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Noncoercive Human Intelligence Gathering

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Despite widespread recognition that coercive methods for intelligence gathering are unethical and counterproductive, there is an absence of empirical evidence for effective alternatives. We compared 2 noncoercive methods—the Modified Cognitive Interview (MCI) and Controlled Cognitive Engagement (CCE)—adapted for intelligence gathering by adding a moral frame to encourage interviewees to consciously consider sharing intelligence. Participants from the general population experienced an unexpected live event where equipment was damaged, and an argument ensued. Prior to interview, participants were incentivized to withhold information about a target individual implicated in the event. CCE yielded more target information more frequently than MCI (67% vs. 36%). Similarly, framing yielded target information more often (65% vs. 39%). The effects of interview and framing appear to be additive rather than interactive. Our results indicate combining noncoercive interview methods with moral framing can enhance intelligence gain.

Keywords: human intelligence, interview, noncoercive, framing, information-gathering

> I have spoken with people at the highest levels of intelligence and I asked them the question, does it work, does torture work, and the answer was yes, absolutely.
>
> —Donald Trump, January 26, 2017, ABC News

Intelligence interviewers involved in national security operations seek to gain useful information in situations of conflicting interest where interviewees (e.g., detainees) typically wish to withhold information (e.g., Human Intelligence Collector Operation, 2006). Calls for the use of torture create a need for psychological research to test intelligence-gathering methods (Meissner, Surmon-Böhr, Oleszkiewicz, & Alison, 2017; Vrij et al., 2017). National security restrictions and the ethics of psychological research mean that the outcomes of torture cannot be evaluated empirically. However, interview transcripts and post hoc accounts from interrogators and detainees (e.g., Kassin, 2017; Porter, Rose, & Dilley, 2016; Vanderhallen & Vervaeke, 2014) indicate that coercive and aggressive techniques (e.g., Inbau, 2013) result in false confessions and incorrect or misleading information (Meissner, Redlich, Bhatt, & Brandon, 2012) and can entrench attitudes culminating in an unwillingness to yield any information (Goodman-Delahunty, Martschuk, & Dhami, 2014; Intelligence Science Board, 2009).

If, as many believe, coercive methods are contra-indicators for information gain, what of noncoercive methods? Despite recent concerns regarding coercive methods and a realization that they may not be effective (Senate Select Committee on Intelligence, 2014), there is little psychological research aimed at testing intelligence-gathering alternatives (Meissner et al., 2017; Vrij et al., 2017). Indeed, we know of no empirically evaluated noncoercive interview protocols designed specifically for human intelligence gathering.[1]

Evans and colleagues (2014) compared the effectiveness of interrogation techniques taken from the US Army field manual (2-22-3; 2006). In particular, they compared direct questioning, in which answers to open-ended questions are followed up by probes for detail, with emotional framing of direct questioning. Emotional framing was of two kinds: positive, using "fear-down" and "pride-and-ego up" techniques in which, for example, the seriousness of the offense was minimized (fear-down), and the participant was complemented on their honesty (pride-and-ego up); and negative, using "fear-up," "pride-and-ego down," and "futility" techniques in which the seriousness of the offense and consequences for the participant (fear-up), the impact of being seen to be dishonest (pride-and-ego down) and the ease with which the offense could be detected (futility) were emphasized. Emotional framing was more effective in gaining admissions of complicity and other event information than direct questioning alone, with positive framing

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[1] It has been suggested that the Scharf technique may offer advantages for intelligence gathering (May & Granhag, 2016). However, to date there is no consistent interview protocol associated with the technique, it has yet to be evaluated in the field, and in its current form, it resembles a set of general best-practice guidelines rather than an interview method per se.

out-performing negative framing. This study is valuable in showing the potential for adapting interrogation methods to gain more information. However, it differs from the study reported below in two key respects: participants were complicit in the offense event (they cheated along with a confederate) and were thus withholding about themselves, and also the protocols used were designed for detecting deception via maximization and minimization approaches found in coercive interviewing methods (e.g., Inbau, 2013), which may account for the high participant attrition rates (73 out of 196 originally recruited participants did not complete the study).

Here we introduce two methods for yielding intelligence from interviewees who have been incentivized to withhold information about events they have seen and heard rather than been involved in. Criminal and terrorist cells typically operate with individuals in the cell not knowing each other or the identity of their leaders, and often they will not be directly involved in front-line criminal or terrorist activity. Yet, they will be in possession of information of interest to the authorities, which they will not wish to yield (e.g., Harms, 2017; Harris-Hogan, 2013). The methods build upon interview protocols, selected because they have been subjected to empirical field as well as laboratory trials, which were originally designed to maximize information yield in the context of detecting deception: Controlled Cognitive Engagement (Ormerod & Dando, 2015) and Modified Cognitive Interviewing (Colwell et al., 2009; De Rosa et al., 2018; Morgan, Rabinowitz, Leidy, & Coric, 2014; Morgan, Rabinowitz, Palin, & Kennedy, 2015). We investigate the utility of the methods, both in their original form and with a protocol created specifically to encourage information yield from interviewees incentivized to withhold elements of an event.

The Cognitive Interview (CI; Geiselman & Fisher, 2014) provides a theoretically grounded, empirically supported technique for retrieving information from cooperative individuals (witnesses, victims, and persons of interest). The CI is well documented, comprising a series of mnemonics and strategies aimed at optimizing the social and communication aspects of an interview (see Geiselman & Fisher, 2014). Although not designed for uncooperative interviewees, a number of CI techniques have been used to detect deception by amplifying the differences between deceivers and truth tellers (see Morgan et al., 2014 for a protocol).

Morgan et al. (2014) used a Modified Cognitive Interviewing method, which they refer to as the MCI, comprising five mnemonic prompts; a) tell me everything in as much detail as you can, starting at the beginning, b) a visual account, c) an auditory account, d) an emotional account, and e) a temporal account, following which interviewees are invited to add any missed information and alter any errors. A typical finding in deception studies, and one that builds upon the reality monitoring framework of Johnson and Raye (1981), is that verbal accounts of truth-tellers contain richer descriptions of the memorial details of events than those of deceivers (e.g., De Rosa et al., 2018; Memon, Fraser, Colwell, Odinot, & Mastroberardino, 2010). The MCI mnemonics aim to capitalize upon this difference, thereby amplifying differences in verbal behavior of liars and truth-tellers. Empirical evaluations of MCI confirm this effect, resulting in improved deception detection (Colwell, Hiscock-Anisman, Memon, Rachel, & Colwell, 2007; Morgan et al., 2014). Truth-tellers appear to benefit from the mnemonics while the same mnemonics can induce cues to deceit in deceivers such as increased errors, shorter responses, and information leakage (Colwell et al., 2007, 2009; Morgan et al., 2014, 2015; Vrij et al., 2008). In laboratory studies with professionals and lay interviewers, the MCI resulted in the detection of between 82 and 92% of deceivers (Morgan et al., 2014, 2015).

Controlled Cognitive Engagement (CCE; Ormerod & Dando, 2015) is an interview method that focusses upon coherence, consistency, and behavioral reactions to interviewer challenges. The CCE protocol invokes three cyclical stages of a) baselining, or building rapport and establishing a neutral behavioral baseline, b) information-gathering questions that commit the interviewee to an account of the truth, and c) veracity testing, in which the interviewer asks questions that pose tests of expected knowledge, setting up an implicit challenge for deceptive interviewees that triggers behavior change. CCE operates via carefully managed question types and employs tactical questioning techniques (Dando & Bull, 2011; Dando, Bull, Ormerod, & Sandham, 2015; Parkhouse & Ormerod, 2018; Vrij et al., 2008). In an in vivo, double-blind, randomized-control field trial conducted in international airports, CCE produced the highest levels of deception detection found to date (up to 74% accuracy against a 1:1000 deceiver: truth-teller base rate). Encouragingly for the current context, CCE significantly increased the amount of information gained from both truth-tellers and deceivers compared with current security interview practices.

Neither MCI nor CCE were developed for intelligence gathering, and so intentionality on the part of the interviewer is not explicit in either method (Perloff, 2010); rather, both seek to detect deception by discretely depleting the cognitive resources of deceivers compared with truth-tellers (Ormerod & Dando, 2015; Vrij, Fisher, Mann, & Leal, 2006; Vrij, et al., 2008). Hence, interviewees may unknowingly leak information when answering questions. As the interview progresses, if interviewees become aware that they have inadvertently revealed information, this may lead them to yield additional information to save face or to recover consistency of their account. Similarly, deceivers may become less coherent and more inconsistent as the interview progresses, resulting in information leakage or a decision to yield information to maintain consistency.

The mnemonic prompts of MCI capture differences between truth-tellers' and deceivers' perceptual experiences of events (the sounds, sights, emotions, etc.; Morgan et al., 2014, 2015). In contrast, the tactical questioning of CCE aims to capture differences between truth-tellers and deceivers in their reactions to challenges to reveal information they ought to know if their account is true, thus focusing on individuals' conceptual understandings of events. Research has emphasized a distinction between conceptual and perceptual memory processes. Implicit perceptual memory concerns physical or sensory event units whereas explicit conceptual memory focuses on meaning and semantic features of an event (e.g., Gong et al., 2016; Roediger, 1990; Roediger & McDermott, 1995; Srinivas & Roediger, 1990; Vakil, Wasserman, & Tibon, 2018). Accordingly, it is reasonable to expect that the target information yielded may differ both qualitatively and quantitatively across MCI and CCE interview conditions.

Adapting MCI and CCE Techniques for Intelligence Gathering

We then considered how to move from covert intentionality on the part of the interviewer to promote overt intelligence gathering with MCI and CCE—being explicit about the need for information rather than relying on depleted cognitive resources. We included a persuasive message within each technique to encourage the interviewee to consciously yield information despite being incentivized to withhold. To maximize the impact of the persuasive message, we encouraged effortful processing with reference to dual-process models of persuasion (e.g., Petty & Cacioppo, 1986; Chaiken, Liberman, & Eagly, 1989), which postulate that motivating people to process persuasive messages carefully can improve persuasion outcomes (e.g., Meyers-Levy & Maheswaran, 2004; Martin, Hewstone, & Martin, 2007). Drawing on one model, the Heuristic-Systematic Model of persuasion (HSM; Chaiken et al., 1989), we motivated participants to actively scrutinize the persuasive message using positive framing, which originates from prospect theory (Tversky & Kahneman, 1981). Faced with two choices—one posing little risk, the other posing more—preference for one option over another can be influenced by the manner in which alternatives are framed.

This effortful type of processing is in contrast to heuristic processing, which is comparatively effortless and characterized by the application of simple decision rules such as the credibility of the source, or here the financial incentivization to withhold target information, for example. In intelligence gathering contexts, both types of cognitive processing—heuristic and systematic—may have value. Indeed, simultaneous processing of persuasive messages is believed to be commonplace (e.g., Petty, Cacioppo, Strathman, & Priester, 2005). However, a consistent finding is that systematic processing typically improves persuasion outcomes, and when systematic processing is appreciable, heuristic cues have less persuasive impact (Martin et al., 2007; Neuwirth, Frederick, & Mayo, 2002; Teng, Khong, & Goh, 2015; Wegener, Petty, Smoak, & Fabrigar, 2004). We also made the interviewer's intentions overt using positive moral framing, which has been effective in improving motivation to change eating and exercise behavior and consumer choice (Moon, Bergey, Bove, & Robinson, 2016; O'Keefe & Jensen, 2006). Moral framing has also been found to reduce the gap between political opponents by emphasizing similarities over differences (Feinberg & Willer, 2013, 2015).

Current Research

Below we report an empirical evaluation of MCI and CCE techniques for human intelligence-gathering, comparing them to adapted versions of each, which we refer to as Framed-MCI and Framed-CCE. In the adapted versions, each information-gathering request is preceded by a positive responsibility frame that explicitly highlights personal responsibilities and alternative outcomes. The intention was to encourage interviewees to process the persuasion message systematically and to provide a more complete account of what they saw rather than to choose the alternative, incentivized option of withholding event information.

In the study, participants witnessed an unexpected live event where conditions of social power, in-group favoritism, and outgroup bias were manipulated to encourage affinity for one of the scenario actors (a confederate playing the role of a student who we refer to as the "student") over another (a confederate playing the role of a researcher). Initial situational judgments of blame were measured, following which participants were incentivized to withhold all information about the student and her involvement in the event. Interviewers naïve to the event interviewed participants to elicit detailed event information using one of the four interview techniques. To understand the efficacy of the techniques for intelligence interviewing, we considered preinterview blame judgments, target information yield, post interview blame judgments, and interviewee's perceptions of their verbal behavior to gain insight into the locus of effects. We are not concerned with the detection of deception nor with eyewitness accounts per se, rather whether reluctant participants yielded any target information and if so, how much target information they yielded.

We formulated the following hypotheses. First, because the unmodified MCI and CCE techniques were devised to raise cognitive load, we hypothesized that both would result in some target information yield despite participants being incentivized to withhold. Second, we hypothesized that participants in the MCI condition would yield less target intelligence because it focusses less than CCE on the concrete elements of an event. Third, the Framed-MCI and Framed-CCE techniques were devised both to raise cognitive load and to persuade participants to consciously yield, and so we hypothesized that in combination our modifications would increase the amount of target information yielded compared with the unmodified versions. Fourth, information yield in the MCI and CCE unframed conditions would likely be as a result of unconscious leakage and so post interview, participants would be less aware that they had revealed target information than participants in the Framed-MCI and Framed-CCE conditions.

Method

Participants

A total of 157 adult participants from the general population took part as interviewees (60 males & 95 females). Participants were recruited from Sussex (South of England), Wolverhampton (West Midlands of England), and London through word of mouth, advertisements placed on social media, and flyers distributed in local cafes. A priori G*power analysis indicated this sample size of 157 was sufficient to detect a medium effect at 95% CI, with 0.80 power (Cohen, 1988). The US Federal Bureau of Investigation Institutional Review board and University of Westminster and University of Sussex research ethics committees approved the study. The mean age of participants was 28.36 years ($SD = 5.29$), ranging from 18 to 45 years. Forty-three (27%) were randomly assigned to the Modified Cognitive Interview (MCI), 37 (24%) to Controlled Cognitive Engagement (CCE), 37 (24%) to the Framed Modified Cognitive Interview (F-MCI) and 40 (26%) to the Framed Controlled Cognitive Engagement (F-CCE). Eight interviewers took part (CT; KV; CJ; TC; LU; SH; FE; SO) with a mean age of 33.49 years ($SD = 19.12$), ranging from 23 to 56 years. The aforementioned interviewers conducted 24, 19, 18, 18, 21, 22, 18, and 17 interviews respectively across each of the four conditions, completing all interviews in one condition before undergoing training for the next condition then completing all interviews in

that condition and so on. Interviewers and participants were naïve to the experimental hypotheses and research design.

Design

Participants were assigned to either CCE or MCI interview groups. Each group was further subdivided into Framed or Unframed groups, giving four interview conditions. Key dependent measures included the number of participants in each condition who yielded target information (i.e., the information they were incentivized to withhold), the number of information items revealed overall, and the number of target information items revealed.

Procedure

In the experiment, participants witnessed a staged accident during a classroom session in which a laptop computer fell from a table as it was being moved by two confederates, one posing as a researcher and the other posing as a student taking part as a study participant. The event was designed to set up conditions under which participants would, in a subsequent interview, want to withhold information about the student confederate. Participants saw the researcher decide to move the table in order to reach a power socket for the laptop charger. The researcher then asked one of the participants (in all instances, the student confederate) to help move the table. The researcher then moved the table before the participant could get a full grip of their side of the table, causing the laptop to crash to the ground and smash the screen. The researcher then verbally abused the student confederate and blamed them for causing the accident, suggesting that the student confederate would be made to pay for damage to the laptop. During this verbal interaction the researcher ensured that the participants could see the extensive damage to the laptop. Thus, the event was configured in such a way that participants would doubt the accusations of the researcher but at the same time be open to a concern (subsequently reinforced by another confederate prior to interview) that the student confederate might be falsely accused of culpability if their involvement was drawn to the attention of those investigating the incident.

Prior to running the experiment, a pilot study was conducted to check that the event created the required conditions for participants to choose to withhold information. Two pilot events were undertaken with five participants in each. After witnessing the event, participants completed a written free recall of the event, with the instruction simply to recall everything they saw during the event. All participants reported the basic details of the event correctly, in particular all reporting that both the student and the researcher were involved in attempting to move the table. Nine out of 10 of the pilot participants reported without prompting that, although the student was involved, the researcher was to blame and had unfairly accused the student of culpability.

In the experiment, participants experienced the event in groups of between six and eight people. Embedded in each group was a confederate playing the role of a participant (from here on referred to as the student), and a confederate playing the role of researcher (from here on referred to as the researcher). The researcher greeted participants and ran the session during which the event occurred. Participants were primed to be sympathetic to student in three ways: a) placing the student within the participant group. The student arrived and interacted with participants and completed the same tasks, creating conditions for in-group favoritism (Turner, Brown, & Tajfel, 1979); b) the scenario, that is, the manner in which the event unfolded, and verbal exchanges that took place between the researcher and the student during the event, which demonstrated unfairness and hostility on the part of the researcher; and c) the researcher taking charge of the session, which created a perceived imbalance of social influence (Brewer, 1979) in which the researcher was clearly more powerful than the student. The researcher and student repeated the live event on 13 occasions, following a script. Participants' initial judgments of blame for the accident in the event were measured immediately post event, prior to being interviewed.

Participants were initially paid $30 each to participate. After the stimulus event, and following completion of a post-event questionnaire, participants were instructed by a further confederate (from here on referred to as the assistant) to withhold all information about the presence or involvement of the student in order to avoid the student being wrongly held responsible for the damage to the laptop. The assistant further encouraged participants to withhold information by explaining that an additional payment of $60 would be forthcoming from the assistant dependent upon the participant's interview performance. Details of what good interview performance constituted were kept deliberately vague so that participants were not unduly influenced in how they would act during the interview but so that they would likely infer a positive link between the instruction to withhold information and receipt of the additional payment. In fact, all participants were paid the entire amount ($90) irrespective of interview performance. The research procedure involved seven phases for all participants:

1. Upon arrival, all participants were brought by the assistant into a reception area where they were introduced to the other participants, and each was provided with an information sheet. Once participants had read the information sheet, they were offered an opportunity to ask questions prior to signing the first general consent form. To mask the true nature of the research, we adopted a two-part approach to gaining consent. The first explained that the research comprised two sessions and that in the first session participants would complete a series of paper-based questionnaires designed to collect information about individual cognitive style and mood. Further, the questionnaires would be completed individually but in the same room as several other participants. It was then explained that a second session would take place after the first (following a short delay), when participants would be individually interviewed to understand more about the way in which they make decisions. Finally, they were asked to complete a questionnaire to give their opinions about the interview and the research, in general.

2. The assistant then took the participants as a group to a classroom, where she introduced them to the researcher and left them with the instruction to complete two questionnaires individually. While completing the first questionnaire, an unexpected event took place involving the student and the researcher. An altercation ensued during which a laptop computer was apparently seriously damaged. The researcher verbally blamed the student and

threatened to make the student responsible for paying for the damage. The entire session, from entering the classroom to leaving lasted approximately 25 min.

3. The assistant returned and then took participants from the classroom to a reception area where individual attitudes concerning who was to blame for the damage to the laptop were collected from each participant using a hard-copy mock Health and Safety report proforma.

4. Upon completion of the report, participants were informed by the assistant that they would be interviewed individually about the event. Prior to interview, participants were given additional instructions by the assistant that, to avoid any risk of the student being wrongly accused of being responsible for damaging the laptop, during the interview they should withhold all information about the presence and involvement of the student in the incident. These instructions were provided individually in hard copy and verbally by the assistant in the interview suite. To continue, participants were asked to sign a second consent form because to withhold event information, participants would need to formulate a lie script to ensure that their "story" made sense during the interview. Participants were given 30 mins alone in the interview suite and were encouraged by the assistant to use this time to formulate a convincing account of the event to exclude all mention of the student. Participants were able to ask questions prior signing the second consent form, and it was made clear that they could withdraw at this point should they wish.

5. Participants were interviewed using the appropriate technique according to condition. All interviews were digitally audio and video recorded.

6. Having completed the interview, participants completed a final self-report measure of interview performance and perceptions of interviewer behaviors and techniques.

Interviewers followed a protocol for each condition. They underwent one full day of classroom training (given by Coral J. Dando, a qualified and experienced interviewer) for each of the four interview protocols, which included a detailed explanation of the relevant interview protocol and role-play practice. Interviewers also took part in an additional half-day practice session prior to conducting interviews for each condition, which was audio recorded. All received detailed verbal and written feedback on their performance. Interviewers were naïve to the design and experimental hypotheses, but they were provided with the following instructions: "The researcher's computer was seriously damaged during the data collection session. Your job is to interview the people in the room and find out exactly how the damage happened."

Materials

Interviews

Irrespective of condition, all interviews comprised the same number of discrete phases (5 in total) in the same order: a) explain and build rapport, b) free account, c) probed questioning, d) challenge, and e) closure. The interview protocols differed as a function of condition in the free account and the probed questioning only. The remaining phases were identical across conditions, as follows:

Explain and build rapport. Here, the interviewer explained to the participant that they were aware that a laptop had been seriously damaged and would be asking a series of questions about what had occurred. The interviewer then provided a general overview of the interview process and explained four ground rules (Report everything; Do not guess; Say if you do not understand; Say if you do not know the answer to a question). Participants were then offered the chance to ask questions.

Once the participant acknowledged that he or she was clear about the interview process and understood the ground rules, the interviewer then engaged the interviewee in more informal conversation to build rapport. The importance of rapport is acknowledged, albeit that what constitutes forensic rapport and how to build it is poorly operationalized (e.g., Walsh & Bull, 2012). One promising technique is interviewer self-disclosure, and so here rapport was initiated by the interviewer by offering some information about their personal situation, delivered in a manner to initiate a response from the interviewee (see Evans et al., 2014). Rapport building continued for a minimum of 6 mins during which the interviewer led the participant to understand the reciprocal nature of the interview, using silences to encourage the participant to speak/respond following self-disclosure statements made by the interviewer.

Challenge. This was the last of the information gathering phases of all interviews where, irrespective of information yield and/or interview performance, interviewees were verbally challenged concerning the completeness of the account given thus far, and "pushed" for more information:

> I think I have a fair understanding of what has happened, but I am not sure that you have told me everything you know. I have interviewed others who were in the room at the same time and they have provided me with more information than you have. It is important that you tell me as much as you can because otherwise I cannot fully understand what has happened. Take a few minutes and have another think about what happened. Tell me everything.

The interviewer sat silently waiting for the interviewee to respond for up to 10 s (counting silently). If the interviewee responded, then the interviewer sat and listened. No extra questions were asked. It the interviewee did not respond after 10 s, then the interviewer moved seamlessly to the next phase.

Closure. This final phase marked the end of the interview. Here the interviewer explained that the interview had now finished and thanked the participant for taking part and for explaining how the laptop was damaged. The participant was offered the opportunity to ask any questions. The recording device was turned off.

Modified Cognitive Interview (MCI)

Free account. This phase is the initial information gathering phase of the interview. Participants were first asked the following two blame questions (verbatim) a) who was to blame for the damage to the laptop and b) was anyone else involved. Once these

questions had been answered, the participant was asked to provide a detailed account of what had happened, verbatim as follows:

> What I would like you to do now is to tell me exactly what happened from the time you entered the room until the time you left, in as much detail as possible. Remember the four ground rules I described earlier-report everything; do not guess; say if you do not understand; say if you do not know the answer to a question.

The free account was uninterrupted by the interviewer. Once the interviewee had finished speaking, the interviewer silently waited a further 5 s (counting silently to 5) before thanking the interviewee and moving into the questioning phase of the interview. During this account, the interviewer displayed attentive listening behaviors.

Probed questioning. This phase of the MCI interviews comprised four information-gathering segments a) visual, b) auditory, c) emotional and d) extra information, replicating the structure of the MCI protocol employed by Morgan et al. (2014). The prompts used for each segment were as follows:

1. Visual. "Describe to me absolutely everything that you saw from the time you entered the classroom until the time you left. Provide as much detail as possible because I was not there."

2. Auditory. "Describe absolutely everything that you heard from the time you entered the classroom until the time you left. Provide as much detail as possible because I was not there."

3. Emotional. "Explain what the experience in the classroom was like for you—how did it feel?"

4. Mistakes. "Have you left anything out or made any mistakes in what you have told me about what happened in the classroom? Please take the time to think hard about what happened and tell me everything. It is important."

Framed Modified Cognitive Interview (Framed-MCI)

Free account. The second phase of interviews in this condition commenced with a positively framed moral rationale as to why the participant ought to fully explain what had occurred and who had been involved (adapted from Cesario, Higgins, & Scholer, 2008). The following prompts were delivered slowly, with a 5s pause between each prompt:

> I am going to ask you to tell me in more detail what happened in the classroom earlier. Unlike people who choose not to tell me everything, telling me about everyone that was involved and everything that happened when the laptop was damaged will **make** you feel that you are doing something to ensure that innocent people do not end up getting blamed for the damage.
>
> I have found that even those people who did not initially want to tell me everything understand that the best way forward is when everyone exercises their responsibility to provide full details.
>
> Those who have told me everything have done just that—exercised their responsibility, and that is the right and proper thing to do—they have done the right thing.
>
> Telling me everything is what you ought to do, too. That way I can fully understand what happened. Would you agree?
>
> So, if we are in agreement that providing full details is what you ought to do, and should do to ensure a fair investigation, please have good think about what happened and answer all my questions in as much detail as you can. Thank you.

From then on, this phase mirrored the free account protocol described above.

Probed questioning. Each segment mirrored that described in the MCI probed questioning but was preceded by a shorted reinforcement of the framed persuasion message that had been delivered at the start of the free account as described above.

Controlled Cognitive Engagement (CCE)

Free account. As in the MCI interviews, this is the first of the information gathering phases, but here it begins with an opportunity for the interviewer to watch and listen to the interviewee when he or she is providing information about an event or experience unrelated to the witnessed event (this is referred to as baselining—see Ormerod & Dando, 2015). Interviewers were able to choose from a bank of baselining questions according to context and/or participant. Each baseline question was an open ended invitation to provide a detailed overview of an experience or event (e.g., Tell in as much detail as you can about other research you have taken part in; Tell me all about a recent holiday; Tell me in as much detail as you can all about your job, and what it entails). The interviewer listened and watched the interviewee's baseline behavior using silences and supportive interviewer behavior (nodding and smiling) to encourage an extended baseline narrative, asking follow-up questions where appropriate to ensure that participants spoke for a minimum of 3 min (in addition to the 6-min rapport-building phase described above). Participants were then asked the two blame questions (verbatim), following which participants were asked to provide a detailed account of what had happened, verbatim as described above.

Probed questioning. This phase of the CCE interviews comprised four information-gathering segments concerning people, actions, verbal and mistakes.

1. People involved. "Describe to me absolutely everything about everyone involved in the damage to the laptop. I know this will be really hard for you, but can you try and provide as much detail as possible because I was not there, and so I don't know what happened."

2. Movements. "Can you talk me through everyone's movements in as much detail as possible. Again, I know this is difficult for you, but can you try and provide as much detail as possible because I was not there, and so I don't know what happened."

3. Verbal. "Describe everything that was said by everyone in the room. It doesn't matter if you can't remember everything that was said, but try hard to explain who said what, and who spoke to whom. Thank you."

4. Mistakes. "Brilliant, you have been so helpful. Just before we finish, I wonder, have you left anything out or

made any mistakes in what you have told me about what happened in the classroom? Please take the time to think hard about what happened and tell me everything. It is really important that I understand because then I can find out what happened to the laptop."

Framed Controlled Cognitive Engagement (Framed-CCE)

Free account. The second phase of interviews in this condition commenced with the interviewer providing the same positively framed moral rationale as to why the participant ought to fully explain what had occurred as in the Framed-MCI (above). From then on, the protocol mirrored that of the CCE condition.

Probed questioning. Each segment mirrored that described in the CCE phase 3, but here each was preceded by a short reinforcement of the framed persuasion message (as in the MCI-Framed) that had been delivered at the start of free account.

Questionnaires

Postincident judgment questionnaire. Participants completed a questionnaire comprising two questions asking a) who was to blame (forced choice), and b) how confident are you when deciding who was to blame (a 5-point Likert style confidence scale).

Post interview perceptions questionnaire. Immediately following each interview, participants completed an additional questionnaire comprising a series of 15 questions - 2 dichotomous, and 12 Likert-type scale questions pertaining to how much information about the confederate and her involvement in the damage to the laptop they had revealed, the interview procedure itself, and interviewer style. Finally, participants answered an open-ended invitation to explain what had encouraged them to mention the student, if they had done so. On completion, each participant returned their questionnaire to the experimenter, who then asked them verbally whether, prior to interview, they had seen the accident as a genuine event or whether they had considered it might have been staged. All participants confirmed that they had not considered the event to be staged.

Results

Manipulation and Paradigm Efficiency Analysis

Postincident judgments. The event was constructed to ensure participants saw the researcher as to blame for the accident while creating a concern that the student might be blamed erroneously by others. To see whether the paradigm had been effective in bringing about stronger judgment of blame for the researcher over the student, participants' blame judgments were first considered. Overall, 73% (115) of respondents reported the researcher to be entirely to blame for the damage to the laptop, 24% (37) reported believing that both the researcher and the student were jointly to blame, while 3% (5) reported that the student was entirely to blame. See Table 1 for blame as a function of interview condition.

Interview and blame. There were nonsignificant associations between interview (CCE, MCI) and blame, $\chi^2(2) = 1.546$, $p = .462$ and Framing (framed, unframed) and blame, $\chi^2(2) = 1.779$, $p = .411$. Overall, mean confidence in blame judgments was 4.69 ($SD = 1.10$). There were no significant main effects or interactions for confidence across conditions ($M_{CCE} = 4.21$, $SD = .98$; $M_{CCE\text{-}Framed} = 4.56$, $SD = 1.02$; $M_{MCI\text{-}Framed} = 4.19$, $SD = 1.10$; $M_{MCI} = 4.78$, $SD = .97$) all Fs < 3.287 all ps $> .078$.

Table 1
Perceptions of Blame for the Damage as a Function of Interview Condition (Number and Percentages)

Condition	Researcher	Researcher & Student (Joint)	Student
CCE	28 (76%)	6 (16%)	3 (8%)
MCI	29 (67%)	13 (30%)	1 (3%)
Framed-CCE	31 (78%)	9 (22%)	0
Framed-MCI	27 (73%)	9 (24%)	1 (3%)

Note. Framed-CCE = Framed Controlled Cognitive Engagement; Framed-MCI = Framed Modified Cognitive Interview.

Blame Questions

At the commencement and end of the free account phase of all interviews, participants were asked two blame questions: a) who was to blame for the damage to the laptop and b) was anyone else involved. All participants complied with the experimenter instructions by replying "the researcher" and "no", respectively.

Interviewer Performance

A dip sample of 25% of each interviewer's interviews across each of the conditions (a total of 40 interviews) was scored by two independent researchers for adherence to the protocol. Using four measures, ranging from 1 to 5 (1 = *did not adhere*; 5 = *completely adhered*), performance was scored for a) inclusion of every phase in the correct order, b) phase instructions correctly verbalized, c) framing script correctly administered/excluded according to condition, and d) rapport building using self-disclosure. As expected, because protocols were applied verbatim, both researchers independently agreed that interviewers had all scored 5 on measures a, b, and c above ($M = 5$). Some mean rating differences for rapport (measure d) across interviewers did emerge, largely because this was a nonverbatim aspect of the interview protocols, so interviewer behaviors were less consistent. However, Cohen's kappa revealed a good level of agreement between raters for rapport, $\kappa = .81$, $p = .008$.

Information Revealed

Verbatim transcripts of the interviews were coded for the overall total amount of event information provided, which was then classified as target or nontarget information. For the purposes of this research, target information is defined as being any information concerning or indicating the presence and/or involvement of another person other than the researcher in the damage to the computer (here the student confederate), including the confederate's speech, her actions, any objects she may have touched, and so forth. For example, where a participant says "The researcher asked the student to help move the table," this would be coded as providing one piece of target information, that is the presence of/involvement of "the student" in the incident.

Unique event information items yielded in the information gathering phases were coded only once (i.e., repetitions were ignored). For example, the first time the participant mentioned "the student" during the free account, it was coded as a target detail on this first occasion, only. If a participant repeated "the student" this information was not recoded. However, if the participant stated, "the student picked up the table" in a later phase the "picked up" and "table" utterances were coded as new target information items. All other unique event information utterances were coded as nontarget information and were only coded once.

A dip sample of 25% of transcripts from each of the four interview conditions (9 CCE, 10 MCI, 10 CCE Framed, 9 MCI Framed) were coded independently by two experienced but independent researchers who were naïve to the experimental design and research hypotheses. Coders underwent a 4-hr training session provided by Coral J. Dando during which the bespoke coding approach was fully explained. Coders also worked through several examples alongside Coral J. Dando until they fully understood the nature of the coding process for the purposes of this research. Any misunderstandings and/or discrepancies were fully discussed during this training session until agreement was reached. Cohen's Kappa for the overall amount of event information revealed very good levels of agreement between coders for both, $\kappa = .91$, $p = .004$, and $\kappa = .88$, $p = .003$, respectively.

Overall Event Information

Transcripts were first analyzed for overall number of event information items verbalized (combination of nontarget event information + target event information) across all of the information gathering phases (free account, probed questioning, challenge). Participants in the MCI condition verbalized more event information than those in the CCE condition (see Table 2). A two-way between-subjects ANOVA with interviewer as a random effect revealed a significant main effect of interview, $F(1, 153) = 13.432$, $p < .001$, η_p^2 .81. The interviewer random effect was nonsignificant, as were all other main effects and interactions, all Fs < 8.42, all ps $> .083$.

Target Information Yielded

The numbers of participants who yielded in each condition is displayed in Table 3. A logistic regression using Interview (CCE vs. MCI), Framing (Framed vs. Unframed), and the interaction between these factors as predictors yielded a significant model, $\chi^2(3, N = 157) = 30.28$, $p < .001$, with Interview (Wald = 13.01, $p < .001$), and Framing (Wald = 10.23, $p = .001$) as significant predictors in the model. The interaction between Interview and Framing (Wald = 1.68, $p = .19$) did not reach significance.

The total number of target information items revealed during the course of the interview (summing all target relevant information across all of the information gathering phases) was then analyzed using a two-way between-subjects ANOVA again with interviewer as a random effect. Participants in the CCE condition, ($M = 2.95$, $SD = 2.40$, 95% CI [2.36, 3.53]), revealed more target information than those in the MCI condition, ($M = 1.37$, $SD = 1.70$, 95% CI [.90, 1.85]), $F(1, 7.58) = 9.037$, $p = .018$, $\eta_p^2 = .54$. Participants in the Framed condition, ($M = 3.04$, $SD = 2.28$, 95% CI [2.44, 3.63]), revealed more target information than those in the nonframed condition, ($M = 1.40$, $SD = 1.80$, 95% CI [.91, 1.89]), $F(1, 7.363) = 21.627$, $p = .002$, $\eta_p^2 = .77$. The Interviewer random effect was nonsignificant, as were Interview × Framing and Interview × Interviewer × Framing interactions, all ps $> .118$, all Fs < 3.120.

Target Information Yielded in Each Phase

Separate analyses of the number of target information items in each phase were then conducted (see Table 4)[2]. In the free account, participants in Framed conditions yielded more target information than those in Unframed conditions, $F(1, 78) = 26.359$, $p < .001$, $\eta_p^2 = .25$. The main effect of Interview and the Interview × Framing interaction were nonsignificant, all Fs < 2.573, all ps $> .113$.

In the probed questioning phase, participants in CCE conditions yielded more target information than those in MCI conditions, $F(1, 78) = 10.137$, $p = .002$, $\eta_p^2 = .16$. The main effect of Framing and the Interview × Framing interaction were non-significant, all Fs $< .712$, all ps $> .401$.

In the Challenge phase, participants in MCI conditions yielded more target information than those in CCE conditions, $F(1, 78) = 12.042$, $p = .001$, $\eta_p^2 = .13$, and participants in nonframed conditions revealed significantly more target information than those in Framed conditions, $F(1, 78) = 14.443$, $p < .001$, $\eta_p^2 = .16$. A significant Interview × Framing interaction also emerged, $F(1, 78) = 9.410$, $p = .003$, $\eta_p^2 = .11$, with participants in the Unframed MCI condition yielding more target information than those in all other conditions.

Post Interview Perceptions

The post interview perceptions questionnaire concerned compliance with researcher instructions (yes or no), a repetition of the blame question asked immediately post event, and 11 Likert scale type questions (ranging from 1 = *I strongly agree* to 5 = *I strongly disagree*) concerning each participant's perception of the interview process.

Question 1 asked participants whether they thought they had complied with instructions to withhold all information about the student and the student's involvement in the incident. Table 5 shows, for each condition, the number of respondents who stated they had yielded target information compared with the number who actually did reveal target information. Overall, 79% (124) of respondents reported that they had complied with instructions while 22% (34) reported that they had not. For the CCE conditions, the number of participants reporting compliance was 61/77 (73%). The corresponding number for the MCI conditions was 62/80 (78%). For the framed conditions, the number of participants reporting compliance was 57/77 (74%). The corresponding number for the unframed conditions was 66/80 (83%). A logistic regression using Interview (CCE vs. MCI), Framing (Framed vs. Unframed), and the interaction between these factors as predictors did not yield a significant model, $\chi^2(3, N = 157) = 4.03$, $p = .259$.

[2] The aim of this analysis was not to examine whether participants from each condition had yielded or not, which is done by the preceding analysis, but to examine for those who did yield the point at which they did so. Accordingly, participants who did not yield were excluded from the phase analyses.

Table 2
Total Number of Event Information Items Verbalized (Non-Target + Target Event Info)

Condition	Framed mean (*SD*: [95% CIs])	Unframed mean (*SD*: [95% CIs])	Overall mean (*SD*: [95% CIs])
MCI	13.1 (4.1: [12.4, 13.8])	13.3 (3.0: [12.6, 13.6])	13.2 (3.6: [12.5, 13.9])
CCE	12.3 (3.1: [10.5, 11.8])	10.2 (2.4: [10.0, 11.5])	11.3 (3.0: [10.6, 12.0])
Overall mean (*SD*: 95% CIs)	12.7 (3.6: [12.0, 13.4])	11.8 (3.1: [11.1, 12.5])	

Note. CCE = Controlled Cognitive Engagement; MCI = Modified Cognitive Interview.

Question 2 repeated the postincident blame question. Overall, 75% (117) of respondents reported the researcher to be entirely to blame for the damage to the laptop, 22% (35) reported believing that both the researcher and the student were jointly to blame, while 3% (5) reported that the student was entirely to blame. A McNemars test revealed no change in blame post interview, $p = .607$.

Question 3 of the post interview questionnaire asked participants to rate, on a Likert-type scale, how much information they had/had not revealed to the interviewer about the presence or involvement of a student in the incident. The scale ranged from 1 (*I provided no information at all*) to 5 (*I explained fully*). We refer to this as the perceived revelation scale. The overall mean perceived revelation score was 2.00 ($SD = .99$), and as a function of interview condition, $MCI_{revelation\ scale} = 2.08$ ($SD = .89$), $CCE_{revelation\ scale} = 2.00$ ($SD = .97$), Framed $MCI_{revelation\ scale} = 2.22$ ($SD = 1.23$), and Framed $CCE_{revelation\ scale} = 1.72$ ($SD = .82$). The mean scores did not differ significantly across conditions, $F = 1.1711$, $p = .167$. The relationship between compliance behavior (the actual revelation of target information) and perceived compliance (revelation scale) was nonsignificant, $r(157) = .059$, $p = .465$.

Perceptions and Experience of the Interview Process

Perceptions of interview. Two-way between subjects ANOVAs on the remaining 9 scale questions revealed significant main effects of Framing (Framed; No Frame) for two: a) *I found the interview cognitive demanding—I had to think very hard about what I said*, $F(1, 149) = 23.196$, $p < .001$, $\eta_p^2 = .14$, and b) *I found answering the interviewer's questions difficult*, $F(1, 149) = 9.944$, $p = .002$, $\eta_p^2 = .06$. Participants in the Framed condition strongly agreed that the interview was cognitively demanding (Framed = 1.82, 95% CI [1.49, 2.15]) whereas participants in the Unframed condition neither agreed nor disagreed (Unframed = 2.95, 95% CI [2.63, 3.27]). Participants in the Framed condition neither agreed nor disagreed the questions were difficult, (Framed = 2.76, 95% CI [2.51, 3.02]) whereas participants in the Unframed condition disagreed (Unframed = 3.30, 95% CI [3.06, 3.54]).

A significant main effect of Interview (CCE; MCI) also emerged for question c) *I found answering the interviewer's questions difficult*, $F(1, 149) = 4.833$, $p = .002$, $\eta_p^2 = .10$. Participants in the MCI condition agreed that the questions were difficult to answer (MCI = 2.84, 95% CI [2.59, 3.08]) whereas participants in the CCE condition disagreed that the questions were difficult to answer (CCE = 4.03, 95% [CI 3.28, 4.98]). All other main effects of Interview condition and Framing for the remaining questions were nonsignificant, all Fs < 4.833, all ps $> .013$. Likewise, all Framing × Interview condition interactions were nonsignificant, Fs < 1.558, all ps $> .185$.

Reasons for revealing information. The final open-ended question was analyzed employing qualitative content analysis (QCA; Schreier, 2012). Using a coding frame that covers all the meanings featured in written responses, a number of unique coding frame dimensions (primary codes) emerged.

Overall, despite 80 (51%) of participants having yielded some target information, just 51 participants (32%) responded to this question. Three categories emerged (some participants contributing to more than one category), as follows:

1. Cognitive effort. Twenty two participants (39%) referred to finding the interview task too difficult to withhold information. Four were in the Framed MCI condition, four were in the MCI condition, and the remaining 14 were in the Framed-CCE condition.

2. Fairness and justice. Nineteen participants (37%) reported they had deliberately yielded information because it was the right thing to do. Twelve participants were in Framed CCE condition, and seven were in the Framed-MCI condition.

3. Interviewer affect. Fifteen participants (22%) stated they had yielded information because they liked the interviewer and felt the interviewer was fair and positive. Of the participants whose responses fitted this category, nine were in the Framed-CCE condition, and the remainder were in the Unframed-MCI condition.

Table 3
Number (%) of Participants Who Yielded Information in Each Condition

Condition	Framed No. (%)	Unframed No. (%)	Overall No. (%)
MCI	22/37 (59)	8/43 (19)	28/80 (36)
CCE	30/40 (75)	20/37 (54)	50/77 (65)
Overall	52/77 (68)	28/80 (35)	

Note. CCE = Controlled Cognitive Engagement; MCI = Modified Cognitive Interview.

Discussion

The merits of two noncoercive interview techniques designed to increase cognitive load for yielding information about a target were investigated, and we also examined whether framing a persuasive message might enhance information yield. The presence of

Table 4
Number of Target Information Items Yielded (Mean, SD, and 95% CIs) as a Function of Phase (n = 83)

Phase	Framed (*SD*: [95% CIs])	Unframed (*SD*: [95% CIs])	Overall mean (*SD*: [95% CIs])
Free account MCI	1.55 (1.01: [1.07, 2.26])	.63 (.74: [−.17, 1.42])	1.09 (1.08: [.62, 1.55])
Free account CCE	2.13 (1.46: [1.72, 2.54])	.30 (.57: [−.20, .80])	1.22 (1.45: [.89, 1.54])
Overall mean	1.88 (1.34: [1.52, 2.16])	.46 (.63: [−.08, .93])	
Probed questioning MCI	1.18 (.91: [.68, 1.68])	1.25 (.46: [.42, 2.08])	1.20 (.81: [.73, 1.70])
Probed questioning CCE	2.17 (1.55: [1.73, 2.60])	2.60 (.94: [2.07, 3.13])	2.34 (1.35: [1.04, 2.72])
Overall mean	1.67 (1.40: [1.34, 2.00])	1.93 (1.03: [1.43, 2.42])	
Challenge MCI	.27 (.55: [−.02, .56])	1.38 (.92: [.89, 1.86])	.82 (.82: [.17, .56])
Challenge CCE	.33 (.71: [.08, 58])	.40 (.68: [.10, .71])	.37 (.69: [.54, 1.11])
Overall mean	.31 (.64: [.11, .50])	.89 (.86: [.60, 1.73])	

Note. CCE = Controlled Cognitive Engagement; MCI = Modified Cognitive Interview.

significant main effects of interview method and of framing throughout our data, and the absence of interactions between these factors, suggest that the effects of interview method and framing are independent but additive. We hypothesized that both CCE and MCI would result in some target information yield despite participants being incentivized to withhold, but because of its emphasis on perceptual memory, participants in MCI conditions may yield less target information. Our results support these hypotheses. Both techniques yielded some target information, but approaching three times as many participants yielded during unframed CCE than unframed MCI interviews (54% vs. 19%), and they yielded more than twice the amount of target information.

The two methods are identical in structure (having the same general instructions, phases, and number of information-gathering segments in each phase) and intended impact (to gain information). The focus of MCI questions is on the perceptual experiences of each participant (visual, auditory & emotional), and MCI questions are less directive and more global in nature in that they encourage interviewees to remember and then describe the overall event. The focus of the CCE questions is on assessing the validity of reported event occurrences, and the questions are more probing and directive about specific event elements (people, actions, objects, etc.) and so may make it more difficult for interviewees to verbally maneuver their way around the target information (Dando & Bull, 2011; Dando et al., 2015).

Perceptual richness is a feature of episodic memory (Conway, 2009; Rubin, Schrauf, & Greenberg, 2003). Although some perceptual elements can become integrated within core memory for an event, most (e.g., sights, sounds, and smells) are typically peripheral to the event's main themes (Winocur & Moscovitch, 2011; Winocur, Moscovitch, & Bontempi, 2010). Hence, one explanation for the greater yield of target intelligence with CCE might be the focus of the technique on questioning that probes the fundamental constructs of the event, compared with the focus of MCI on questioning that probes the surrounding context of the event. As a consequence, the degrees of freedom available for CCE interviewees to evade the revelation of target information are reduced, since they must address questions that are event-focused. MCI interviewees can use contextual information (feelings, sights, etc.) to mask the absence of concrete target information in their answers. In essence, MCI allows interviewees to prevaricate while appearing compliant in providing nontarget information.

In support of this explanation, counts of the number of unique event information items (sum of target and nontarget) revealed that participants in the MCI condition provided over 35% more than those in the CCE. However, of that information, just 11% was target information, whereas 40% of the information revealed by participants in the CCE condition was target information. CCE participants were asked to recall and verbalize concrete information concerning the building blocks (actors, actions, objects) of the event that are central to the target information they were incentivized to withhold. MCI participants were able to recall and verbalize peripheral event information, which may have been easier to disassociate from the target information (e.g., St-Laurent, Moscovitch, & McAndrews, 2016; Winocur & Moscovitch, 2011).

We also hypothesized that the Framed-MCI and Framed-CCE techniques would increase the amount of target information yielded compared with unframed versions. Our results also support

Table 5
Number of Participants in Each Condition Who Stated They Had Complied but Yielded (Did Not Comply) and Percentages

	Framed		Unframed		
Conditon	Stated had complied	Stated had complied but yielded (%)	Stated had complied	Stated had complied but yielded (%)	Overall
MCI	25	16 (64)	37	7 (19)	62/23 (37)
CCE	32	23 (72)	29	14 (48)	61/37 (61)
Overall	57	39 (68)	66	21 (32)	

Note. CCE = Controlled Cognitive Engagement; MCI = Modified Cognitive Interview.

this hypothesis. Positive moral framing encourages systematic processing of the persuasion message, which emphasizes duties, responsibilities, and obligations (Petty & Cacioppo, 1986). In doing so, framing reduces the heuristic salience of the financial incentive and situational affinity for the target confederate. Positive framing has been shown to increase the power of persuasive messages in other domains (e.g., Feinberg & Willer, 2013, 2015; Pelletier & Sharp, 2008) but has not been empirically evaluated in intelligence interviewing. Here, framing increased the odds of yielding target information by approaching four times more than in unframed interviews, and participants revealed over twice the amount of target information. Postinterview feedback indicates the locus of the framing effect: *Fairness and Justice* was one of the primary reasons why participants yielded target information, all of whom were in the framed condition. Cognitive effort and interviewer effects were also important, but here participants were evenly spread across framed and unframed and across CCE and MCI conditions.

Despite being the more effective method with respect to persuasion to yield, participants in CCE conditions reported being more comfortable during the interviews and finding the questions less difficult than in MCI conditions. This finding is unexpected, but it further supports arguments that that interviewer behavior and questioning approaches are important for facilitating cooperation and increasing information gain (e.g., Abbe & Brandon, 2013; Brandon, Wells, & Seale, 2018). Here, the CCE interview protocol was judged more conversational and less formal than MCI. In addition to the rapport-building phase common to both methods, CCE also included a baseline phase that allows the interviewer to understand how interviewees behave in context when not being directly questioned to provide target/event information. The additional element of a CCE prior to the intelligence gathering phases combined with the more conversational style may have been important for shaping interviewee behavior in terms of encouraging more extensive narratives and increasing the elicitation of accurate event information. Even in domains such as sex offender interrogations (e.g., Kebbell, Alison, Hurren, & Mazerolle, 2010) where empathic and sympathetic interviewing often go against the interviewer's natural instincts because of the nature of the suspected crime (Dando & Oxburgh, 2016; Vrij et al., 2017), information gathering, less formal integrative styles have been found to be effective.

Coercive interrogation, often referred to as enhanced interrogation, has received considerable attention in the last decade for being, among other things, ineffective (e.g., Dimitriu, 2013; Costanzo & Gerrity, 2009; Vrij et al., 2017). The empirical scientific literature on intelligence interviewing is less advanced than the detecting deception literature and so offers few concrete alternatives for practitioners. Rather, the emphasis has been on understanding which techniques to avoid and suggesting how interviewers might behave for improving cooperation and increasing information gain (e.g., Alison, Alison, Noone, Elntib, & Christiansen, 2013; Kelly, Miller, & Redlich, 2016; Meissner, Kelly, & Woestehoff, 2015; Walsh & Bull, 2012). Our findings and the associated protocols indicate a number of promising tools for noncoercive interviewing and yet again challenge assumptions concerning the necessity of so-called "enhanced" coercive and torturous interrogation methods (also see Vrij et al., 2017).

In the current study, both MCI and CCE yielded information despite the vast majority of participants across all groups reporting (immediately post event but prior to interview) that they believed the researcher was to blame. It remains possible that the degree of incentivisation to withhold varied across participants, since the reason for receiving financial reward implied but did not make explicit the fact that the desired interview performance was to withhold target information. This manipulation was designed to mimic real-world uncertainties about the impacts on interviewees of their interviewing behaviours. Nonetheless, overall the results are consistent with an intention among participants to withhold that was overcome by effective intelligence interviewing. We cannot be certain of the extent to which our findings will play out outside of a controlled experiment, and it may be that individuals with stronger incentives to withhold (e.g., through ideological commitment or threat of reprisal) may be more resistant to yielding information than participants in the current study. Also, the nature of the intelligence to be gathered may impact the effectiveness of interview methods: this study focused upon a known event, but there are intelligence gathering contexts where, to paraphrase Donald Rumsfeld, a previous United States Secretary of Defense, there are "unknown unknowns" and where the risks of confabulations in information yield may be greater. However, we believe our findings provide a mandate to practitioners to utilize noncoercive methods such as those tested here in order to gain first-hand experience of their practical effectiveness.

This laboratory-based research is not without limitations. Although we checked via a pilot study that participants interpreted the event as intended, future studies might benefit from the addition of a control group who are not incentivized to withhold, allowing a comparison to be made of the relative effectiveness of noncoercive interviewing methods for reluctant versus willing interviewees. Moreover, while our participants were adults of various ages, genders, ethnicities, and educational and career backgrounds sampled from the general population, we did not control systematically for these factors, and our interviewers were all white British. Future research should also consider the impact of culture, particularly where interviewer and interviewee are from different cultures. Nonetheless, the research adds to the accumulating evidence for the effectiveness of rapport-based information-gathering approaches as an alternative to aggressive interrogations.

President Trump's views about torture—his justification of its use as effective and fair given the barbaric nature of the activities of his adversaries—ignore the primary purpose of interrogations, which is to gain intelligence rather than to punish. Yet, accusatorial, aggressive interviews are known to have significant negative effects both for the amount of information elicited from an interviewee and the utility of that information for intelligence purposes. This article adds to the ongoing debate and the empirical literature toward the efficacy of evidence-based ethical interviewing techniques and shows that noncoercive techniques offer a potential alternative.

Context

The backdrop to this research is the attempts of Barack Obama during his presidency to close the prison facilities at Guantánamo due to concerns over its ethical status, which stalled in the face of resistance from Congress and the Pentagon over claims of opera-

tional effectiveness (Bruck, 2016). Recent promotion by the current POTUS of coercive approaches such as torture gives a new urgency to find evidence for effective ethical alternatives. In 2009, President Obama established the High-Value Detainee Interrogation Group (HIG) to conduct research, training and intelligence operations. The research reported here was funded by the HIG as part of an effort to find ethical alternatives to differentiating innocent individuals from those who pose a threat or hold valuable intelligence. The research builds on the authors' previous work to develop Controlled Cognitive Engagement (CCE), a short face-to-face interview protocol for detecting deception as a marker of risk in aviation security screening. Our experiences gained while evaluating CCE alongside security professionals, US Transport Security Administration, and U.K. Dept. for Transport, led us to consider that CCE may be relevant for human intelligence gathering. Similarly, the Modified Cognitive Interviewing (MCI) technique had also been evaluated in the field, and given the similar pattern of results, we considered this may also be a promising technique. With reference to cognitive and social psychological research, we modified both techniques by including framing of persuasive messages in situations of conflicting interest. Our results are promising and indicate there are viable alternatives that emphasize the primary purpose of interrogations, which is to gain intelligence rather than to punish.

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