action review of his case cited lack of knowledge of Rahim as one of the major factors contributing to his unresponsiveness during interrogation.⁸⁰

Hypothesis 4: EIT may impede accurate memory of events.

Once an interrogator is able to overcome source resistance, debriefing of the source begins. During debriefing, the interrogator obtains information from the source that is necessary to meet intelligence requirements.⁸¹ This must be done in a manner that facilitates accurate recollection of events so that any information obtained from sources is credible. However, memory is malleable and several factors may impede accurate memory retrieval. First, memory retrieval may be affected by stress.⁸² Psychological and physical stress are inherent components of EIT. Second, sleep deprivation can affect many aspects of cognitive function, including memory retrieval.⁸³ Most detainees subjected to EIT were exposed to sleep deprivation; several

of these detainees also experienced hallucinations and one detainee could barely speak.⁸⁴ It is difficult to imagine that anyone in such a psychological state would be able to provide an accurate and coherent accounting of events or facts. Third, a large body of research has demonstrated that interviewing methods incorporating misinformation can contribute to the development of false memories of events.⁸⁵ For instance, Survival Escape Resistance and Escape (SERE) school students who were exposed to misinformation about events occurring during interrogation incorporated the misinformation into later recounting of events.⁸⁶ EIT involves repeated questioning based on the assumption that detainees hold required information. If a detainee does not hold such information, then this questioning introduces the detainee to new information which may distort his or her memory of an event. It is vital to note the important distinction between providing a source with *accurate* information or evidence and providing a source with *inaccurate* information or evidence. While the former may be helpful in overcoming resistance and detecting deception, the latter may contribute to memory distortion. In conclusion, EIT incorporates a number of factors which can produce inaccurate retrieval of information from memory.

How can interrogators facilitate accurate memory retrieval? The Cognitive Interview (CI) is a debriefing method that has been shown to be effective in improving accurate recollection.⁸⁷ The CI encompasses the following memory retrieval techniques: 1) context reinstatement (having sources attend to the context in which events took place, such as the time of day, the weather, or what they were wearing), 2) asking sources to report everything they can remember about the events, 3) asking sources to remember events from their own perspective, as well as that of others, and 4) having sources remember events in a different temporal order, such as starting from the end of an event and telling the story backward.⁸⁸

The CI and its variations have been studied extensively. A meta-analysis included 46 experimental research studies comparing the CI to other interview methods concerning the number of correct, incorrect, and confabulated details produced by sources participating in these interviews.⁸⁹ The CI was found to greatly increase the number of correct details recalled over other interview methods, to slightly increase the number of incorrect details recalled, and to have no effect on the number of confabulated details recalled. The CI, thus, seems to be effective in significantly improving correct recall of events, even if it also facilitates the production of a small number of incorrect details. This technique can also be combined with other non-coercive interrogation tactics to overcome resistance.

Hypothesis 5: EIT may be less effective than other methods for determining the validity of a source's statement.

An important part of the interrogation process is assessment of the veracity of obtained intelligence.⁹⁰ The consequences of inaccurate judgment can be disastrous, leading, for example, to the failure of an operation based on a misinformed plan. A robust body of research has generally demonstrated that humans have difficulty detecting deception.⁹¹ Most of this research has been conducted using analogue experimentation because, in field studies, ground truth is unknown. In a typical deception detection experiment, a sample of participants is randomly assigned either to engage in a mock crime and lie about it or to engage in a non-criminal task and tell the truth about it. Other participants watch video recordings of the interviews and make a judgment about who is lying and who is telling the truth. A meta-analysis conducted on 206 studies of this type found that naïve observers (those without any training) correctly differentiated between truth-tellers and liars on average of 54% of the time.⁹² This is not much better than chance; observers may just as well have tossed a coin to decide who was lying and

who was telling the truth. Additionally, experts (i.e., police officers, judges, psychiatrists) were found to be no better able to discriminate liars from truth-tellers than non-experts (i.e., college students). Thus, this meta-analysis indicates that people generally are not effective at detecting deception.

A later meta-analysis examined 247 samples from experimental studies that included 19,801 judges of deception and 2,945 senders (liars or truth-tellers) to determine whether or not differences existed between people's ability to detect deception and whether or not this difference might depend upon the believability of senders.⁹³ The researchers found no individual differences in people's ability to detect deception. However, there were individual differences in deception detection bias; that is, whether a person is predisposed toward perceiving a sender as a truth-teller or a liar. The meta-analysis also detected individual differences in the credibility and detectability of senders. In other words, some senders were more believable than others, especially when they were lying, while the lies of other senders were frequently detected. These two factors, credibility and detectability, were much more influential on deception judgments than senders' actual deception.

Why is it so difficult for people to detect deception? First, senders differ in their ability to tell lies, when judges of deception assume that cues to deception are universally displayed by liars, they are more prone to error. Second, some individuals are biased in their judgments towards truth or deception.⁹⁴ Police officers are particularly biased towards judging people to be lying when they deny having committed a crime.⁹⁵ As discussed earlier, biased interrogators may behave in ways that cause innocent sources to react in a manner perceived by others as guilty or deceptive, thereby confirming to the interrogators that their judgment of these sources was accurate, even when it was not.⁹⁶ When this occurs, interrogators do not receive accurate

feedback about the validity of their judgments, which is problematic because feedback about accuracy has been demonstrated to improve deception judgments.⁹⁷

Third, there are few verbal or nonverbal behaviors that are valid indicators of deception. A meta-analysis was conducted on 116 experimental studies that examined which verbal or non-verbal behaviors, referred to as cues, could be used to correctly classify someone as a truth-teller or a liar.⁹⁸ Across all studies, 158 cues were coded. The researchers found that the verbal and non-verbal behavior of liars and truth-tellers did not generally differ. Furthermore, for those few cues which did discriminate between truth-tellers and liars, the difference between them was quite small. This means that judges of deception have few objective criteria on which to base their judgment.

Fourth, those who detect deception may attend to cues that are not reliable indicators of deception, an idea referred to as the “wrong subjective cue hypothesis”.⁹⁹ The validity of this hypothesis depends on whether or not judges of deception are aware of which cues they use to form judgments. In a recent meta-analysis, researchers found that those cues which people identify as important in their judgments of deception are not the same as the cues they actually use in their judgments of deception.¹⁰⁰ The researchers included studies which examined the relationship between cues and deception judgements *and* the relationship between cues and actual deception. They found that some of the cues that judges unwittingly relied on to make deception judgments were the same cues that enabled accurate discrimination between liars and truth-tellers. Thus, the difficulty in detecting deception may not lie in the use of invalid cues to deception but in the limited utility of deception cues, in general, for discriminating truth tellers from liars. In order to increase the utility of cues to deception, the authors recommended

employing interrogation tactics which increase behavioral differences between truth tellers and liars.

Which tactics should interrogators use to elicit valid cues to deception? Some tactics may elicit cues through increasing a source's cognitive load, the demand on cognitive processes inherent in particular tasks.¹⁰¹ One task that may increase the cognitive load of liars, but not truth-tellers, is responding to unanticipated questions. Liars practice their responses to standard interview questions ("Where were you on the night of April 15th?") because such questions can be anticipated. Liars can only practice responses to questions they can anticipate. When an interrogator poses an unanticipated question ("Describe the layout of the restaurant where you say you ate dinner"), liars use more cognitive resources than truth tellers to generate responses because those responses are untrue. This leaves fewer cognitive resources available for managing behaviors that serve as cues to deception (hedging or fidgeting). Research has shown that unanticipated questions yield a cue to deception (level of detail), which enables observers to discriminate between liars and truth-tellers.¹⁰² Liars who are asked unanticipated questions provide less detail in their responses than truth-tellers; liars also provide less detail in response to the unanticipated questions in comparison to anticipated questions.¹⁰³

The unanticipated questioning tactic has also been researched in relation to deception about future activities because one goal of HUMINT interrogations is to obtain information about enemy intentions. Individuals with mal-intent attempting to pass through security at a port of entry may prepare answers to anticipated security questions about their intended activities or travel plans.¹⁰⁴ However, such individuals may have difficulty answering unanticipated questions about how they went about making those travel plans. In one study, participants were instructed to plan to engage in either a criminal or non-criminal act and were then interrogated about their

intentions.¹⁰⁵ Those who planned to engage in a criminal act were told to lie about their intentions during the interrogation. Although the detail and length of the liars' statements in response to questions about their intentions (anticipated questions) did not differ from those of truth-tellers, liars statements in response to questions about how they planned the activity (unanticipated questions) were less detailed and shorter than truth tellers' statements. The unanticipated questions about planning elicited cues that could be used to distinguish liars from truth-tellers.

When implemented in interrogations with pairs of sources, asking unanticipated questions can elicit within-pair inconsistencies in liars' statements.¹⁰⁶ Because pairs of liars cannot jointly prepare responses to unanticipated questions, each may respond differently to such questions; this inconsistency serves as a cue to deception. Another type of inconsistency, statement-evidence inconsistency, is also a useful cue for deception¹⁰⁷ and can be elicited through the SUE technique.

In closing, tactics shown to be successful in improving deception detection induce a *cognitive* burden on a source, eliciting cues which allow an interrogator to discriminate between truthful and deceptive sources. In contrast, EIT induces a *physical* burden on a source to cooperate. Because this burden is likely to be similar for liars and truth-tellers, there is no reason to believe that EIT improves the interrogator's ability to form accurate judgments about deception. Indeed, evidence is repeatedly presented throughout the SSCI report that interrogators using EIT were often unable to ascertain when detainees provided inaccurate information and when detainees truthfully denied knowledge of required information.¹⁰⁸

The Future of Interrogation Research

The psychology literature reviewed in this article can inform both the practice of interrogation and related debates about intelligence practices. However, the validity of the five hypotheses developed in this article must be addressed through additional interrogation research studies. The importance of such research was recognized by President Obama when, in 2009, he signed Executive Order 13491, which established the High-Value Detainee Interrogation Group (HIG).¹⁰⁹ The HIG is administratively housed within the Federal Bureau of Investigation and is comprised of interrogators from across the Intelligence Community who interrogate sources deemed to hold high-value information. The Executive Order established a component of HIG that sponsors research on effective interrogation methods. In the five years since its inception, HIG-sponsored research has significantly added to the body of literature on intelligence interrogation, and enabled HIG interrogators to practice evidence-based interrogation methods.¹¹⁰

In stark contrast to evidence-based interrogation methods, EIT appear to have little empirical justification.¹¹¹ EIT were developed by psychologists James Mitchell and Bruce Jessen, two former SERE school instructors contracted by the Department of Defense and CIA to provide consultation on the interrogation of detainees.¹¹² During SERE training, US military personnel are subjected to treatment similar to EIT in order to learn counter-interrogation strategies. Mitchell and Jessen reverse-engineered interrogation tactics used during SERE training to interrogate detainees;¹¹³ they believed that such methods would induce a state of learned helplessness in detainees,¹¹⁴ causing them to comply with interrogator demands. No published evidence supports this assumption.¹¹⁵ Even if EIT effectively produced a state of compliance in detainees, it does not necessarily follow that EIT would induce sources to provide accurate information. Interrogations intended to produce compliance have historically had the

objective of obtaining false confessions for propaganda, not obtaining accurate, actionable intelligence.¹¹⁶

Executive Order 13491, thus, represents a welcome shift from non-evidence-based interrogation methods to a search for evidence-based interrogation methods discoverable through scientific research. It remains to be seen whether or not the next administration will provide additional support for this effort.

Conclusion

The hypotheses generated from the state of the research on interrogations contradict claims that EIT are uniquely effective means of obtaining accurate information from sources. Alternatively, information-gathering interrogations that incorporate rapport-building behaviors and cognitive-based methods of deception detection are promising avenues for overcoming source resistance. However, these methods must be field tested in order to support their use in non-laboratory settings. Such research is necessary to enable interrogators to protect national security more effectively.

Notes

¹Senate Select Committee on Intelligence, *Committee Study of the CIA's Detention and Interrogation Program*, S. Rpt. 113-288, 2014. Retrieved from <http://www.intelligence.senate.gov/publications>

²*Ibid*, Findings and Conclusions, pp.3-4.

³*Ibid*, Findings and Conclusions, p.4 and p.12.

⁴ *Ibid.*, Part III, F, beginning at p.217; George J. Tenet et al., "Ex-CIA Directors: Interrogations Saved Lives" *Wall Street Journal*, 2014. Retrieved from <http://www.wsj.com/articles/cia-interrogations-saved-lives-1418142644>; John A. Wahlquist, "Enhancing Interrogation: Advancing a New Agenda" *Parameters*, Vol. 38, 2009, pp.38-51.

⁵ For example, the report specifies that the CIA asserted that Khalid Sheikh Mohammed provided information about Majid Khan, who, once captured, provided information that led to the capture of Riduan Isamuddin (known as Hambali), a leader in Al Qaeda's Southeast Asian operations. However, the report also claims that Khan had provided this information to a foreign government before KSM identified him. Senate Select Committee on Intelligence, *Committee Study of the CIA's Detention and Interrogation Program*, Executive Summary Background and History, p. 200. It is important to note that former CIA officials have disputed the accuracy of the SSCI report, Tenet et al., "Ex-CIA Directors: Interrogations Saved Lives". All comments and observations made in this article are based only upon declassified material and, thus, may be limited in scope.

⁶*Ibid.* pp. 119-128, 178-179.

⁷Not all CIA employees involved in the program supported the use of EIT with detainees. *Ibid.*, pp. 33, 35-36, 65-66. Psychologists within the CIA Office of Medical Services objected to the overall use of EIT and to the involvement of psychologists in conducting interrogations using EIT. David Hoffman, et al., *Report to the Special Committee of the Board of Directors of the American Psychological Association: Independent Review Relating to APA Ethics Guidelines, National Security Interrogations, and Torture*, 2015. Retrieved from <http://www.nytimes.com/interactive/2015/05/01/us/document-report.html>

⁸This argument ignores the ethical issues related to EIT. Some authors argue EIT should be avoided whether or not they are effective in producing source cooperation. See Samantha Newberry, Bob Brecher, Philippe Sands, and Brian Stewart, "Interrogation, Intelligence and the Issue of Human Rights", *Intelligence and National Security*, Vol. 24, No. 5, 2009, pp.631-643; John A. Wahlquist, "Setting an Agenda for the High-Value Detainee Interrogation Group", *International Journal of Intelligence Ethics*, Vol. 1, No. 1, 2010, pp.24-46.

⁹It is possible that the CIA, or another government agency, has conducted empirical evaluation of EIT effectiveness. However, no such research has been published at this time.

¹⁰William R. Shadish, Thomas D. Cook, and Donald Thomas Campbell. *Experimental and Quasi-experimental Designs for Generalized Causal Influence*. 2nd Edition. (Boston, MA: Houghton Mifflin Company, 2002).

¹¹Newberry et al. have made similar comments with regard to interrogation of prisoners in Northern Ireland. See Newberry et al., "Interrogation, Intelligence, and the Issue of Human Rights."

¹²In some cases, the CIA employed EIT after detainees were interrogated using non-EIT methods. In such cases, it may be tempting to infer that, if detainees provide more information after being interrogated with EIT than after being interrogated with non-EIT methods, EIT are more effective. However, it is possible that such detainees would have provided the information had they continued to be interrogated using non-EIT methods. One would need to examine other

situations in which detainees were initially questioned with EIT and later questioned using non-EIT methods.

¹³Shaddish, et al., *Experimental and Quasi-experimental Designs for Generalized Causal Influence*, 2nd Edition.

¹⁴*Ibid.* These are not the only requirements for experiments to provide valid causal inferences. Additional requirements are appropriate manipulation of the independent variable, valid and reliable measurement of the dependent variable, reduction of attrition, isolation of experimental and control groups, and consideration of adequate sample size, among others.

¹⁵According to the Senate Select Committee report, the CIA officers tasked to review the Detention and Interrogation Program asserted that evaluating the effectiveness of EIT is impossible because of the ethical implications of such research. This realization may have led another reviewer to conclude that ‘there is no objective way to answer the question of efficacy of the techniques.’ Senate Select Committee on Intelligence, *Committee Study of the CIA’s Detention and Interrogation Program*, Findings and Conclusions, p.18.

¹⁶John A. Wahlquist, “Educating Information: Interrogation-Science and Art”, in *Educating Information: Interrogation: Science and Art, Foundations for the Future*, ed. Intelligence Science Board (Washington, DC: National Defense Intelligence College, 2006) pp.xxi-xxv.

¹⁷Raymond F. Toliver. *The Interrogator: The Story of Hanns Joachim Scharff, Master Interrogator of the Luftwaffe* (Atglen, PA: Schliffer Military History, 1997).

¹⁸Par Anders Granhag, Sebastian C. Montecinos, and Simon Oleszkiewicz, “Eliciting Intelligence from Sources: The First Scientific Test of the Scharff Technique” *Legal and Criminological Psychology*, Vol. 20, No. 1, 2013, pp.96-113.

¹⁹Jacqueline R. Evans, et al., “Criminal Versus HUMINT Interrogations: The Importance of Psychological Science to Improving Interrogation Practice”, *The Journal of Psychiatry and Law*, Vol. 38, 2010, pp.215-249.

²⁰Clark McCauley, “Toward a Social Psychology of Professional Military Interrogation”, *Peace and Conflict: Journal of Peace Psychology*, Vol. 13, No. 4, 2007, pp.399-410. For a review of the historical role of psychology in intelligence, see Susan E. Brandon, “Impacts of Psychological Science on National Security Agencies Post-9/11,” *American Psychologist*, Vol.66, No. 6, 2011, pp.495-506.

²¹Mark Fallon, “Collaboration between Practice and Science will Enhance Interrogations” *Applied Cognitive Psychology*, Vol. 28, 2014, pp.949-950.

²²Peter Gill, “Security Intelligence and Human Rights: Illuminating the ‘Heart of Darkness’”, *Intelligence and National Security*, Vol. 24, No. 1, 2009, pp.78-102; Newberry, Brecher, Sands, and Stewart, “Interrogation, Intelligence, and the Issue of Human Rights”, pp. 631-643.

²³Robert F. Coulam, “Skill versus Brutality in Interrogation: Lessons from Israel for American Policy”, *Intelligence and National Security*, Vol. 28, No. 4, 2013, pp. 566-590; Adam Lankford, “Assessing the Obama Standards for Interrogations: An Analysis of Army Field Manual 2-22.3”, *Studies in Conflict and Terrorism*, Vol. 33, 2010, pp. 20-35; Derek Leebaert, “The CIA in Unknown Terrain: ‘The Education of an Interrogator’”, *Intelligence and National Security*, Vol. 27, No. 4, 2012, pp.582-591; Wahlquist, “Enhancing Interrogation: Advancing a New Agenda”.

²⁴Ronnie Janoff-Bulman, “Erroneous Assumptions: Popular Belief in the Effectiveness of Torture Interrogation”, *Peace and Conflict: Journal of Peace Psychology*, Vol. 13, No. 4, 2007, pp.429-435.

²⁵See Saul M. Kassin and Gisli H. Gudjonsson, “The Psychology of Confessions: A Review of the Literature and Issues” *Psychological Science in the Public Interest*, Vol. 5, No. 2, 2004, pp.33-67.

²⁶Razmi bin al Shibh produced a consistently low quality of reporting in response to EIT. Senate Select Committee on Intelligence, *Committee Study of the CIA’s Detention and Interrogation Program*, Executive Summary History and Background, p. 81. KSM repeatedly fabricated information in response to EIT, *Ibid*, pp.85, 90, 92, 94-96, and retracted information, *Ibid*, p. 86. Hambali provided false information, which he later retracted. He reported that he provided false information to reduce the pressure on himself and provide interrogators with the information they requested, *Ibid*, pp.108-109. Muhammad Rahim threatened to provide false information in response to EIT, pp.164-165.

²⁷Mark A. Costanzo and Ellen Gerrity, “The Effects and Effectiveness of Using Torture as an Interrogation Device: Using Research to Inform the Policy Debate” *Social Issues and Policy Review*, Vol. 3, No. 1, 2009, pp.179-210.

²⁸Sleep deprivation was regularly used with detainees subjected to EIT: Rahim was sleep deprived for 138 hours, Senate Select Committee on Intelligence, *Committee Study of the CIA’s Detention and Interrogation Program*, Executive Summary Background and History, p.165; KSM was sleep deprived for 180 hours, *Ibid*, p.90; Arsala Khan could barely speak after 56 hours of sleep deprivation, *Ibid*, p.109; Hassan Ghul experienced hallucinations after 59 hours of sleep deprivation, *Ibid*, pp.132, 136-137; Abu Zubaydah, *Ibid*, p.29, Ridha Al-Najjar, *Ibid*, p.52, Gul Rahman, *Ibid*, p.56, and Bin Al-Shibh, *Ibid*, p.79, were also sleep deprived.

²⁹For a review of this research see John G. McCoy and Robert E. Strecker, “The Cognitive Cost of Sleep Lost” *Neurobiology of Learning and Memory*, Vol. 96, 2011, pp.564-582.

³⁰Deborah Davis and Richard A. Leo, “Interrogation-related Regulatory Decline: Ego Depletion, Failures of Self-Regulation, and the Decision to Confess” *Psychology, Public Policy, and the Law*, Vol. 18, No. 4, 2012, pp.673-704.

³¹Bin al-Shibh, who was isolated for 2 ½ years, experienced severe deficits to psychological functioning, including “visions, paranoia, insomnia, and attempts at self-harm.” Senate Select Committee on Intelligence, *Committee Study of the CIA’s Detention and Interrogation Program*, Executive Summary Background and History, pp.80, 114. Abu Zubaydah, *Ibid*, p.30, Al-Najjar, *Ibid*, p.52, and Rahim, *Ibid*, p.166, were also isolated for periods between a few weeks to a few months.

³²Kassin and Gudjonsson, “The Psychology of Confessions: A Review of the Literature and Issues”.

³³KSM and Hambali provided false information in response to interrogator pressure. Senate Select Committee on Intelligence, *Committee Study of the CIA’s Detention and Interrogation Program*, Executive Summary Background and History, pp.85, 90, 92, 94-96, 108-109. Interrogators had threatened to harm KSM’s family. Rahim threatened to provide false information after facial slap, abdominal slap, and facial hold were used on him, *Ibid*, pp.164-165.

³⁴Kate A. Houston, Christian A. Meissner, and Jacqueline R. Evans, “Psychological Processes Underlying True and False Confessions”, in *Investigative Interviewing*, ed. Ray Bull (2014 New York: Springer) pp.19-34.

³⁵Saul M. Kassin, Christine C. Goldstein, and Kenneth Savitsky, “Behavioral Confirmation in the Interrogation Room: On the Dangers of Presuming Guilt”, *Law and Human Behavior*, Vol. 27, No. 2, 2003, pp.187-203.

³⁶Senate Select Committee on Intelligence, *Committee Study of the CIA’s Detention and Interrogation Program*, Executive Summary Background and History, pp.45-46. This dynamic also occurred with Gul Rahman, *Ibid*, p.137. Drawing conclusions about the absence of something is much more difficult than drawing conclusions about the presence of something. Investigators can only make inferences that a detainee does *not* have information after repeated failures in obtaining such information.

³⁷Timothy R. Levine, Rachel K. Kim, and J. Pete Blair, “(In)accuracy at Detecting True and False Confessions and Denials: An Initial Test of a Projected Motive Model of Veracity Judgments” *Human Communication Research*, Vol 36, 2010, pp.82-102. For a review of observational and additional analogue studies on the topic, see Kassin and Gudjonsson, “The Psychology of Confessions: A Review of the Literature and Issues”.

³⁸Saul M. Kassin, Christian A. Meissner, Rebecca J. Norwick, “ ‘I’d Know a False Confession if I Saw One’: A Comparative Study of College Students and Police Investigators,” *Law and Human Behavior*, Vol. 29, No. 2, 2005, pp.211-227. The confessions were manipulated as part of the study, so the experimenters knew the accuracy of each confession.

³⁹Senate Select Committee on Intelligence, *Committee Study of the CIA's Detention and Interrogation Program*, Executive Summary Background and History, pp.135-139.

⁴⁰*Ibid*, pp.24-25.

⁴¹Ali Soufan, *The Black Banners: The Inside Story of 9/11 and the War against al-Qaeda* (New York: W.W. Norton and Company, 2011).

⁴²Senate Select Committee on Intelligence, *Committee Study of the CIA's Detention and Interrogation Program*, Executive Summary Background and History, p.167.

⁴³Tenet, et al., "Ex-CIA Directors: Interrogations Saved Lives".

⁴⁴For further discussions of the impracticality of the "ticking time-bomb" scenario, see: Office of the Director of National Intelligence, *Intelligence Interviewing: Teaching Papers and Case Studies*, 2009; Gary Kern, 'Torture and Intelligence in the Global War on Terror' *Intelligence and National Security*, Vol. 24, No. 3, 2009, pp.429-457; Wahlquist, 'Enhancing Interrogation: Advancing a New Agenda'.

⁴⁵Senate Select Committee on Intelligence, *Committee Study of the CIA's Detention and Interrogation Program*, Executive Summary Background and History, pp.66-70, 75-79.

⁴⁶*Ibid*, pp.81-96.

⁴⁷*Ibid*, pp.85, 90, 92, 94-96.

⁴⁸*Ibid*, pp.24-25. The report does not reveal the exact date FBI agents began questioning Abu Zubaydah. Shortly after questioning began, Zubaydah had to be hospitalized and intubated. Once his breathing tube was removed on April 8th, he took two days to reveal the identity of KSM as the mastermind of the 9/11 plot.

⁴⁹Ronald P. Fisher and R. Edward Geiselman, *Memory Enhancing Techniques for Investigative Interviewing: The Cognitive Interview* (Springfield, IL: Charles C. Thomas, 1992); Gisli H. Gudjonsson, *The Psychology of Interrogations and Confessions* (West Sussex: Wiley, 2003); Michael E. Lamb, et al., "A Structured Forensic Interview Protocol Improves the Quality and Informativeness of Investigative Interviews with Children: A Review of Research using the NICHD Investigative Interview Protocol," *Child Abuse & Neglect*, Vol. 31, 2007, pp.1201-1231.

⁵⁰Chris E. Kelly, Allison D. Redlich, and Jeanee C. Miller, "Examining the Meso-Level Domains of the Interrogation Taxonomy," *Psychology, Public Policy, and the Law*, Vol 21, No. 2, 2015, pp.179-191; Allison D. Redlich, Chris E. Kelly, and Jeanee C. Miller, "The Who, What, and Why of Human Intelligence Gathering: Self-Reported Measures of Interrogation Methods," *Applied Cognitive Psychology*, Vol. 28, 2014, pp.817-828; Jonathan P. Vallano, Jacqueline R. Evans, Nadja Schreiber Compo, and Jenna M. Kieckhaefer, "Rapport-building during Witness and Suspect Interviews: A Survey of Law Enforcement," *Applied Cognitive Psychology*, Vol. 29, 2015, pp.369-380.

⁵¹Roger Collins, Robyn Lincoln, and Mark G. Frank, "The Effect of Rapport in Forensic Interviewing," *Psychiatry, Psychology and Law*, Vol. 9, No. 1, 2002, pp.69-78. Ulf Holmberg

and Sven-Ake Christianson, “Murderers’ and Sexual Offenders’ Experiences of Police Interviews and their Inclination to Admit or Deny Crimes,” *Behavioral Sciences and the Law*, Vol. 20, 2002, pp.31-45. For reviews, see Jonathan P. Vallano and Nadja Schreiber Compo, “Rapport-building with Cooperative Witnesses and Criminal Suspects: A Theoretical and Empirical Review,” *Psychology, Public Policy, and the Law*, Vol. 21, No. 1, 2015, pp.85-99; Miet Vanderhallen and Geert Vervaeke, “Between Investigator and Suspect: The Role of the Working Alliance in Investigative Interviewing,” in *Investigative Interviewing*, ed. Ray Bull (2014 New York: Springer) pp.63-90.

⁵²Dave Walsh and Ray Bull, “How do Interviewers Attempt to Overcome Suspects’ Denials?” *Psychology, Psychiatry, and the Law*, Vol. 19, No. 2, 2012, pp.151-168.

⁵³Dave Walsh and Ray Bull, “Examining Rapport in Investigative Interviews with Suspects: Does its Building and Maintenance Work?,” *Journal of Police and Criminal Psychology*, Vol. 27, 2012, pp.73-84.

⁵⁴For a review of this research, see Vallano and Schreiber Compo, “Rapport-building with Cooperative Witnesses and Criminal Suspects: A Theoretical and Empirical Review”.

⁵⁵Jonathan P. Vallano and Nadja Schreiber Compo, “A Comfortable Witness is a Good Witness: Rapport-building and Susceptibility to Misinformation in an Investigative Mock-Crime Interview,” *Applied Cognitive Psychology*, Vol. 25, 2011, pp.960-970.

⁵⁶Jenna M. Kieckhafer, Jonathan P. Vallano, and Nadja Schreiber Compo, “Examining the Positive Effects of Rapport Building: When and Why Does Rapport-Building Benefit Adult Eyewitness Memory,” *Memory*, Vol. 22, No. 8, 2014, pp.1010-1023.

⁵⁷Vallano and Schreiber Compo, “Rapport-building with Cooperative Witnesses and Criminal Suspects: A Theoretical and Empirical Review”.

⁵⁸Laurence J. Alison, et al., “Why Tough Tactics Fail and Rapport Gets Results: Observing Rapport-Based Interpersonal Techniques (ORBIT) to Generate Useful Information From Terrorists,” *Psychology, Public Policy, and the Law*, Vol. 19, No. 4, 2013, pp.411-431; Laurence Alison, et al., “The Efficacy of Rapport-Based Techniques for Minimizing Counter-Interrogation Tactics Amongst a Field Sample of Terrorists,” *Psychology, Public Policy, and the Law*, Vol. 20, No. 4, 2014, pp.421-430.

⁵⁹Jane Goodman-Delahunty, Natalie Martschuk, and Mandeep K. Dhimi, “Interviewing High-value Detainees: Securing Cooperation and Disclosures,” *Applied Cognitive Psychology*, Vol. 28, 2014, pp.993-997.

⁶⁰Department of the Army, *Human Intelligence Collector Operations (Field Manual 2-22.3)*, (Arlington, VA: Headquarters, Department of the Army, 2006), pp. 8-4 – 8-7. The Army Field Manual does list an approach, Mutt and Jeff, which involves alternating between accusatory and friendly interrogators. There has been no published empirical examination of this technique.

⁶¹Bin al-Shibh and six detainees were subjected to EIT prior to being questioned by an interrogator, Senate Select Committee on Intelligence, *Committee Study of the CIA’s Detention*

and Interrogation Program, Executive Summary Background and History, p.77. Although KSM was questioned by Pakistani authorities after capture, he was not questioned by US interrogators before being subjected to EIT, *Ibid*, pp.81-82.

⁶²Christian A. Meissner, et al., “Accusatorial and Information-gathering Interrogation Methods and their Effects on True and False Confessions: A Meta-Analytic Review,” *Journal of Experimental Criminology*, Vol. 10, 2014, pp.459-486.

⁶³Meissner et al., “Accusatorial and Information-gathering Interrogation Methods and their Effects on True and False Confessions: A Meta-Analytic Review”. A meta-analysis is a method of statistically combining the results of many individual research studies examining similar research questions.

⁶⁴Colin Clarke, Rebecca Milne, and Ray Bull, “Interviewing Suspects of Crime: The Impact of PEACE Training, Supervision, and the Presence of a Legal Advisor,” *Journal of Investigative Psychology and Offender Profiling*, Vol. 8, 2011, pp.149-162; Walsh and Bull, “How do Interviewers Attempt to Overcome Suspects’ Denials?”; David W. Walsh and Rebecca Milne, “Keeping the PEACE? A Study of Investigative Interviewing Practices in the Public Sector,” *Legal and Criminological Psychology*, Vol. 13, 2008, pp.39-57.

⁶⁵Walsh and Bull, “What Really is Effective in Interviews with Suspects? A Study Comparing Interviewing Skills against Interviewing Outcomes”.

⁶⁶Senate Select Committee on Intelligence, *Committee Study of the CIA’s Detention and Interrogation Program*, Executive Summary Background and History, pp.81, 89-90.

⁶⁷Department of the Army, *Human Intelligence Collector Operations (Field Manual 2-22.3)*, pp.8-14, 8-15.

⁶⁸Ray Bull, “When in Interviews to Disclose Information to Suspects and to Challenge Them”, in *Investigative Interviewing*, ed. Ray Bull (2014 New York: Springer) pp.167-182; Walsh and Bull, “How do Interviewers Attempt to Overcome Suspects’ Denials?”

⁶⁹Maria Hartwig, Par Anders Granhag, Leif A. Stromwall, and Aldert Vrij, “Detecting Deception via Strategic Disclosure of Evidence,” *Law and Human Behavior*, Vol. 29, No. 4, 2005, pp.469-484.

⁷⁰Maria Hartwig, Par Anders Granhag, and Leif A. Stromwall, “Guilty and Innocent Suspects’ Strategies during Police Interrogations,” *Psychology, Crime, and Law*, Vol. 13, No. 2, 2007, pp.213-227.

⁷¹Sarah Jordan, et al., “Early versus Late Disclosure of Evidence: Effects on Verbal Cues to Deception, Confessions, and Lie Catchers’ Accuracy,” *Journal of Investigative Psychology and Offender Profiling*, Vol. 9, 2012, pp.1-12.

⁷²Serra Tekin, et al., “Interviewing Strategically to Elicit Admissions from Guilty Suspects,” *Law and Human Behavior*, Vol. 39, No. 3, 2015, pp.244-252.

⁷³Par Anders Granhag, Jenny Rangmar, and Leif A. Stromwall, “Small Cells of Suspects: Eliciting Cues to Deception by Strategic Interviewing,” *Journal of Investigative Psychology and Offender Profiling*, Vol. 12, 2015, pp.127-141.

⁷⁴Maria Hartwig, Par Anders Granhag, Leif A. Stromwall, and Ola Kronkvist, “Strategic Use of Evidence during Police Interviews: When Training to Detect Deception Works,” *Law and Human Behavior*, Vol. 30, 2006, pp.603-619.

⁷⁵Toliver, *The Interrogator*.

⁷⁶Par Anders Granhag, Sebastian C. Montecinos, and Simon Oleszkiewicz, “Eliciting Intelligence from Sources: The First Scientific Test of the Scharff Technique,” *Legal and Criminological Psychology*, Vol. 20, No. 1, 2013, pp.96-113.

⁷⁷Granhag et al., “Eliciting Intelligence from Sources: The First Scientific Test of the Scharff Technique”; Lennart May, Par Anders Granhag, and Simon Oleszkiewicz, “Eliciting Intelligence using the Scharff Technique: Closing in on the Confirmation/Disconfirmation Tactic,” *Journal of Investigative Psychology and Offender Profiling*, Vol. 11, No. 2, 2014, pp.136-150; Simon Oleszkiewicz, Par Anders Granhag, and Steve M. Kleinman, “On Eliciting Intelligence from Human Sources: Contextualizing the Scharff Technique,” *Applied Cognitive Psychology*, Vol. 28, No. 6, 2014, pp.898-907; Simon Oleszkiewicz, Par Anders Granhag, and Sebastian Cancino Montecinos, “The Scharff Technique: Eliciting Intelligence from Human Sources,” *Law and Human Behavior*, Vol. 38, No. 5, 2014, pp.478-489.

⁷⁸Par Anders Granhag, Simon Oleszkiewicz, Leif A. Strömwall, and Steven M. Kleinman, “Eliciting Intelligence with the Scharff Technique: Interviewing More and Less Cooperative and Capable Sources,” *Psychology, Public Policy, and the Law*, Vol. 21, No. 1, 2015, pp.100-110.

⁷⁹Department of the Army, *Human Intelligence Collector Operations (Field Manual 2-22.3)*, pp. 7-1 – 7-14.

⁸⁰Senate Select Committee on Intelligence, *Committee Study of the CIA’s Detention and Interrogation Program*, Executive Summary Background and History, p.165.

⁸¹Department of the Army, *Human Intelligence Collector Operations (Field Manual 2-22.3)*, Chapter 9.

⁸²Pia Schonfeld, Karina Ackermann, and Lars Schwabe, “Remember under Stress: Different Roles of Autonomic Arousal and Glucocorticoids in Memory Retrieval,” *Psychoneuroendocrinology* Vol. 39, 2014, pp.249-256.

⁸³McCoy and Strecker, “The Cognitive Cost of Sleep Lost”.

⁸⁴See Note 28.

⁸⁵For a brief introduction to research on the effect of misinformation and suggestion on memory retrieval and the development of false memories, see: Elizabeth F. Loftus, “Make-believe Memories” *American Psychologist*, Vol. 58, 2003, pp.867-873. For a discussion of how misinformation can be problematic in intelligence interrogation, see Elizabeth F. Loftus, “Intelligence Gathering Post-9/11,” *American Psychologist*, Vol. 66, 2011, pp.532-541.

⁸⁶C.A. Morgan III, Steven Southwick, George Steffian, Gary A. Hazlett, and Elizabeth F. Loftus, “Misinformation Can Influence Memory for Recently Experienced, Highly Stressful Events,” *International Journal of Law and Psychiatry*, Vol. 36, 2013, pp.11-17.

⁸⁷Ronald P. Fisher, R. Edward Geiselman, and Michael Amador, “Field Test of the Cognitive Interview: Enhancing the Recollection of Actual Victims and Witnesses of Crime,” *Journal of Applied Psychology*, Vol. 74, No. 5, 1989, pp.722-727.

⁸⁸Other versions of the CI include rapport building, requesting that sources refrain from guessing about information, transferring control of the interview to sources, and guided imagery.

⁸⁹Amina Memon, Christian A. Meissner, and Joanne Fraser, “The Cognitive Interview: A Meta-Analytic Review and Study Space Analysis of the Past 25 Years,” *Psychology, Public Policy, and the Law*, Vol. 16, No. 4, 2010, pp.340-372.

⁹⁰Department of the Army, *Human Intelligence Collector Operations (Field Manual 2-22.3)*, pp. 12-4; Jacqueline R. Evans, et al., “Criminal Versus HUMINT Interrogations: The Importance of Psychological Science to Improving Interrogation Practice”.

⁹¹The focus of this discussion is human deception detection. For a summary of research on the polygraph, see: The Committee to Review the Scientific Evidence on the Polygraph, National Research Council, *The Polygraph and Lie Detection* (Washington DC: National Academies Press, 2003). For a summary of research on other mechanical means of lie detection, see Kristin E. Heckman and Mark D. Happel, “Mechanical Detection of Deception: A Short Review,” in *Educating Information: Interrogation: Science and Art, Foundations for the Future*, ed. Intelligence Science Board (Washington, DC: National Defense Intelligence College, 2006) pp.63-94. The current state of research on the latter indicates that these methods lack the validity necessary for use in the field.

⁹²Charles F. Bond and Bella M. DePaulo, “Accuracy of Deception Judgments,” *Personality and Social Psychology Review*, Vol. 10, No. 3, 2006, pp.214-234.

⁹³Charles F. Bond and Bella M. DePaulo, "Individual Differences in Judging Deception: Accuracy and Bias," *Psychological Bulletin*, Vol. 134, No. 4, 2008, pp.477-492.

⁹⁴For a review of this research, see Aldert Vrij, Par Anders Granhag, and Stephen Porter, "Pitfalls and Opportunities in Nonverbal and Verbal Lie Detection," *Psychological Science in the Public Interest*, Vol. 11, No. 3, 2010, pp.89-121.

⁹⁵Narchet, et al., "Modeling the Influence of Investigator Bias on the Elicitation of True and False Confessions"; Meissner and Kassin, "'He's Guilty!': Investigator Bias in Judgments of Truth and Deception".

⁹⁶Narchet, et al., "Modeling the Influence of Investigator Bias on the Elicitation of True and False Confessions".

⁹⁷Stephen Porter, Sean McCabe, Michael Woodworth, and Kristine A. Peace, "'Genius is 1% Inspiration and 99% Perspiration'. Or is it? An Investigation of the Impact of Motivation and Feedback on Deception Detection," *Legal and Criminological Psychology*, Vol. 12, 2007, pp.297-309; Aldert Vrij, "The Impact of Information and Setting on Detection of Deception by Police Detectives," *Journal of Nonverbal Behavior*, Vol. 18, No. 2, 1994, pp.117-136.

⁹⁸Bella M. DePaulo, et al., "Cues to Deception," *Psychological Bulletin*, Vol. 129, No. 1, 2003, pp.74-118.

⁹⁹Maria Hartwig and Charles F. Bond, Jr., "Why do Lie-Catchers Fail? A Lens Model Meta-Analysis of Human Lie Judgments," *Psychological Bulletin*, Vol. 137, No. 4, 2011, pp.643-659.

¹⁰⁰*Ibid.*

¹⁰¹For a review of this research, see Aldert Vrij, "Interviewing to Detect Deception," *European Psychologist*, Vol. 19, No. 3, 2014, pp.184-194; Aldert Vrij and Par Anders Granhag, "Eliciting Information and Detecting Lies in Intelligence Interviewing: An Overview of Recent Research," *Applied Cognitive Psychology*, Vol. 28, 2014, pp.936-944.

¹⁰²Aldert Vrij, et al., "Outsmarting the Liars: The Benefit of Asking Unanticipated Questions," *Law and Human Behavior*, Vol. 33, 2009, pp.159-166; Lara Warmelink, et al., "The Effects of Unexpected Questions on Detecting Familiar and Unfamiliar Lies," *Psychiatry, Psychology, and the Law*, Vol. 20, No. 1, 2013, pp.29-35.

¹⁰³Gary L. J. Lancaster, Aldert Vrij, Lorraine Hope, and Bridget Waller, "Sorting the Liars from the Truth Tellers: The Benefits of Asking Unanticipated Questions on Lie Detection," *Applied Cognitive Psychology*, Vol. 27, 2013, pp.107-114.

¹⁰⁴Franziska Clemens, Pär Anders Granhag, and Leif A. Strömwall, “Counter-Interrogation Strategies when Anticipating Questions on Intentions,” *Journal of Investigative Psychology and Offender Profiling*, Vol. 10, 2013, pp.125-138.

¹⁰⁵Tuule Soonistea, Par Anders Granhag, Melanie Knieps, and Aldert Vrij, “True and False Intentions: Asking about the Past to Detect Lies about the Future,” *Psychology, Crime, and Law*, Vol. 19, No. 8, 2013, pp.673-685.

¹⁰⁶Vrij et al., “Outsmarting the Liars: The Benefit of Asking Unanticipated Questions”.

¹⁰⁷Annelies Vredeveldt, Peter J. van Koppen, and Par Anders Granhag, “The Inconsistent Suspect: A Systematic Review of Different Types of Consistency in Truth Tellers and Liars,” in *Investigative Interviewing*, ed. Ray Bull (New York: Springer, 2014) pp.183-208.

¹⁰⁸CIA Headquarters were convinced that Abu Zubaydah and Gul Rahman held specific intelligence requirements despite later assessments that these detainees never held this information, Senate Select Committee on Intelligence, *Committee Study of the CIA’s Detention and Interrogation Program*, Executive Summary Background and History, pp. 31, 137. Interrogators were not able to ascertain that some information provided by KSM was false, *Ibid*, p.96.

¹⁰⁹“Executive Order 13491: Ensuring Lawful Interrogations” (2009) Retrieved from <https://www.whitehouse.gov/the-press-office/ensuring-lawful-interrogations>.

¹¹⁰High Value Detainee Interrogation Group, “Interrogation: Expanding the Frontiers of Research and Practice” (2014) Retrieved from <http://online.fliphtml5.com/xaga/cwpt/#p=1>

¹¹¹Fallon, “Collaboration Between Practice and Science will Enhance Interrogations”

¹¹²Hoffman et al., *Report to the Special Committee of the Board of Directors of the American Psychological Association: Independent Review Relating to APA Ethics Guidelines, National Security Interrogations, and Torture*.

¹¹³Senate Select Committee on Intelligence, *Committee Study of the CIA’s Detention and Interrogation Program*, Executive Summary Background and History, pp.31-33.

¹¹⁴Martin E. P. Seligman and Gwyneth Beagley, “Learned Helplessness in the Rat,” *Journal of Comparative and Physiological Psychology* Vol. 88, No. 2, 1975, pp.534-541.

¹¹⁵Seligman was quoted stating “I think learned helplessness would make someone more dependent, less defiant and more compliant, but I do not think it would lead reliably to more truth-telling.” Martin Seligman, ‘A Response to Bryan Welch’, *The Huffington Post: The Blog*,

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¹¹⁶Steve Kleinman, “The Promise of Interrogation vs. the Problem of Torture,” *Valparaiso University Law Review*, Vol. 43, 2009, pp.1577-1589; Janoff-Bulman, “Erroneous Assumptions: Popular Belief in the Effectiveness of Torture Interrogation”.