THE MODERATING EFFECTS OF ABSORPTION IN FACILITATING RECALL IN
THE COGNITIVE INTERVIEW

by

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ABSTRACT OF THE THESIS

The Moderating Effects of Absorption in Facilitating Recall in the Cognitive Interview

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The Cognitive Interview (hereafter, CI) was created with the weaknesses associated with a standard police interview in mind (Geiselman, Fisher, Hutton, Sullivan, Avetissian, & Prosk, 1984). Ineffective tactics such as interrupting a witness, asking leading questions, and asking closed-ended questions are absent from the CI. Instead, the CI builds on Tulving’s (1974) idea that there are several retrieval paths to memory for an event. The CI utilizes a number of mnemonics to help facilitate recall. These include, reinstatement of the context, reporting everything, recalling events in a different order, and changing perspectives. The CI employs techniques similar to interviews involving a hypnotic induction (e.g., reinstating the context), while at the same time avoiding some of the pitfalls involved in hypnosis. Examples of the problems inherent in hypnotically enhanced interviews include an increase in confabulations and error rates (Diamond, 1980) and an increased likelihood of viewing distorted memories as accurate (Orne, 1961; Sheehan & Tilden, 1983). In addition, the CI avoids some of the legal problems which surround the use of hypnosis (Geiselman, Fisher, MacKinnon, and Holland, 1985a). Past research has shown a link between a trait known as absorption (openness to experience) and hypnosis (Glisky, Tataryn, Tobias, Kihlstrom, & McConkey, 1991;
Roche & McConkey, 1990). Given the similarities between hypnosis and the CI, it was expected there would be a similar correlation between performance on the CI and the moderator variable Absorption. A week following watching a short video, participants were administered either a Cognitive Interview or Structured Interview (control interview) to measure recall in a second recall interview. Contrary to past research, the CI and SI were not significantly different in the number of correct details they produced. Consistent with previous research, equal levels of accuracy were found in the CI and SI conditions. The SI elicited slightly more incorrect and confabulated details than the CI. Although the study failed to replicate the superiority of the CI, correlational findings indicated that absorption was correlated with correct details in Recall 2 in the CI condition. A relationship between correct details recalled and absorption was not found in the control condition.
Acknowledgements

I would like to thank Dr. Michael Wogan for all his guidance and support during the last two years. I will always appreciate his willingness to meet, advise, and guide me towards completing my thesis. He has helped me with the design of my study, understanding statistics better, and thinking like a researcher. He has made me a better writer, thinker, and generator of ideas. I would also like to thank my committee members, Dr. Bill Whitlow and Dr. Mary Bravo. I have valued their expertise, insight and suggestions along my journey. Thank you to my fellow cohort and good friend Erika Olsen. She has been so kind to me and supportive since the first day I met her. I have also received a great deal of encouragement beyond the walls of Rutgers. My family and friends have remained by my side, always cheering me on. Their support and love has meant the world to me. To all you who have been directly or indirectly involved in this process, I thank you. This has been a fulfilling and rewarding experience.
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Introduction

Development of the Cognitive Interview

The original Cognitive Interview (hereafter, CI) was developed by Geiselman et al. (1984) in an effort to create an interview technique which avoided many of the pitfalls associated with the standard police interview (SPI).

The format of the SPI begins with a request to a witness to explain what happened uquestions. These questions are aimed to elicit a physical description of the perpetrator (age, weight, height, eye color, race, etc.) as well as other details of the crime. Examples of questions are, “How tall was he?” or “What was she wearing?” (Fisher, 1995).

Examination of transcripts of standard police interviews has shown questions are typically sequenced inappropriately and eyewitnesses are interrupted frequently. Police leave little opening for witnesses to speak and tend to follow a standardized checklist of questions for all witnesses. This is not ideal as not all situations require the same line of questioning or the same style of questioning. As Fisher, Brennan, and McCauley (2002) suggest, where certain witnesses may be better at describing a crime scene in words, others may be better at illustrating the crime scene in a drawing or in their own sequential order. Furthermore, standard police interviews often use a “rapid-fire” questioning technique which may generate inaccurate information or less information than is known by the witness. For instance, police tend to ask primarily close-ended questions as well as leading questions. They may ask, “did you notice the tattoo on the shooter’s right shoulder?” instead of asking, “Did you notice a tattoo on the shooter’s shoulder?” In this case, the use of a simple word like “the” can have a significant effect on an eyewitnesses’ answer (Loftus & Zanni, 1975).
Geiselman and Fisher’s Cognitive Interview built on Tulving’s (1983) earlier work which viewed memory as a combination of both cues and stored memory. Tulving suggested that memories are recalled through many different avenues. The design of the CI attempts to use multiple paths to uncover a memory. Further, the CI centers around the principle of guided retrieval, which makes use of multiple recall cues. A witness may first be asked to describe what they saw, and then asked to describe feelings, sounds, and smells (Fisher, Ross, & Cahill, 2010).

It is important to understand that it is the eyewitness, not the interviewer who guides the interview, and it is the eyewitness who will ultimately access the information and details surrounding the event. Transfer of control from the interviewer to the eyewitness is one of the main differences between the CI and a standard police interview (hereafter, SPI). The interviewer must stress to the eyewitness that they play a central role in the interview (Fisher & Geiselman, 1992)

For example, in the CI, instructions may be:

“Mary, you’re the only person who saw the crime. I didn’t see it, so I’m depending on you to tell me what happened. Don’t wait for me to ask you lots of questions. I’m expecting you to do more of the talking here. Now, try to tell me everything you can about what happened earlier today” (Fisher & Geiselman, 1992, p. 19).

The original CI was characterized by four mnemonics, a) reinstatement of the context, b) the instruction to report everything, c) requests to recall events in a different order, and d) utilizing changes in perspective. According to Fisher et al. (2002), the inclusion of the following techniques, is critical: 1) witnesses are told not to guess or
fabricate answers, 2) the majority of information is obtained through open-ended questions, and 3) few leadings questions are asked.

Shortly after the development of the CI, Geiselman, Fisher, MacKinnon, and Holland (1985a) conducted a study in which an emotionally arousing police training video was shown. The witnesses were interviewed by experienced law enforcement personnel, using either a standard (untrained) interview or the CI. Results revealed the CI elicited 35% more correct information from participants than the standard police interview. Interestingly, this increase was not accompanied by an increase in incorrect or confabulated information.

A number of studies have compared the Cognitive Interview with the Standard Police Interview. Geiselman and Padilla (1988) conducted a study with children ages 7 and 12 years old. Children were shown a film of a simulated liquor store robbery and interviewed three days later, using either a CI or a standard police interview. The CI elicited 21% more information than the SPI. The proportion of incorrect information did not differ between the CI and SPI. In a later study, Saywitz, Geiselman, and Bornstein (1992) showed children ages 7-12 years a staged event where a child wore a costume and pictures were taken of the child. Compared with a standard interview, results showed the CI increased recall without an increase in errors.

The CI has primarily been tested on young adults and children. Mello and Fisher’s study (1996) is one of only a handful of studies which examined the effects of the CI on older adults (mean age = 71.73) as compared to young adults (mean age = 21.6). Participants watched a simulated crime video and were interviewed with either the CI or
the SPI. Consistent with previous research findings, in both groups the CI elicited more information than the SPI without any loss in accuracy.

The original CI has been shown to elicit 25-35% more information than a SPI (Geiselman et al., 1984, 1985; Geiselman, Fisher, Cohen, Holland, & Surtes, 1986). Despite the CI eliciting more information, the increase has not been associated with a loss in accuracy (Memon & Stevenage, 1996).

Research has also been conducted to try to identify what elements of the CI contribute to its success. In a study of adults and children ages 5-9 years Memon, Cronin, Eaves, and Bull (1996) included four conditions. The first three isolated individual instructions from the CI: reinstate the context, change perspective, and report the events in reverse order. The fourth condition served as a control and instructed participants to “try harder.” Memon et al. did not find a difference in the number of correct details and incorrect details recalled based on which instructions participants received. Further, results did not show the isolated CI instructions in any of the three CI groups to be advantageous over the control group who were given instructions to “try harder.” Memon et al. suggest the reason for such findings may be that those being interviewed did not understand the instructions properly and therefore did not follow the instructions as directed. In a second experiment, they incorporated a practice session to allow participants to practice the techniques. The second experiment revealed similar results. No significant difference in correct or incorrect details was found between the “try harder” control group and the remaining three conditions. A conclusion drawn from the study was that the isolated CI instructions had no beneficial effects beyond what was found with the motivational element to “try harder.” Memon et al. concluded that
perhaps the CI’s memory enhancing effects found in previous studies can be attributed more to increased motivation to work harder, for both the interviewer and interviewee, rather than to the individual instructions. Another explanation may be that the CI works better when all the components are present, rather than when a single component is implemented by itself. The CI can be thought of as a package of items, or in this case, mnemonic techniques, that work best when in a synergistic partnership with one another. If one of these components is missing, the CI is less effective.

Advantages over Hypnosis

The CI was created to both avoid the problems associated with standard police interviews as well as avoid the difficulties surrounding the use of hypnosis. As additional research was conducted on the use of hypnosis to enhance recall, the scientific community and public began to exhibit skepticism regarding the technique. Some studies found that hypnotic interviews failed to show an increase in recall (M. Smith, 1983, for a review). In addition, hypnosis was said to distort the memory process by introducing fabrications into an eyewitness’ memory, as well as resulting in an increase in errors (Diamond, 1980; Dywan & Bowers, 1984). It was thought that hypnosis increased individuals’ vulnerability to leading questions (Putnam, 1979; Sanders & Simmons, 1983). And finally, according to Orne (1961) and Sheehan and Tiden (1983), hypnotized individuals tended to display an inflated sense of confidence, although this confidence was not associated with increased accuracy of remembered details and events (Zelig & Beidleman, 1981). In contrast, the CI results in greater recall without an increase in false information, and without the use of leading questions.

The Enhanced Cognitive Interview
Following the creation of the CI, Geiselman and Fisher refined the interview to improve its effectiveness, as well as address its limitations (Fisher, Geiselman, Raymond, Jurkevich & Warhaftig 1987). For example, the original CI included little guidance on aspects such as the sequence of questions once the interview was started (Fisher, Geiselman, Raymond, Jurkevich, & Warhaftig 1987b). Unsystematic ordering of questions was a weakness of the SPI and was thought to hinder memory retrieval (Fisher, Geiselman, Raymond, 1987a). As in the original Cognitive Interview, in the enhanced version of the interview control is given back to the witness. Building rapport with the witness is an added feature of the enhanced version. This is an aspect that tends to be overlooked in standard police interviews, where police tend to immediately launch into a series of direct, short-answer questions, and was not explicitly incorporated into the original CI. In many interview procedures, eyewitnesses or victims are asked to recall personal information to strangers. Without establishing rapport with an eyewitness and attempting to make them feel more comfortable, eyewitnesses may be reluctant to disclose certain information out of anxiety over saying something wrong, embarrassment or shame. In this respect, Fisher and Geiselman (1992) liken the Enhanced Cognitive Interview to a clinical psychologist/client relationship.

The idea of “focused memory retrieval” (Fisher et al., 1987b) was another important addition to the Enhanced CI (ECI). This meant minimizing the number of interruptions and asking more open-ended questions. Further probing, where the interviewer asked specific, short-answer questions, followed the request for a narrative account with open-ended questions. Instructions regarding the sequential order of the interview were included in the Enhanced CI as well.
Fisher et al. (1987b) compared the original CI with the Enhanced CI (Figure 1). Because the purpose of their study was to determine if the Enhanced CI improved upon the original CI, a standard police interview was not included in the design of the study. The Enhanced CI produced 45% more correct information than the original.

Figure 1. Elements of the CI and Enhanced CI

<table>
<thead>
<tr>
<th>Cognitive Interview (original)</th>
<th>Enhanced Cognitive Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context Reinstatement</td>
<td>Structure interview to be witness-compatible (ask about mental record of event)</td>
</tr>
<tr>
<td>Report Everything</td>
<td>Establish Rapport</td>
</tr>
<tr>
<td>Recall from different perspectives</td>
<td>Context Reinstatement</td>
</tr>
<tr>
<td>Recall in reverse order</td>
<td>Report Everything</td>
</tr>
<tr>
<td></td>
<td>Recall from different perspectives</td>
</tr>
<tr>
<td></td>
<td>Recall in reverse order</td>
</tr>
<tr>
<td></td>
<td><strong>Focused Retrieval</strong> (open-ended questions)</td>
</tr>
<tr>
<td></td>
<td><strong>Extensive Retrieval</strong> (further probing)</td>
</tr>
<tr>
<td></td>
<td><strong>Closure</strong> return to neutral topics</td>
</tr>
</tbody>
</table>

*Items in bold are unique to the Enhanced CI.
Memon, Meissner, & Fraser, 2010

In addition, two field studies have been conducted which compare the Enhanced CI with standard police interviews (Fisher, Geiselman, & Amador, 1989; George & Clifford, 1992, 1996). In both cases, results revealed the advantages of the Enhanced CI when interviewing actual witnesses and victims to a crime. Fisher et al.’s study (1989),
involving 16 experienced detectives from the Metro-Dade Police Department, found that detectives who were trained in administering the ECI obtained 63% more information from witnesses and victims than an untrained group of police interviewers. In the second field study, George and Clifford (1992, 1996) uncovered similar findings in England. They found that detectives who had been trained in the ECI subsequently developed different questioning styles than the untrained group. For example, they asked fewer questions in general, and used fewer leading questions, asked more open-ended questions, and allowed more pauses during their interview (Fisher, Brennan, & McCauley, 2002).

*The Structured Interview*

The structured interview (hereafter, SI) was developed to provide a more stringent control condition than the standard police interview. The structured interview, developed by Köhnken, Thürer, and Zoberbier (1994), is different from a standard interview, in that it is more closely modeled after the ECI. According to Köhnken, Milne, Memon, and Bull (1999), the structured interview requires the same length and depth of training as the CI and those trained are trained on both interviewing skills and communication skills. The primary difference is individuals trained in the structured interview do not receive additional instruction on the special cognitive techniques incorporated in the CI (e.g., reinstating the context). Police training, or lack thereof, in investigative interviewing contributed to a shift towards use of a structured interview to compare against the CI. Researchers questioned whether or not the advantages of the CI were due to the mnemonic strategies or merely a function of the training interviewers received in administering the CI or ECI. It became important to show that it was the cognitive
techniques unique to the CI that elicited more recall, versus other factors. According to Memon, Wark, Holley, Bull, and Köhnken (1997b), by utilizing a control such as the structured interview, one can demonstrate that it is not factors such as social communication, quality of questioning, interviewer motivation, or rapport building skills that contribute to the success of the CI, but the main features, such as context reinstatement and reporting everything which contribute to its advantages over other interviewing techniques.

Köhnken, Schimossek, Aschermann, and Hofer (1995) compared the CI with a SI. A central question was, are the benefits of more correct details in the CI outweighed by an increase in errors? The stimulus was a 12-minute film showing a blood donation. Participants were adults, ages 19-39 years of age. Transcripts of interviews were scored for correct, incorrect, and confabulated details. The results showed that significantly more correct details were produced in the CI condition than in the SI condition. The number of incorrect details was not significantly increased in the CI condition. On the other hand, in contrast to prior findings, the CI showed an increase in confabulated details. Köhnken et al. (1995) found the accuracy (proportion of correct details relative to the total number of details recalled) was almost identical in both the CI condition (84%) and the structured interview condition (86%).

In a similar vein of research, Memon et al. (1997b) conducted a study which found differences in recall between the ECI and a SI. The purpose of the study was to compare the ECI with a control condition which was similar to the CI but did not include the CI techniques to report everything or reinstate the context. Memon et al. hoped to find whether these special CI features were associated with its ability to elicit more
information than other interviewing techniques. Children ages 8 and 9 years old were shown a magic show and questioned following either a long (12 days) or short (2 days) delay. For the shorter delay, the CI produced significantly more correct details (d = 0.58) than the structured interview, but also created significantly more recall errors than the structured interview. Such errors were made about persons. Prior research has shown that children have difficulty describing persons, (Gee & Pipe, 1995) which may help explain the results. There was no significant difference in confabulations between the two groups (CI and SI). Even with an increase in incorrect details, the CI produced a greater increase in correct details than incorrect details. For every 6 correct details, only one error was made. In light of the differences found, the accuracy rates (number correct as a proportion of the total) across the CI and Structured Interview were the same. According to Koriat and Goldsmith (1994), in a forensic context it is the accuracy of information that is most crucial.

Research continues to affirm a number of findings related to the original and Enhanced CI, relative to controls: 1) The CI results in an increase in overall information, 2) The CI results in an increase in correct details, 3) In some studies, the CI results in a corresponding increase in incorrect details, 4) The CI does not differ in number of confabulations produced in comparison to control interviews, and 5) The CI’s accuracy rate, as compared to comparison interviews is the same as the accuracy rate in control conditions (Memon, et al., 2010).

Absorption as a Moderating Variable
Yuille and Kim (1987) suggest that the effectiveness of hypnosis as a tool for memory improvement cannot be attributed to hypnosis itself, but instead, to the cognitive instructions incorporated in the hypnotic interview. In their study comparing the CI with hypnosis and a standard police interview, Geiselman, Fisher, MacKinnon, and Holland (1985), found that both the CI and hypnosis resulted in a significant increase in correct information reported. They went on to attribute such findings to the memory-guidance techniques present in both hypnosis and the CI (e.g., context reinstatement). In a recent study, Whitehouse, Orne, Dingels, Bates, Nadon, and Orne (2005), compared the CI, hypnosis, and a control group (motivated, repeated recall condition). They found that hypnosis elicited more information than either the CI or the control group. They found that hypnotizability, as measured by the Harvard Group Scale of Hypnotic Susceptibility (Shor & Orne, 1962), was associated with the recall of erroneous and confabulatory information under both the CI and hypnotic conditions. Whitehouse et al. (2005) went on to suggest that this may be due to the fact that “some CI mnemonics may invoke hypnotic-like processes in hypnotizable people” (p. 213). It is important to note that Fisher, Ross, and Cahill (2010, p. 69) warns that since these results contradict previous studies (e.g., Geiselman, Fisher, MacKinnon, & Holland, 1985), that the findings should be interpreted with caution. With that said, the Whitehouse findings suggest a link between hypnosis and techniques used in the CI.

In 1974, Tellegen and Atkinson developed the Tellegen Absorption Scale as a focused measure to predict hypnotic susceptibility. They subsequently found a correlation of .43 between the trait of Absorption and hypnotizability. In a later study, a .66 correlation between scores on the Tellegen Absorption Scale (TAS) and a measure of
receptivity to trancelike experiences was found (Finke & Macdonald, 1978). Since then,
positive correlations between absorption and hypnotizeability have been consistently
found (e.g., Nadon, Hoyt, Register, & Kihlstrom, 1991). For instance, in their study,
Nadon et al. (1991) found that absorption was a predictor of hypnotic responsiveness.
Finke and MacDonald (1978) found a correlation of .39 between the Tellegen scale and
hypnotic susceptibility. Similar correlations were found in a Danish sample (Zachariae,
Jorgensen, and Christensen, 2000).

Seeking to better understand the utility of the TAS in predicting hypnotizability,
Tellegen (1992) performed a factor analysis of the scale. From the analysis, he derived
six separate factors. Presumably all six factors relate to hypnotic susceptibility, although,
to my knowledge, no study has looked at the six factors individually in relation to
hypnotizability. However, some speculations can be made regarding the relationship
between these factors and various components of the CI. The items loading on each of the
six factors are given in Appendix A.

Factor 1 is “Responsiveness to engaging stimuli.” The question, “When listening
to organ music or other powerful music, I sometimes feels as if I am being lifted into the
air” is an illustration of this factor. The statement relates directly to openness to
experience events in the past or the present. In the Cognitive Interview, eyewitneses
need to be able (or willing) to relive the event they witnessed. If they can let themselves
be taken back to the day when they witnessed the crime, for example, then this should
assist in generating more memories.

The second factor is “Synesthesia.” In this phenomenon, one thing, such as a
smell or sound, triggers an involuntary response in another modality. For example, the
item, “Some of my most vivid memories are called up by scents and smells” exemplifies this factor. The CI tries to achieve a similar effect by the use of imagery and context reinstatement. It attempts to elicit recall about a specific event by reinstatement, through probing, of the sounds, smells, feelings and emotions surrounding the event. For instance, in the CI, the witness is asked to recreate various aspects of the original event. This may include aspects like the weather or the individual’s emotional state at the time of the event (e.g., how they were feeling or what they might have been thinking).

The third factor, “Enhanced Cognition,” describes the ability to recall events with little effort or remembering not in words but in “visual images.” The question on the TAS, “I often have ‘physical memories’; for example, after I have been swimming I may still feel as if I am in the water” relates to imaginative context reinstatement which is a prominent feature in the CI.

The fourth factor, “Oblivious/dissociative involvement” is also related to vividly remembering things such as a person or a place. The statement on the TAS, “While acting in a play I think I could really feel the emotions of the character and ‘become’ her/him for the time being, forgetting both myself and the audience.” This is precisely what the CI hopes to achieve in its instruction to eyewitnesses to try to remember the event from a different perspective. Eyewitnesses are asked to imagine they were the shooter or the victim. The more effectively the person can do this, presumably the more new information will be uncovered.

The fifth factor, “Vivid Reminiscence” is illustrated in a number of questions, including, “I can sometimes recollect certain past experiences in my life with such clarity and vividness that it is like living them again or almost so.” The CI attempts to achieve
vivid reminiscence through many of its features (e.g., “Remember back to the day the shooting occurred…”). At the most basic level, eyewitnesses are asked to think back and “relive” the event. The more vividly this can be achieved, the more likely it is that additional details will be recalled.

The sixth and final factor is “Enhanced Awareness.” This refers to the ability to be hypersensitive to one’s surroundings. Presumably a person who takes in more details at the time of the event will remember more details about it later.

Considering the relation between hypnotizability and absorption, and the suggestion that hypnosis and the CI share similar features, it follows that a relation may be observed between response to the CI and the trait of Absorption. The primary goal of this research is to attempt to uncover a relationship which has yet to be explored, whether performance on the Cognitive Interview is moderated by the individual difference variable of Absorption. The following hypotheses were generated for this research based on the correlation between absorption and hypnotizability and the similarities between hypnosis and the CI:

1. Replicating earlier research, recall scores will be higher for the CI than for the SI (number of items recalled and number of correct items recalled).

2. Scores on the Tellegen Absorption Scale (TAS) will be more highly correlated with improvement in the CI condition than in the SI condition. In other words, an interaction is expected between Absorption and experimental condition.

3. Consistent with earlier findings, accuracy in the CI will be equal to accuracy in the SI condition.
Method

Overview

The moderator variable, Absorption, was assessed with a written questionnaire. Age and gender were also recorded. Following completion of the Tellegen Absorption Scale, participants watched a 2-minute video clip depicting an argument between a man and woman which escalates to a shooting. Participants were asked to report everything they could remember from the video they just watched. Nine days later, participants returned for a follow up session. During this time, participants were randomly assigned to receive either the Structured Interview (control condition) or the Enhanced Cognitive Interview (experimental condition).

Manipulation

The manipulation corresponded to one of the independent variables of the study, whether or not participants are administered an Enhanced Cognitive Interview or a Structured Interview during the second recall test. Participants in the ECI condition were given instructions such as, “Picture the shooter’s face and describe it” or reverse order recall instructions like, “Tell me about the very last thing you remember and then what happened before that” (Memon, Wark, Bull, & Köhnken, 1997a). According to Fisher and Geiselman (1992), characteristics of the CI are neutrally worded questions, open-ended questions, reinstating the context (emotional and perceptual elements, like feelings, smells, and sounds), and use of various retrieval processes, such as changing perspective, reporting everything regardless of importance, and recalling events in a different order (see Appendix C for a more detailed description). Qualities which are not characteristic of a cognitive interview are: complex wording when questioning the
witness, biased language, closed questions before open-ended questions and leading questions (Fisher & Geiselman, 1992). In the SI condition, participants would be asked to simply, “Describe the shooter’s face” (Memon et al., 1997a). Both the ECI and SI are summarized in Figure 2.
**Figure 2. Elements of the Structured Interview and the Enhanced Cognitive Interview**

<table>
<thead>
<tr>
<th>Structured Interview</th>
<th>Enhanced Cognitive Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rapport</strong> (transfer of control from interviewer to interviewee):</td>
<td><strong>Rapport</strong> (transfer of control from interviewer to interviewee):</td>
</tr>
<tr>
<td>Long pauses, active listening, and avoid interruptions.</td>
<td>Long pauses, active listening, and avoid interruptions.</td>
</tr>
<tr>
<td><strong>Recall Phase:</strong></td>
<td><strong>Recall Phase:</strong></td>
</tr>
<tr>
<td>Request a free narrative account.</td>
<td>Request a free narrative account.</td>
</tr>
<tr>
<td></td>
<td><strong>Reinstate the context surrounding the event.</strong></td>
</tr>
<tr>
<td></td>
<td><em>Such as smells, sounds, feelings, etc.</em></td>
</tr>
<tr>
<td></td>
<td><strong>Report Everything.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Prompt Phase:</strong></td>
</tr>
<tr>
<td></td>
<td>“Please tell me more” instruction.</td>
</tr>
<tr>
<td><strong>Questioning Phase:</strong></td>
<td><strong>Questioning Phase:</strong></td>
</tr>
<tr>
<td>Begin with open-ended questions, followed by closed questions.</td>
<td>Begin with open-ended questions, followed by closed questions.</td>
</tr>
<tr>
<td>Avoid misleading or leading questions.</td>
<td>Avoid misleading or leading questions.</td>
</tr>
<tr>
<td></td>
<td><strong>Probe and use of imagery in questioning</strong></td>
</tr>
<tr>
<td></td>
<td>(e.g., “Picture the robber’s face, then, describe it.”)</td>
</tr>
<tr>
<td></td>
<td><strong>Second Retrieval Phase:</strong></td>
</tr>
<tr>
<td>“Go through the event again, and recall new information if possible.”</td>
<td>“Go through the event again, and recall new information if possible.”</td>
</tr>
<tr>
<td></td>
<td>Imagine event in reverse order.</td>
</tr>
</tbody>
</table>

*Italicized items are unique to the ECI.*
Dependent Measures

The dependent measures consist of scores on the second recall test, compared to the baseline at the first recall test (Figure 3).

**Figure 3. Study Design**

| Group 1: TAS → Video → Free Recall Interview → Retention Interval → **Structured Interview** (Recall 2) |
| Group 2: TAS → Video → Free Recall Interview → Retention Interval → **Cognitive Interview** (Recall 2) |

The number of memories produced during Recall 2 were counted to measure improvement over baseline. This was done by subtracting the number of correct details in Recall 1 from correct details generated in Recall 2. Some research (Whitehouse et al., 2005) has shown an increase in correct memories, incorrect memories, and confabulations, on both the CI and under hypnosis, so all three types of recall were scored. To follow previous research, objective information was scored (e.g., the shooter had brown hair). Irrelevant information, like, “I viewed the video at 2:00 pm,” was not scored and subjective statements, such as, “The perpetrator seemed lazy” were not scored (Fisher et al., 1987). An example of the scoring, cited in Memon et al.’s study (1996) is as follows:

“he wore a green shirt and carried a black briefcase.” Scored as: one point for ‘green’ and one point for ‘shirt’ and one error (incorrect detail) for ‘black’ and one error for (incorrect detail) ‘briefcase.’ (assuming they are not confabulations)”
For both conditions, accuracy of recall were calculated as:

\[
\text{total correct details recalled} / \text{total details recalled}
\]

At the time of scoring, scorers did not have any knowledge regarding participants’ scores on the Tellegen Absorption Scale. The raters did however know which condition the subject was in given that the content of the two types of interviews were noticeably different. The second coder was not given a full explanation of the differences between the two types of interview until after the coding was complete. This helped eliminate any potential for experimenter bias. In order to measure inter-rater reliability, a selection of 20 interviews were coded by two individuals. Where discrepancies were found, scoring was further discussed and agreed upon (Memon et al., 1996). For the purposes of calculating inter-rater reliability, the original scores (before discrepancies were discussed and resolved) were used.

**Participants**

Forty-one undergraduates from Rutgers Camden participated in order to fulfill a course requirement in an Introduction to Psychology course \((n=35)\) or for extra credit in a course on Psychology of Human Sexuality \((n=6)\). Three participants failed to return for the second interview and were eliminated. A fourth participant gave frivolous, inappropriate responses and had to be dropped. When the participant returned for the second interview, he/she was randomly assigned to the Enhanced Cognitive Interview condition \((n=19, \text{ Appendix D})\) or the Structured Interview condition \((n=18, \text{ Appendix E})\). The average age of the sample was 19.73 \((SD=2.42)\). There were 22 males \((59.5\%)\) and 15 females \((40.5\%)\).
Procedure

The research proposal was reviewed and approved by the Rutgers University Institutional Review Board. Participants in this study were recruited with the following information:

This is a two-part study, worth 2 credit hours. Part I, you will be asked to anonymously fill out a survey, watch a short video clip, and answer a few questions. Part II, you will be asked some follow-up questions regarding the video. In order to be eligible for this study and obtain full credit, you must attend both sessions.

After signing an informed consent form, participants completed the Tellegen Absorption Scale (TAS, Appendix A). The dichotomous version of the TAS was used. Examples of questions include, “I can be greatly moved by eloquent or poetic language,” “I sometimes ‘step outside’ my usual self and experience an entirely different state of being,” and “Sometimes I feel as if my mind could envelop the whole world.” Absorption is described as an openness to experience emotional and cognitive events across a variety of situations (Tellegen & Atkinson, 1974; Roche & McConkey, 1990). Next, participants were shown a 2-minute video originally utilized as a police training video. The video depicted a man and a woman arguing and ended with a shooting. The video was obtained from one of the two creators of the CI, Dr. Ronald Fisher. Participants were instructed to pay close attention to the video and that they would be asked some questions afterwards.

A free recall interview was administered to participants following the video (Appendix B). At the end of session 1, participants were told they would be asked additional questions about the video at the follow up session (Recall 2), 9 days later. The Recall 2
interviews varied in length, from 16-30 minutes. This was mainly a reflection of individual differences (i.e., some participants were more verbose than others, some participants remembered more details than others). Following the interview, participants were debriefed and provided with an explanation of the study.
Results

Randomization

Analyses were run to show that assignment into groups based on both gender and age was random. Results showed that there was no relationship between experimental condition and participants’ age, t(35) = 0.52, n.s. The mean ages of the CI and SI group were 19.94 (SD = 2.98) and 19.53 (SD = 1.81), respectively. Similarly, results showed that a relationship between experimental condition and gender did not exist, $\chi^2 (1, N = 37) = 0.29$, n.s. In addition, TAS scores did not differ significantly between conditions, t(35) = 0.92, n.s. Mean scores for the CI and SI group were 18.00 (SD = 5.63) and 19.83 (SD = 6.43), respectively.

Inter-Rater Reliability

Both Recall 1 and Recall 2 interviews were scored for Correct details, Incorrect details, and Confabulations following general guidelines provided by Ronald Fisher (personal communication, June 2010; Appendix G). All of the interviews were scored by the experimenter. The mean scores for Recall 1 and Recall 2 interviews are shown in Table 1.

<table>
<thead>
<tr>
<th></th>
<th>Recall 1</th>
<th>Recall 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI</td>
<td>SI</td>
<td>CI</td>
</tr>
<tr>
<td>Correct Details</td>
<td>17.79 (8.02)</td>
<td>19.28 (7.41)</td>
</tr>
<tr>
<td>Incorrect Details</td>
<td>1.11 (1.05)</td>
<td>.94 (1.55)</td>
</tr>
<tr>
<td>Confabulations</td>
<td>1.21 (.98)</td>
<td>1.89 (2.74)</td>
</tr>
<tr>
<td>Total Details</td>
<td>20.11 (8.46)</td>
<td>22.11 (9.50)</td>
</tr>
</tbody>
</table>

*Note*: standard deviations are in parentheses.

Reliability of the scoring was assessed by having a second coder score 20 randomly selected Recall 2 interviews. Reliability levels for each type of detail were high (Table 2). Combining both conditions, inter-rater reliability for correct details was, $r(18)$
Correlations were calculated separately for participants in the Structured Interview and Cognitive Interview conditions. In the CI group, inter-rater reliability for correct details was, $r(9) = .97$, incorrect details, $r(9) = .98$, and confabulations, $r(7) = .93$. In the SI group, inter-rater reliability for correct details was, $r(9) = .83$, incorrect details, $r(11) = .97$, and confabulations, $r(11) = .94$. The reliabilities were high enough to show that the scoring rules could be applied in an unbiased way.

**Table 2**

**Inter-rater Reliability**

<table>
<thead>
<tr>
<th></th>
<th>CI(^a)</th>
<th>SI(^b)</th>
<th>Total Group(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct Details</td>
<td>.97</td>
<td>.83</td>
<td>.89</td>
</tr>
<tr>
<td>Incorrect Details</td>
<td>.98</td>
<td>.97</td>
<td>.97</td>
</tr>
<tr>
<td>Confabulations</td>
<td>.93</td>
<td>.94</td>
<td>.92</td>
</tr>
</tbody>
</table>

\(^a\)\(n = 9\)

\(^b\)\(n = 11\)

\(^c\)\(n = 20\)

*Note:* all correlations are significant at the \(p < .01\) level, two-tailed

**Improvement**

Improvement in memory was calculated by subtracting total correct details generated in Recall 1 from total correct details generated in Recall 2. There was no significant effect for condition on Improvement scores, \(t(35) = .08\), n.s. Since Improvement has not been measured in previous research, these findings cannot be directly compared. Table 3 includes the mean number of correct details and the improvement score for both conditions.
Table 3  
Means and SD’s for Correct Details, Improvement Scores, and Accuracy (Recall 2) 

<table>
<thead>
<tr>
<th></th>
<th>Cognitive Interview&lt;sup&gt;a&lt;/sup&gt;</th>
<th></th>
<th>Structured Interview&lt;sup&gt;b&lt;/sup&gt;</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Correct Details</td>
<td>36.16</td>
<td>7.76</td>
<td>37.83</td>
<td>6.06</td>
</tr>
<tr>
<td>Improvement</td>
<td>18.37</td>
<td>7.60</td>
<td>18.56</td>
<td>6.67</td>
</tr>
<tr>
<td>Accuracy</td>
<td>0.81</td>
<td>0.10</td>
<td>0.80</td>
<td>0.10</td>
</tr>
</tbody>
</table>

<sup>a</sup>n=19  
<sup>b</sup>n=18

The mean number of correct details reported in the CI group (M = 36.16) was slightly lower than the mean number of correct details reported in the SI group (M = 37.83). In this case, the usual superiority of the CI was not replicated. Possible explanations for these findings will be explored in the discussion.

**Accuracy**

Accuracy of recall was calculated by dividing total number of details recalled by total number of correct details recalled. An independent measures t-test was performed in order to compare accuracy in the CI condition with accuracy in the SI condition. The findings were not significant, t(35) = .17, n.s. Mean accuracy for the CI condition and Structured Interview conditions were, M = .81 and M = .80, respectively. These results support past findings that accuracy for the CI and a control interview such as the Structured Interview are the same, or nearly so (Köhnken et al., 1995, Memon et al., 1997b).

Correlations were run to determine if accuracy in either condition was related to TAS scores. TAS and accuracy were not significantly correlated in either the CI or SI condition, r(17) = .15, n.s. and r(16) = .20, n.s., respectively.
Incorrect and Confabulations

The number of incorrect details generated in Recall 2 did not differ between conditions, $t(35) = 0.53$, n.s. Means for incorrect details in the CI and SI conditions were, $M = 6.0$ (SD = 3.71) and $M = 6.72$ (SD = 4.54), respectively.

Similarly, the number of confabulations in Recall 2 did not differ between conditions, $t(35) = .58$, n.s. Means for confabulations in the CI and SI conditions were, $M = 2.63$ (SD = 1.89) and $M = 3.06$ (SD = 2.51), respectively.

Tellegen Absorption Scale

In the CI condition, scores on the Tellegen Absorption Scale and number of correct details (Recall 2) were strongly correlated, $r(17) = .53$, $p = 0.02$. The correlation between TAS and Improvement in the CI condition was marginally significant, $r(17) = .40$, $p = .09$. Conversely, in the SI condition, scores on the TAS and correct details reported were not correlated, $r(16) = 0.20$, $p = 0.42$ and TAS scores were not correlated and Improvement, $r(16) = .09$, $p = .73$ (Table 4).

Table 4

<table>
<thead>
<tr>
<th></th>
<th>Tellegen Absorption Scale</th>
<th>Cognitive Interview$^a$</th>
<th>Structured Interview$^b$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct Details</td>
<td>.53*</td>
<td>.20</td>
<td></td>
</tr>
<tr>
<td>Improvement</td>
<td>.40</td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td>Accuracy</td>
<td>.15</td>
<td>-.20</td>
<td></td>
</tr>
</tbody>
</table>

$^a$n=19  
$^b$n=18  
* significant at the $p<.05$ level, two-tailed

Absorption and Number of Incorrect Statements and Confabulations

Predictions were not made regarding the relation between TAS and incorrect details and confabulations. Findings indicated no relationship between incorrect
details/confabulations and Tellegen Absorption scores. This was the case in both the CI condition and the SI condition (Table 5).

Table 5
Correlations between TAS, Incorrect Details, and Confabulations (Recall 2) by Condition

<table>
<thead>
<tr>
<th></th>
<th>Cognitive Interview</th>
<th>Structured Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorrect Details</td>
<td>.06 (p = .80)</td>
<td>.19 (p = .45)</td>
</tr>
<tr>
<td>Confabulations</td>
<td>.04 (p = .88)</td>
<td>.31 (p = .20)</td>
</tr>
</tbody>
</table>

Interaction between TAS and Experimental Condition as a Predictor of Improvement

A simultaneous regression analysis was performed to determine if the interaction between TAS scores and experimental condition predicted improvement (Table 6). TAS scores, experimental condition, and the interaction between TAS x condition were entered as predictor variables with Improvement as the dependent variable. The analyses did not show significant effects for any of the variables, although TAS as a predictor approached significance, t(35) = 1.56, p = .14.

Table 6
Regression Analysis

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>Beta</th>
<th>p (two-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAS</td>
<td>1.53</td>
<td>.84</td>
<td>.14</td>
</tr>
<tr>
<td>Condition</td>
<td>1.04</td>
<td>.58</td>
<td>.31</td>
</tr>
<tr>
<td>TAS x Condition</td>
<td>1.13</td>
<td>-.93</td>
<td>.27</td>
</tr>
</tbody>
</table>

Note: Dependent Variable is improvement

Interview Length

The mean interview length for Recall 1 was 1:54 min (SD = 53 s). The mean interview length for the total group (N = 37) for Recall 2 was approximately 22:08 min (SD = 4:01 min). For Recall 2, the CI interviews were slightly longer than the SI interviews (M(CI) = 24:48 min, SD(CI) = 3:86 min, M(SI) = 21:02 min, SD(SI) = 3:43 min;
$t(35) = 2.88, p = .007$. Correlational analyses were run to determine if length of the interview was related to recall scores generated during Recall 2 (Table 7).

In the CI condition, the length of interview was predictive of the total number of correct details, $r(17) = .49, p = .04$ and Improvement, $r(17) = .52, p = .02$. Incorrect details and confabulations were not correlated with length of interviews, $r(17) = .19, p = .44$ and $r(17) = .38, p = .11$, respectively. On the other hand, length of interview was not predictive of the total number of correct details generated in the SI condition, $r(16) = .25, p = .31$. However, length of interview was predictive of the total number of incorrect and confabulated details produced, $r(16) = .78, p < .001$ and $r(16) = .63, p = .005$, respectively.

Table 7
*Correlations (p-value) among Length and Recall 2 Scores*

<table>
<thead>
<tr>
<th></th>
<th>CI $^a$</th>
<th>SI $^b$</th>
<th>Total Group $^c$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Details</td>
<td>.59 (.008)</td>
<td>.74 (.001)</td>
<td>.51 (.001)</td>
</tr>
<tr>
<td>Improvement</td>
<td>.52 (.022)</td>
<td>-.30 (.218)</td>
<td>.15 (.38)</td>
</tr>
<tr>
<td>Correct Details</td>
<td>.89 (.035)</td>
<td>.25 (.311)</td>
<td>.30 (.07)</td>
</tr>
<tr>
<td>Incorrect Details</td>
<td>.19 (.439)</td>
<td>.78 (&lt;.001)</td>
<td>.39 (.02)</td>
</tr>
<tr>
<td>Confabulations</td>
<td>.38 (.112)</td>
<td>.63 (.005)</td>
<td>.41 (.01)</td>
</tr>
</tbody>
</table>

$^a n = 19$

$^b n = 18$

$^c N = 37$
Discussion

The current study sought to determine if a relationship exists between the trait of absorption and recall in the CI (but not the Structured Interview). Unfortunately, the study failed to replicate findings from the majority of previous research that the CI generates more correct details than other interviewing techniques such as the SI. The CI and SI did not differ in accuracy or improvement in Recall 2. The CI and SI also did not differ in number of correct, incorrect, and confabulated details generated in Recall 2. Interestingly, as predicted, a correlation between absorption and number of correct details in Recall 2 was found in the CI condition, but not in the SI condition. Regression analysis to test the major hypothesis did not reveal the expected interaction effect for TAS x Experimental Condition on Improvement. In the regression analysis, the TAS made the greatest contribution towards predicting Improvement.

There are a number of possible explanations for the failure to replicate past findings. In comparison to other studies on the CI, few details were recalled. For example, in Köhnken et al.’s study (1994), the average number of correct details produced in the CI condition was 112.94, whereas the average number of correct details produced in the current study was 36.16. A lack of motivation on the part of the undergraduate students from the university subject pool may be a reason for the sparse amount of recall. Although participants were awarded credit towards completion of their course, this may not have been motivating enough to encourage participants to report more information during the follow up session. Perhaps students would have been more motivated if the study had been conducted in one session rather than two. Another response to a lack in motivation would be to provide participants with an incentive to
remember more about the video. This might include such tangible rewards as money or the chance to win a prize through a random drawing.

The length of the video may be another reason the CI and SI did not differ in effectiveness. The video was 1:30 minutes long and contained limited dialogue. It may be that it was easy for participants, regardless of condition, to remember the majority of details from the relatively short video. Perhaps the video needs to be longer and richer in details. By giving participants more of an opportunity to show improvement, the differences in performance would be more pronounced between the CI and SI groups.

A video that elicited a more arousing response should have been used. In the current study, the video was not graphic in nature and as a result may have failed to leave a lasting impression on participants. Cutshall and Yuille (1989) found that when measuring levels of stress among witnesses to actual crimes, those reporting the highest level of stress were significantly more accurate in their reports than those indicating less stress. This suggests memories for more stressful events are more enduring. An alternative may be to show a graphic episode from a current television show or movie that evokes a more shocking and emotional response (e.g., The Sopranos). With this, however, there is the risk that participants may have had exposure to the video clip prior to the experimental session which could confound results. However, others have found ways of doing this, (e.g., Geiselman & Padilla, 1988, video of a simulated liquor store robbery; Mello & Fisher, 1996, video of a simulated crime).

Another explanation is lack of interviewer training. A formal training program to teach individuals how to administer a Cognitive Interview does not yet exist. Even though the Cognitive and Structured Interviews were crafted on the basis of published
interview protocols, it may be that the Cognitive Interview condition was not strong enough in the sense that it too closely resembled the Structured Interview. As a result, the main components of the CI which make it more effective in eliciting information from eyewitnesses may have been less salient to those being interviewed.

Although the current study failed to find evidence supporting past findings that the CI is more effective than other interview techniques, a significant correlation was found between Absorption and number of correct details recalled (Recall 2) in the CI condition. A significant correlation was not found in the SI condition. This supported the hypothesis that Absorption would be related to performance on the CI. These findings further suggest that the components in the CI which contribute to its ability to produce a greater number of correct details are more effective with individuals who are high in Absorption. Mnemonics such as remembering the event in a different order or imagining the event from a different perspective may work better with individuals who are better able to relive an event from the past and more open to experience in general. These findings also suggest that those high in Absorption are more imaginative, responding more to imagery. Note that the effect of the interaction term in the regression analysis predicting improvement was marginally significant (p = .14).

What would be the benefits of knowing that individuals high in Absorption respond better to the CI than those who are average or below? The practical implications of such findings would be the design of an alternative version of the CI. Individuals who are lower in Absorption may not respond to the components of the CI which encourage context reinstatement. Such individuals could be given a modified version of the CI in
which a greater focus is given to components that encourage reporting everything and remembering the event from a different perspective.

It seems plausible that context reinstatement is a more effective technique with individuals high in Absorption. According to Kraftka and Penrod (1985), not only has physical environment been identified as a contextual feature in aiding recall, but emotional response to the original event has been identified as a feature that can be reinstated to help facilitate recall. Although returning to the location in which the event originally took place is not always feasible, reinstating the emotions felt by an eyewitness is possible. In fact, context reinstatement is one of many features of the CI which encourages recall. In the Kraftka study, an innocuous event (an exchange between a customer and store clerk) took place and either 2 or 24 hours later the store clerk was asked to identify the customer from a photo array. 55% of witnesses in the context reinstatement group correctly selected the customer from the photo array, whereas only 29.2% of customers in the non-context reinstatement group made correct identifications.

Findings supporting a relationship between TAS and performance on the CI means that among low scorers, a greater focus can be given to features of the CI like recalling the event in a different order, remembering the event from a different perspective and reporting everything. This can help ensure that the CI is highly effective among both individuals high in absorption and individuals low in absorption.

In the SI group, the length of the interview was mainly predictive of the number of incorrect details and number of confabulations produced. In the CI group, the length of the interview predicted number of correct details and degree of improvement. In the CI, the longer the interview went on, the more participants were able to utilize the strategies
unique to the CI. Conversely, in the SI group, the longer the recall interview went on, the more likely it was that the participant would make errors or confabulate to fill the time or respond to situational demands.

Limitations

A number of limitations exist in the current study. Since no prior research had observed absorption as it related to the CI, an estimate of an effect size was not available and an a priori power analysis. Therefore, a power analysis could not be performed. Furthermore, the time required to individually administer and score each interview imposed practical limitations on the number of participants who could be included in the study.

The current study utilized a convenience sample. As a result, the sample was not representative of the general population. The sample was composed entirely of university students who presumably all have fairly adequate memory abilities. The restricted range of memory abilities potentially limits the magnitude of any correlations which may be found.

Another reason findings must be interpreted with caution relates to the fact that the study was conducted in a lab setting, rather than a naturalistic setting. Had participants witnessed an actual crime, recall may have varied more based on interview type (CI vs. SI), thus providing an opportunity for the CI to surpass the SI in effectiveness. For example, having actually experienced the event, details may be more salient in the participants’ minds, thus providing a situation where participants can ruminate about the event and recall a greater number of details. In addition, eyewitness motivation when experiencing real events is quite different than motivation when
experiencing a contrived event. In a taped event taking place in a laboratory, participants know beforehand they will witness such an event. This knowledge reduces the potential consequences of witnessing the event, in turn reducing motivation to remember details of the event. Stern’s “necessary nearness to life” criterion which posited that live events were preferable over static picture-events is an appropriate illustration of this (1984, as cited in Yuille & Cutshall, 1986).

Cutshall and Yuille (1989) state information provided in laboratory settings has trivial consequences therefore witnesses are often unaffected by events presented to them. They argue that the impact and arousing nature of crimes cannot be recreated in a laboratory setting. Cutshall and Yuille contacted witnesses of a variety of different crimes (e.g., gun store robbery, shooting, and bank robberies) anywhere from a few months to two years following the event. Their goal was to compare the accuracy of their memories following the retention interval with recall in a police interview immediately after the event. In all cases, they found that accuracy remained high. For example, in the gun store robbery and shooting case, they found that the accuracy rate did not decrease over time. In fact, witnesses’ accuracy rate was 81% four to five months following the incident compared to 84% immediately after the incident. In addition, 60% of the information reported at the time of the research interview had not been reported at the police interview. The witnesses’ level of suggestibility was tested by employing Loftus’s (1974) procedure (e.g., did you see the or a broken headlight?). Questions designed to insert false memories into the witnesses accounts had no effect. Similarly, in a restaurant shooting case, following a 2-year delay, showed an overall accuracy rate of 92.3%, with no decline. It is worth noting that violence plays a role in increasing the amount of
information recalled. Less information was recalled by witnesses of bank robberies. Specifically, recall was only about half that of other shooting incidents reported by Cutshall and Yuille. These findings suggest witnesses recall events accurately and in great detail when they are unique and arousing in nature. With that, we must question the ecological validity of the current study as the implications of watching a short video depicting a staged crime are quite different than witnessing an actual event, like a gun store robbery or a murder.

Due to ethical concerns, real crimes cannot be recreated in the laboratory. We must strike a balance between utilizing a staged event and utilizing a live event. This means avoiding an event that could have potentially long-lasting, negative emotional effects while at the same time, avoid staging an event that seems artificial and scripted. The idea is to present a situation that is either seemingly normal or a more arousing event like a purse snatching. For example, Gwyer and Clifford (1997) conducted a study investigating the effects of the CI on recall, identification, and the confidence/accuracy relationship. In their study, they staged a live event in a classroom involving an exchange between a confederate and the teacher. Students were called upon by the confederate and asked to arrange a time for an interview session. The exchange lasted about 3 minutes. While this situation does not mimic the experience of an eyewitness to an actual crime, it does come closer than a video clip of a staged event like the one used in the current study.

Future Research

Future research should investigate the link between Absorption and recall in the Cognitive Interview. The sample should not be limited to university students but instead,
participants should include both young and older adults and students and non-students. A longer and more emotional video should be used as the stimulus.

Studies should be conducted which investigate what parts of the CI the trait of Absorption taps into. For example, do high Absorption individuals respond more to the instruction to reinstate the original context or do they respond more to an instruction to remember the events in a different order? In a similar vein, research should continue to try to identify what exactly makes the CI work so well? Research needs to examine whether it is each individual component or a combination of components that contribute to its remarkable success.

Summary

This study investigated whether recall in the Enhanced Cognitive Interview was differentially affected by the trait of Absorption (openness to experience). Analyses were run to determine if scores on the Tellegen Absorption Scale were correlated with recall in a follow-up interview conducted under either the ECI or SI conditions. It was hypothesized that performance on the ECI would be moderated by Absorption.

Results comparing recall on the ECI and the SI (control) condition did not replicate findings from past research. Contrary to prior studies, in the current study the ECI did not result in greater recall over the SI. In fact, although not significant, the SI resulted in slightly more recall of correct details than the ECI. On the other hand, the SI resulted in slightly more incorrect details and confabulations than the ECI. Also, consistent with prior research, the ECI and SI did not differ in accuracy or improvement in Recall 2. Regression analyses found some evidence in favor of the relationship between the CI and Absorption. As a predictor, TAS approached significance while
Experimental Condition and the Interaction between TAS and Condition did not make significant contributions.

As predicted, the correlation between scores on the TAS and recall in the CI were greater than the correlation found between TAS scores and the Structured Interview condition. Although interviews varied in length, time (in seconds) did not have a statistically significant effect on number of correct details or improvement in Recall 2. Conversely, time and incorrect details and confabulations did yield a statistically significant effect. It seems likely that further exploration of the relationship between Absorption and the Cognitive Interview would be worthwhile.
Appendices

Appendix A: Tellegen Absorption Scale and Factor Structure of the TAS
Appendix B: Free Recall Questions
Appendix C: Elements of the Enhanced Cognitive Interview
Appendix D: Enhanced Cognitive Interview Script
Appendix E: Structured Interview Script
Appendix F: Scoring Criteria
Appendix G: Inter-rater Reliability Data
Appendix A

Tellegen Absorption Scale (Tellegen & Atkinson, 1974)

This questionnaire consists of questions about experiences that you may have had in your life. We are interested in how often you have these experiences. It is important, however, that your answers show how often these experiences happen to you when you are not under the influence of alcohol or drugs.

For the following questions, please answer TRUE or FALSE, even if you are not completely sure of your answer.

1. Sometimes I feel and experience things as I did when I was a child.  
   True  False

2. I can be greatly moved by eloquent or poetic language.  
   True  False

3. While watching a movie, a TV show, or a play, I may become so involved that I may forget about myself and my surroundings and experience the story as if it were real and as if I were taking part in it.  
   True  False

4. If I stare at a picture and then look away from it, I can sometimes "see" an image of the picture almost as if I were still looking at it.  
   True  False

5. Sometimes I feel as if my mind could envelop the whole world.  
   True  False

6. I like to watch cloud shapes change in the sky.  
   True  False

7. If I wish I can imagine (or daydream) some things so vividly that they hold my attention as a good movie or story does.  
   True  False

8. I think I really know what some people mean when they talk about mystical experiences.  
   True  False

9. I sometimes "step outside" my usual self and experience an entirely different state of being.  
   True  False

10. Textures, such as wool, sand, wood, sometimes remind me of colors or music.  
    True  False
11. Sometimes I experience things as if they were doubly real.  
12. When I listen to music I can get so caught up in it that I don't notice anything else.  
13. If I wish I can imagine that my body is so heavy that I could not move it if I wanted to.  
14. I can often somehow sense the presence of another person before I actually see or hear her/him.  
15. The crackle and flames of a wood fire stimulate my imagination.  
16. It is sometimes possible for me to be completely immersed in nature or in art and to feel as if my whole state of consciousness has somehow been temporarily altered.  
17. Different colors have distinctive and special meanings for me.  
18. I am able to wander off into my thoughts while doing a routine task and actually forget that I am doing the task, and then find a few minutes later that I have completed it.  
19. I can sometimes recollect certain past experiences in my life with such clarity and vividness that it is like living them again or almost so.  
20. Things that might seem meaningless to others often make sense to me.  
21. While acting in a play I think I could really feel the emotions of the character and "become" her/him for the time being, forgetting both myself and the audience.  
22. My thoughts often don't occur as words but as visual images.  
23. I often take delight in small things (like the
five-pointed star shape that appears when you cut an apple across the core or the colors in soap bubbles).

24. When listening to organ music or other powerful music I sometimes feel as if I am being lifted into the air.  
   True  False

25. Sometimes I can change noise into music by the way I listen to it.  
   True  False

26. Some of my most vivid memories are called up by scents and smells.  
   True  False

27. Some music reminds me of pictures or changing color patterns.  
   True  False

28. I often know what someone is going to say before he or she says it.  
   True  False

29. I often have "physical memories," for example, after I have been swimming I may still feel as if I am in the water.  
   True  False

30. The sound of a voice can be so fascinating to me that I can just go on listening to it.  
   True  False

31. At times I somehow feel the presence of someone who is not physically there.  
   True  False

32. Sometimes thoughts and images come to me without the slightest effort on my part.  
   True  False

33. I find that different odors have different colors.  
   True  False

34. I can be deeply moved by a sunset.  
   True  False

* Scores are based on the number of responses marked ‘True.’
Six Factors of the 34-item Absorption Scale (Tellegen, 1992)

**Factor 1: “Responsiveness to engaging stimuli”**

34. I can be deeply moved by a sunset.

23. I often take delight in small thing (like the five-pointed star shape that appears when you cut an apple across the core or the colors of soap bubbles).

6. I like to watch cloud shapes change in the sky.

2. I can be greatly moved by eloquent or poetic language.

15. The crackle and flames of wood fire stimulate my imagination.

24. When listening to organ music or other powerful music I sometimes feel as if I am being lifted into the air.

8. I think I really know what some people mean when they talk about mystical experiences.

**Factor 2: “Synesthesia”**

27. Some music reminds me of pictures or changing color patterns.

33. I find that different odors have different colors.

10. Textures- such as wool, sand, wood- sometimes remind me of colors and music.

17. Different colors have distinctive and special meanings for me.

25. Sometimes I can change noise into music by the way I listen to it.

26. Some of my most vivid memories are called up by scents and smells.

30. The sound of a voice can be so fascinating to me that I can just go on listening to it.

**Factor 3: “Enhanced cognition”**

14. I can often somehow sense the presence of another person before I can actually see or hear her/him.

28. I often know what someone is going to say before he or she says it.

---

1 Items are listed in order of magnitude of the factor loadings, from highest to lowest.
31. At times I somehow feel the presence of someone who is not physically there.

29. I often have “physical memories”; for example, after I have been swimming I may still feel as if I am in the water.

32. Sometimes thoughts and images come to me without the slightest effort.

22. My thoughts often don’t occur as words but as visual images.

13. If I wish I can imagine that my body is so heavy that I could not move it if I wanted to.

Factor 4: “Oblivious/dissociative involvement”

3. While watching a movie, a TV show, or play, I may become so involved that I may forget about myself and my surroundings and experience the movie as if it were real and as if I were taking part in it.

18. I am able to wander off into my thoughts while doing a routine task and actually forget that I am doing the task, and find a few minutes later that I have completed it.

7. If I wish I can imagine (or daydream) some things so vividly that they hold my attention as a good movie or story does.

12. When I listen to music I can get so caught up in it that I don’t notice anything else.

21. While acting in a play I think I could really feel the emotions of the character and “become” her/him for the time being, forgetting both myself and the audience.

16. It is sometimes possible for me to be completely immersed in nature or in art and to feel as if my whole state of consciousness has somehow been temporarily altered.

Factor 5: “Vivid reminiscence”

1. Sometimes I feel and experience things as I did when I was a child.

19. I can sometimes recollect certain past experiences in my life with such clarity and vividness that it is like living them again or almost so.

4. If I stare at a picture and then look away from it, I can sometimes “see” an image of the picture almost as if I were still looking at it.

Factor 6: “Enhance awareness”

20. Things that might seem meaningless to others often make sense to me.
5. Sometimes I feel as if my mind could envelop the whole world.

9. I sometimes “step outside” my usual self and experience an entirely different state of being.

11. Sometimes I experience things as if they were doubly real.
Appendix B
Free Recall Questions

INTERVIEWER: Tell me everything you can remember from the video…

RESPONDENT: Recall

INTERVIEWER: Anything else?*

RESPONDENT: Recall

* If the participant does not mention the victim, shooter, or shooting, additional open-ended questions will be asked (e.g., can you remember anything about the victim/shooter?).
Appendix C
Elements of the Enhanced Cognitive Interview (Fisher & Geiselman, 1992)

Introduction

Primary goal is to develop the appropriate psychological mood and promote effective social dynamics.

Control the eyewitness’s anxiety: Calm eyewitness and build their confidence. Begin interview with non-threatening questions not directly related to the crime (e.g., background and personal information).

Develop rapport

Establish the centrality of the eyewitness’s role: In order to encourage a more active, voluntary style of communication, and a less passive responding (i.e., waiting for interviewer to ask questions), the interviewer should convey to the witness that he/she should play a central role in the interview.

Maximize memory and communication: Explicitly indicate a need for detailed information. Do not assume the eyewitness will volunteer information. Remind eyewitness not to edit their thoughts and share anything that comes to mind, even if thoughts seems trivial, out of sequence, or contradict things said earlier. Ensure eyewitness does not think this means it is ok to fabricate details.

Open-Ended Narration

Interviewer should spend this time to determine how the eyewitness’s knowledge is stored, rather than what specific details are stores. Ask the question, which mental images provide the clearest view of important details?
Recreate the general context: For instance, you may ask the eyewitness to describe what their plans for the day were.

**Requesting the narration:** Instructions might be, “Tell me in your own words whatever you can remember about the crime from that point on. Tell me everything you can, in as much detail as possible.”

**Uninformative description:** Allow eyewitness to express their personal feelings regarding the experience instead of specific details regarding descriptions about the assailant.

Anxious witnesses: If an eyewitness becomes anxious during the narration, the anxiety should be treated first before returning to the narration.

**Re-probing factual details:** Be sure not to interrupt witnesses. If a questions arises, make a note reminding to re-probe the fact later in the interview.

Determining the eyewitness’s representation: Ask directly what views the eyewitness had of the assailant or other important objects.

**Notating the eyewitness’s images**

**Developing a probing strategy:** Goals are 1) bring to conscious awareness those image containing the best view of relevant information and then, 2) probe such images until information has been exhausted.

**Probing Memory Codes**

**Activating Mental Images:** At this time, the interviewer explains to the eyewitness that they will be probing for a more detailed description of some of the things mentioned earlier. In order to help in the recollection and facilitate concentration, you can instruct the witness to close their eyes.
**Guided general narration**: Instruct the witness to give a detailed and extensive description. Ask open-ended questions. To ensure completeness, allow for a short period of silence after the eyewitness stops speaking before continuing probing.

**Follow-up probing, probe the remaining images, and re-probe images activated earlier**

**Reviewing the interview**: Interviewer repeats all relevant information, from notes and memory. This allows the interviewer to check the accuracy of notes and allow eyewitness another opportunity to search memory for any new information.

**Closing the interview**: Collect background information and create a positive, lasting impression.
Appendix D
Enhanced Cognitive Interview Script*

* Dialogue unique to the CI is in **bold**.

INTERVIEWER: Hi there. I’m Amanda Dregne and I’m getting my Masters in Psychology here at Camden. I’m here to ask you some questions about the video clip you watched last week. I would like to try and get from you a thorough description of what happened. But before I start, let me ask a few questions about you. *(rapport building questions)*

What year are you? Do you have a major/what is your major? What classes are you taking? Do you like them? Which is your favorite class? Are you ready for finals?

RESPONDENT: Answers questions.

*After the respondent has answered and you feel they are comfortable, proceed with the interviewer.*

INTERVIEWER: [respondent name], it is important you realize that you have all the information. I am trying to determine from you, what happened in the film. So you will be doing most of the talking. You don’t necessarily have to wait for me to ask questions. If you would like to say something, include more details, even if you think they are trivial or contradicts something you said earlier, please, include them in your recounting of the video. Do not omit anything. If you say things that are contradictory, we can straighten these things out at the end of the interview. It’s important you include as much detail as possible.

Do you have any questions so far?

RESPONDENT: *Wait for answer, then proceed...*

INTERVIEWER: *Go through this next part slowly. Pause between each statement. Before we begin, I would like you to close your eyes*(if respondent is not comfortable closing their eyes, tell them they can focus their attention on a certain object in the room). *Remember back to the day you sat in this room, and watched the video. Think about what you were wearing.*

**How were you feeling?** *(wait for answer)*
RESPONDENT: Recall

INTERVIEWER: **Were you feeling anything else?**

RESPONDENT: Recall

INTERVIEWER: **Ok. Now that you remember how you were feeling, try to remember what you were thinking about during the video... what were you thinking at the time?**

RESPONDENT: Recall

INTERVIEWER: **Now that we’ve recreated the thoughts, feelings and emotions surrounding the time when you watched the video, let us move on to the events in the video.**

I would like you to go back to the images you mentioned last week. I realize this will be difficult, since it’s been a week since you watched the video, and this will likely take concentration, but I need you to try and describe the victim again, this time in greater detail.

**Think about the victim. It may help to put yourself in the role of the victim and remember what happened from their perspective. Imagine what they might have been thinking. Imagine what they were feeling.**

**Now, try imagining you are the victim. Try to develop a mental picture of the victim. Develop the image in as much detail as possible.**

Remember, do not make anything up. Instead, tell me only the things you actually saw, but from the perspective of the victim.

**As the victim, what are you wearing?**

RESPONDENT: Recall

INTERVIEWER: **As you face the shooter, do you see anything unique about the shooter? Any unique features? If you are having difficulty, try closing your eyes and visualize the victim.**

RESPONDENT: Recall
INTERVIEWER: Do any of the victim’s features stick out in your mind?

RESPONDENT: Recall

INTERVIEWER: Does the victim look like anyone you might know?

RESPONDENT: Recall

*If the RESPONDENT does not mention general information such as height, weight, or age, ask the following.*

INTERVIEWER: Before we move on, I would like for you to describe the victim in more general terms. Such information may include height, weight and age.

RESPONDENT: Recall

INTERVIEWER: Now that you have described the victim further, I would like you to try and do the same for the shooter. Try to describe them in greater detail.

**Now, put yourself in the role of the shooter. As the shooter, what are you wearing?**

RESPONDENT: Recall

INTERVIEWER: What are you saying to the victim?

RESPONDENT: Recall

INTERVIEWER: Does the victim say anything to you?

RESPONDENT: Recall

INTERVIEWER: Do any of the shooter’s features stick out in your mind?

RESPONDENT: Recall

INTERVIEWER: Does the shooter look like anyone you might know?

RESPONDENT: Recall
INTERVIEWER: Now, describe the shooter in more general terms. Such information may include height, weight and age.

RESPONDENT: Recall

INTERVIEWER: I would like for you to try and remember the shooter’s car. Please describe it in greater detail.

Again, if you’re having trouble remembering, you can close your eyes or take a moment to gather your thoughts.

RESPONDENT: Recall

INTERVIEWER: Probe for more details if necessary. Is there anything more you can recall about the shooter’s car?

RESPONDENT: Recall

INTERVIEWER: I would like for you to describe to me now the victim’s car. Please describe it in as much detail as possible.

RESPONDENT: Recall

INTERVIEWER: Now that you have recalled information about the victim, the shooter, and their vehicles, let us move on to their actions. Can you recall to me what happened from the very beginning of the video to the very end. Please include as much detail as possible.

RESPONDENT: Recall (ask follow-up questions where necessary)

INTERVIEWER: You have given me a lot of information. I would like to review with some of my notes as a final heck and make sure everything is correct. Think about the video as I’m reading over my notes. If at any time I say something that is incorrect or your think of something that you haven’t told me, please stop me and tell me immediately.
Appendix E
Structured Interview Script

INTERVIEWER: Hi there. I’m Amanda Dregne and I’m getting my Masters in Psychology here at Camden. I’m here to ask you some questions about the video clip you watched last week. I would like to try and get from you a thorough description of what happened. But before I start, let me ask a few questions about you. (rapport building questions)

What year are you? Do you have a major/what is your major? What classes are you taking? Do you like them? Which is your favorite class? Are you ready for finals?

RESPONDENT: Answers questions.

After the respondent has answered and you feel they are comfortable, proceed with the interview.

INTERVIEWER: [respondent name], it is important you realize that you have all the information. I am trying to determine from you, what happened in the film. So you will be doing most of the talking. You don’t necessarily have to wait for me to ask questions. If you would like to say something, include more details, even if you think they are trivial or contradicts something you said earlier, please, include them in your recounting of the video. Do not omit anything. If you say things that are contradictory, we can straighten these things out at the end of the interview. It’s important you include as much detail as possible.

Do you have any questions so far?

RESPONDENT: Wait for answer, then proceed...

INTERVIEWER: I would like you to go back to the details you mentioned last week. I realize this will be difficult, since it’s been a week since you watched the video, and this will likely take concentration, but I need you to try and describe the victim again, this time in greater detail.

Remember, do not make anything up. Instead, tell me only the things you actually saw.

INTERVIEWER: What was the victim wearing?

RESPONDENT: Recall
INTERVIEWER: Did the victim have any unique features?

RESPONDENT: Recall

INTERVIEWER: Do any of the victim’s features stick out in your mind?

RESPONDENT: Recall

INTERVIEWER: Does the victim look like anyone you might know?

RESPONDENT: Recall

INTERVIEWER: What did the victim say to the shooter?

RESPONDENT: Recall

If the RESPONDENT does not mention general information such as height, weight, or age, ask the following.

INTERVIEWER: Before we move on, I would like for you to describe the victim in more general terms. Such information may include height, weight and age.

RESPONDENT: Recall

INTERVIEWER: Now that you have described the victim further, I would like you to try and do the same for the shooter. Try to describe them in greater detail.

What was the shooter wearing?

RESPONDENT: Recall

INTERVIEWER: What did the shooter say to the victim?

RESPONDENT: Recall

INTERVIEWER: Did any of the shooter's features stick out in your mind?

RESPONDENT: Recall
INTERVIEWER: Did the shooter look like anyone you might know?

RESPONDENT: Recall

INTERVIEWER: Now, describe the shooter in more general terms. Such information may include height, weight and age.

RESPONDENT: Recall

INTERVIEWER: I would like for you to try and remember the shooter’s car. Please describe it in greater detail.

RESPONDENT: Recall

Probe for more details if necessary.

INTERVIEWER: Is there anything more you can recall about the shooter’s car?

RESPONDENT: Recall

INTERVIEWER: I would like for you to describe to me now the victim’s car. Please describe it in as much detail as possible.

RESPONDENT: Recall

INTERVIEWER: Now that you have recalled information about the victim, the shooter, and their vehicles, let us move on to their actions. I would like for you to describe to me what happened from the very beginning of the video to the very end. Please include as much detail as possible. Let’s start at the beginning.

RESPONDENT: Recall (ask follow-up questions where necessary)

INTERVIEWER: Is there anything else you would like to add?

RESPONDENT: Recall

INTERVIEWER: You have given me a lot of information. I would like to review with some of my notes as a final check and make sure everything is correct. Think about the video as I’m reading over my notes. If at any time I say something that is incorrect or your think of something that you haven’t told me, please stop me and tell me immediately.
Appendix F
Scoring Criteria

All interviews will be scored for type of detail:

1. Correct Details
2. Incorrect Details
3. Confabulations
4. Not Scorable
* Duplicates are not scored.

Correct details are details which can be verified by examination of the video (e.g., “The victim was wearing a blue jacket.”). Compound statements like “red jeep” get 2 points, one for “red” and one for “jeep.” For the jeep’s color, red, orange, rust, burgundy, etc. are all acceptable answers. Similarly, for the man’s jacket, colors such as blue, green, or purple are all acceptable.

A few items can be established by consensus. Statements such as, “She was angry” or “She was aggressive” or “She was not happy” can be scored because viewers of the video can agree that this was the case. For example, since 15 people watched the video and they all said “She was angry” we can conclude this is a true statement. However, in cases where we cannot be sure, the statement will not be scored. For example, “The man seemed lazy and cannot do anything right” would not be scored.

Note: If the participant gives a number of similar statements, such as, “She was angry,” “She was aggressive,” “She was not happy,” “She was not civil,” etc., only score these statements once. Do not give a point for each statement as they all mean the same thing, just different adjectives.

If a participant recounts dialogue that does not match word for word but has the same idea or “gist” as something they said, then score as correct. “I think” and “I’m not sure” statements like, “I think she had blond hair” are scored.

An incorrect detail is something that is not a correct statement. This is a statement that we can correct by referencing the video. For example, a statement such as, “She was wearing a skirt” can be corrected by saying, “No, she was wearing pants.” Or, “She had brown hair” can be corrected by saying, “No, she had blond hair.”

If a participant says the shooter or victim said something they never said, item is scored as incorrect.

A confabulation is something that cannot be verified or refuted.
Examples of such statements include: “She had light colored eyes” (we can’t see her eye color in the video), “It took place outside a governmental building” (we have no way of knowing that for sure), “It was on a college campus,” “They were fighting over divorce papers” (they could have been, but we are not sure of the topic of the argument), “They were married,” “It was a governmental conspiracy,” and “The shooter was wearing green socks.” We cannot see the shooter’s socks, therefore we cannot confirm whether or not the shooter’s socks are green.

Note: In the example above, the statement “governmental building,” “building” is scored as correct and “governmental” is scored as a confabulation. In the statement “divorce papers,” “papers” is scored as correct and “divorce” is scored as a confabulation.

Not scorable items are usually references to subjective state, which can neither be confirmed or disconfirmed. For example, “he was lazy” is not scorable. In addition, general impressions are not scorable. “Something shady was going on” is an unverifiable statement. Height, age, and weight statements are not scorable. Participants are asked to report height and weight, however, there is no fair way to discriminate between accurate and inaccurate statements.

Statements such as, “she is mean” will not be scored because they are attributions of character. Statements such as, “the car was red or white” contradict one another and therefore will not be scored.

Examples of specific items and how to score them:

<table>
<thead>
<tr>
<th>Detail</th>
<th>How to Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern accent</td>
<td>Correct (1 point)</td>
</tr>
<tr>
<td>Woman shot man</td>
<td>Correct (1 point)</td>
</tr>
<tr>
<td>Male and female</td>
<td>Correct (1 point each)</td>
</tr>
<tr>
<td>Car Year</td>
<td>Confabulation (1 point)</td>
</tr>
<tr>
<td>Seasons/months</td>
<td>Confabulation</td>
</tr>
<tr>
<td>Grey Out</td>
<td>Correct (1 point)</td>
</tr>
<tr>
<td>Light Brown/brown hair (woman)</td>
<td>Incorrect (1 point)</td>
</tr>
<tr>
<td>Says “t shirt OR blouse”</td>
<td>Not Scorable</td>
</tr>
<tr>
<td>Says “Toyota or Cadillac” (or similar)</td>
<td>Not Scorable</td>
</tr>
<tr>
<td>“he says something to piss her off.”</td>
<td>Correct (1 point)</td>
</tr>
<tr>
<td>Dark SUV (what’s considered “dark?”)</td>
<td>Not Scorable</td>
</tr>
<tr>
<td>They knew each other (prior)</td>
<td>Correct (1 point)</td>
</tr>
<tr>
<td>“older model” for both cars</td>
<td>Correct (1 point each)</td>
</tr>
<tr>
<td>Victim had no accent</td>
<td>Not Scorable</td>
</tr>
<tr>
<td>Blond or brown hair (for woman)</td>
<td>Not Scorable</td>
</tr>
<tr>
<td>Light Hair (shooter)</td>
<td>Correct (1 point)</td>
</tr>
<tr>
<td>Statement</td>
<td>Scoring</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Tall (for both man and woman)</td>
<td>Correct (1 point each)</td>
</tr>
<tr>
<td>Blond hair with grey (man)</td>
<td>Correct (1 point)</td>
</tr>
<tr>
<td>Brown hair (man)</td>
<td>Correct (1 point)</td>
</tr>
<tr>
<td>Salt and pepper hair (man)</td>
<td>Correct (1 point)</td>
</tr>
<tr>
<td>Grey hair (man)</td>
<td>Incorrect (1 point)</td>
</tr>
<tr>
<td>White hair (man)</td>
<td>Incorrect (1 point)</td>
</tr>
<tr>
<td>“High” heel (subjective)</td>
<td>Not Scorable</td>
</tr>
<tr>
<td>She was wearing “heels”</td>
<td>Correct (1 point)</td>
</tr>
<tr>
<td>“He shows her again”</td>
<td>Correct (1 point)</td>
</tr>
<tr>
<td>Average height (what’s “average?”)</td>
<td>Not Scorable</td>
</tr>
<tr>
<td>Average weight (what’s “average?”)</td>
<td>Not Scorable</td>
</tr>
<tr>
<td>She is mean</td>
<td>Not Scorable</td>
</tr>
<tr>
<td>She is aggressive</td>
<td>Not Scorable</td>
</tr>
<tr>
<td>She is angry/frustrated/upset</td>
<td>Correct (consensus)</td>
</tr>
<tr>
<td>Khaki pants (man)</td>
<td>Correct (1 point) and Incorrect (1 point)</td>
</tr>
<tr>
<td>Middle Aged (man and woman)</td>
<td>Correct (consensus)</td>
</tr>
<tr>
<td>“Jeep or Explorer”</td>
<td>Not Scorable</td>
</tr>
<tr>
<td>“No modifications” on car</td>
<td>Confabulation (1 point)</td>
</tr>
<tr>
<td>“Casual” dress/attire (man)</td>
<td>Correct (1 point)</td>
</tr>
<tr>
<td>Met a second time (video editing)</td>
<td>Not Scorable</td>
</tr>
<tr>
<td>Shot in the leg/hip/stomach (or other area)</td>
<td>Confabulation (1 point) and Correct (1 point)</td>
</tr>
<tr>
<td>“She didn’t appreciate what he gave her”</td>
<td>Correct (consensus)</td>
</tr>
<tr>
<td>Around same age as victim (or shooter)</td>
<td>Confabulation (1 point)</td>
</tr>
<tr>
<td>Prescription glasses</td>
<td>Confabulation (1 point)</td>
</tr>
<tr>
<td>Shooter: “This better be right, or else.”</td>
<td>Incorrect (1 point)</td>
</tr>
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</table>
Appendix G

Inter-rater Reliability Data

<table>
<thead>
<tr>
<th>#</th>
<th>Correct</th>
<th>Incorrect</th>
<th>Confabulation</th>
<th>Second Coder</th>
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<tbody>
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<td></td>
<td></td>
<td></td>
<td></td>
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* n = 20


