

**Effects of the Evidence Framing Matrix -Technique Training in Simulated  
Interrogations With Avatars: A Pilot Study**

Rasmus Ahlgren, 38556

Master's thesis in Psychology

Supervisors: Pekka Santtila and Pär-Anders Granhag

Faculty of Arts, Psychology and Theology

Åbo Akademi, 2020

## Table of Contents

Effects of the Evidence Framing Matrix -Technique Training in Simulated Interrogations With Avatars: A Pilot Study.....	6
Liars' and Truth-Tellers' Strategies in Interviews .....	6
Strategic Use of Evidence.....	7
The Evidence Framing Matrix.....	9
Training in Interview Techniques.....	11
The Current Study .....	12
Hypotheses .....	12
Method .....	13
Participants and Design .....	13
Procedure .....	13
The Simulated Interview .....	14
Measures .....	16
Ethical Permission .....	17
Statistical Analyses.....	17
Pre-Registration .....	18
Results.....	19
English Proficiency.....	19
Interview Realism.....	19
Following Instructions.....	19
Overall Performance in Detecting Guilt.....	19
Trained Versus Untrained Participants.....	20
Factors With Impact on Guilt Judgement.....	21
Use of Accusatory Questions .....	21
Confidence in Conclusion .....	21
Discussion .....	23

Limitations.....	24
Conclusions and Future Research.....	26
Swedish Summary – Svensk Sammanfattning.....	27
Abstrakt .....	27
Introduktion .....	27
Misstänkta strategier i förhör .....	28
Strategisk bevishantering .....	28
Studiens syfte .....	31
Metod.....	32
Deltagare och design.....	32
Procedur .....	32
Resultat .....	33
Diskussion .....	34
References .....	36
Appendix A .....	41
Appendix B .....	42

**ÅBO AKADEMI UNIVERSITY – FACULTY OF ARTS, PSYCHOLOGY AND  
THEOLOGY**

<b>Subject:</b> Psychology	
<b>Author:</b> Rasmus Ahlgren	
<b>Title:</b> Effects of the Evidence Framing Matrix -Technique Training in Simulated Interrogations With Avatars: A Pilot Study	
<b>Supervisor:</b> Pekka Santtila	<b>Supervisor:</b> Pär-Anders Granhag
<p><b>Abstract:</b>  Deception detection is literally a matter of life and death in many scenarios in intelligence gathering and criminal investigations. While scientific knowledge on techniques to differentiate between truthful accounts and lies evolve, practical constraints limit the effectiveness of training in these techniques, and therefore hinder their implementations. In the present study, we developed an interactive software with computer-generated avatars driven by empirically based algorithms of suspect behavior to develop a tool for practitioners to practice interview techniques in simulated interviews. We recruited 40 participants and gave half of them training in the Strategic Use of Evidence (SUE) technique including the Evidence Framing Matrix (EFM). All participants interrogated an avatar in a fictional terrorism case. Half of the avatars were innocent and truth-telling and half of them were guilty and lying. Participants who received training were better able to detect avatars that were telling the truth, but not lying avatars. Participants who did not receive training labelled all avatars without exception to be liars. In this pilot study, the avatars only had limited response options in some areas the participants asked questions about, which many of them found suspicious. Use of avatar interview technique training seems promising, but the avatars need to be developed further to include a wider pool of answer possibilities. Also, scenarios with varying levels of difficulty need to be developed.</p>	
<b>Keywords:</b> deception detection, Strategic use of Evidence, Evidence Framing Matrix, interrogation, interview	
<b>Date:</b> 30.10.2020	<b>Page count:</b> 43

**ÅBO AKADEMI – FAKULTETEN FÖR HUMANIORA, PSYKOLOGI OCH  
TEOLOGI**

<b>Ämne:</b> Psykologi	
<b>Författare:</b> Rasmus Ahlgren	
<b>Arbetets titel:</b> Effekterna av träning i användning av bevispresentationsmatrisen i simulerade förhör med avatarer	
<b>Handledare:</b> Pekka Santtila	<b>Handledare:</b> Pär-Anders Granhag
<p><b>Abstrakt:</b> Att kunna skilja mellan sanna och falska påståenden är ytterst viktigt inom polisförhör. När vetenskapligt kunnande om tekniker för att kunna skilja åt lögner och sanning ökar, begränsas deras implementering fortfarande av praktiska orsaker. I denna studie utvecklade vi avatarfigurer och en nätsida för att kunna träna människor i användning av intervjustrategier i simulerade förhör. Vi rekryterade deltagare som inte hade fått skolning i användning av intervjustrategier och gav hälften av dem träning i strategisk bevishantering (SUE) och bevispresentationsmatrisen (EFM), en teknik inom SUE för att presentera bevis stegvis i mindre delar. Vi jämförde dessa två grupper och fann att de deltagare som fick träning bättre kände igen misstänkta som talade sanning. Deltagare som inte fick träning klassade alla misstänka oberoende om de talade sanning eller inte som skyldiga. I vår studie hade avatarfigurerna ett begränsat antal svarsalternativ angående vissa teman försökspersoner frågade om, vilket många av dem tyckte var misstänksamt. Genom att vidare utveckla avatarerna kunde de potentiellt användas i framtiden för att mer effektivt skola människor i användning av intervjutekniker.</p>	
<b>Nyckelord:</b> Lögnedetektion, Strategisk bevishantering, evidenspresentationsmatrisen, förhör	
<b>Datum:</b> 30.10.2020	<b>Sidoantal:</b> 43

## **Effects of the Evidence Framing Matrix -Technique Training in Simulated Interrogations With Avatars: A Pilot Study**

Differentiating between truthful and deceptive statements is crucial in police interviews and intelligence gathering. Liars are believed to behave differently than truth-tellers in both popular culture and police training manuals (Vrij & Granhag, 2007). Contrary to this common belief, research has amassed critical knowledge that shows people are bad at reliably differentiating between liars and truth-tellers. Bond and DePaulo (2006) reviewed 206 studies and found that people perform at just above the chance level of 50% with an average accuracy of 54%. The authors also found very little variation in the ability to detect deception between different individuals in another study (Bond & DePaulo, 2008). In fact, individuals who are believed to be experts in telling liars from truth-tellers (e.g., law enforcement personnel) do not as a rule fare any better than laypersons (Aamondt & Custer, 2006; Bond & DePaulo, 2006; Ekman & O'Sullivan, 1991; Hartwig et al., 2004). In fact, despite extensive research, no clear verbal or non-verbal signs of deception have been found. In the hitherto most comprehensive meta-analysis on the subject, DePaulo et al. (2003) analyzed 50 cues of deception that were featured in multiple studies. The authors found that only 14 (28%) of these cues had any diagnostic value in identifying deception, and the effect sizes of these cues were small (average  $d = 0.25$ ). Cues such as postural shifts and gaze aversion are not associated with deception, despite the common belief among practitioners that they are (Sporer & Schwandt, 2007; Strömwall & Granhag, 2003; Vrij & Semin, 1996). In a new approach, recent research has focused on increasing verbal differences between liars and truth-tellers by using specific interview strategies based on an analysis of how innocent and guilty suspects approach interviews (Lancaster et al., 2013; Vrij & Granhag, 2012).

### **Liars' and Truth-Tellers' Strategies in Interviews**

Several studies have explored the verbal strategies used in interviews by both innocent and guilty suspects. In one study, liars' most common verbal strategy was to avoid giving a too detailed testimony (Granhag & Strömwall, 2002). Strömwall et al. (2006) compared participants' reported verbal content strategies between liars and truth-tellers in an interview in a mock-crime scenario with police officers as interviewers. Liars' principal strategy was to keep their story simple and truth-tellers' principal strategy was to tell it like it happened. Participants in another mock-crime study were asked after their interrogation to report any strategies regarding verbal content they used. Liars' most common strategies regarding verbal content were to present a detailed story, avoid lying as much as possible and to have a consistent story, whereas most truth-tellers reported telling the truth as it happened as their

strategy (Hartwig et al., 2007). Guilty suspects, especially criminally experienced ones, also tend to avoid disclosing incriminating information in both free-recall and as answer to specific questions (Granhag et al., 2009). Most liars plan information management strategies before an interview while only half of innocent suspects do so (Hartwig et al., 2010). Liars' most reported information management strategies were minimizing the amount of lying and preparing an innocent explanation for being at the crime scene. Those innocent suspects who reported a strategy most often planned to be forthcoming and honest ("tell the truth about what happened"). Hines et al. (2010) found that innocent suspects were less concerned with controlling the amount of details (in any way) in their statement than guilty suspects, most of whom controlled the amount of details by either adding or limiting them in their verbal accounts. Guilty suspects avoided contradictions and releasing sensitive information. Guilty suspects were also more likely than innocent suspects to prepare and rehearse their story. In a mock-crime setting, 81% of innocent and 36% of guilty participants waive their Miranda rights to silence (Kassin & Norwick, 2004). When asked why they chose to do so, 72% of the innocent participants who waived their Miranda rights reported that they did so because they were innocent and had nothing to hide. Almost all (92%) guilty suspects who waived their Miranda rights did so because of self-presentational concerns (to appear innocent).

Little research has been done on real criminals and their verbal strategies in real-life interviews apart from Strömwall and Willén (2011) who interviewed incarcerated criminals about lying in interviews. Their most reported verbal strategies were staying close to the truth, keeping it simple and being rich in detail. This result was contradictory to Granhag and Strömwall (2002), where liars tended to avoid giving a too detailed testimony.

### **Strategic Use of Evidence**

Based on these differences between truth tellers and liars, Strategic Use of Evidence (SUE) was developed as an interview technique to help practitioners potentially better differentiate between liars and truth-tellers (Hartwig et al., 2014). While liars and truth-tellers in an interview setting share the goal of trying to convince the interviewer of their innocence, a basic premise of SUE is that liars and truth tellers employ different strategies to reach this goal. Liars will avoid disclosing critical information, if given the opportunity, while in contrast, truth-tellers will be forthcoming (Hartwig et al., 2010; Strömwall et al., 2006). The SUE framework aims to exploit these differences between liars and truth-tellers to produce within-statement inconsistencies, and evidence-statement inconsistencies. Within-statement inconsistencies are statements that are inconsistent with earlier statements by the suspect, and evidence-statement inconsistencies are statements that contradict available evidence. Both

kinds of inconsistencies have been found to be reliable signs of deception (Hartwig et al., 2014). To elicit these inconsistencies the SUE framework advocates withholding of evidence and using a funnel-like structure of questioning. By withholding available evidence and using it strategically, interviewers can exhaust potential innocent explanations for the evidence, and increase the chance of a guilty suspect making statements that are inconsistent with evidence or inconsistent with their earlier statements. In a relatively recent meta-analysis, the SUE technique was found to reliably amplify the tendency of guilty suspects to produce evidence-statement inconsistencies in interviews (Hartwig et al., 2014). The SUE technique has also been used successfully to detect lies by children (Clemens et al., 2010) and suspected groups (Granhag et al., 2015). The SUE has also been successful in eliciting admissions and detecting suspects lying about their intentions (Clemens et al., 2011; Tekin et al., 2015, 2016). Effects of training practitioners in the use of SUE has also been studied with promising results. A sample of police academy trainees in Sweden trained in the SUE technique achieved a deception detection accuracy of 85% while untrained participants had an accuracy of 56% (Hartwig et al., 2006). Police officers in the USA who received SUE training obtained a 65% deception detection accuracy compared to the 43% accuracy of untrained police officers (Luke, Hartwig, Joseph, et al., 2016). The SUE technique also appears to withstand spontaneous countermeasures from suspects who expect the SUE to be used against them (Luke, Hartwig, Shamash, et al., 2016).

Because the SUE technique advocates for using broad and open-ended questions at the start of the interview and the use of a funnel structure, using the SUE framework should ideally make the interview more information gathering, as opposed to accusatorial, in style. This distinction is based on the work of Moston and Engelberg (1993) who listened to taped police interviews and identified two different interview styles that are commonly used: the information-gathering and the accusatory style. The information-gathering style seeks to build rapport with the suspect, use open-ended and exploratory questions with the goal of gathering information. The accusatorial method is characterized by control, psychological manipulation, close-ended and confirmatory questions with the goal of eliciting a confession (Meissner et al., 2014). Accusatory questions are questions that are confrontational and guilt presumptive (e.g. “You must have killed her, just admit it!”, or “Why should I believe you?”). The accusatory style generates less verbal content, and therefore fewer verbal cues to deception, than the information-gathering style (Vrij et al., 2007). The information gathering style reduces the risk of false confessions while retaining the amount of true confessions, whereas



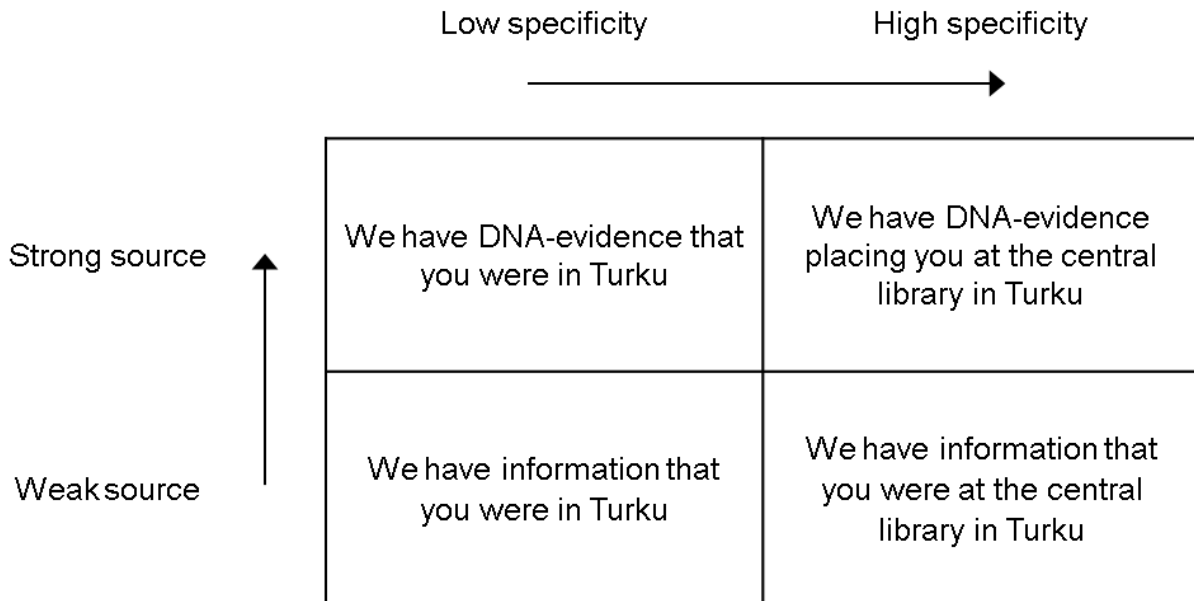
the accusatorial style generates more confessions, both true and false (for a meta-analytical review see Meissner et al., 2014).

### **The Evidence Framing Matrix**

The Evidence Framing Matrix (EFM) is a technique within the SUE framework to present available evidence gradually (Granhag et al., 2013). For example, DNA-evidence placing a suspect at the scene of a crime can be presented just as it is (“We have DNA-evidence placing you at the central library in Turku”) or in a more general way, (“We have information placing you in Turku”). The EFM illuminates possible ways to present evidence along two dimensions: the strength of the source (from weak to strong) and specificity of the evidence (from low to high specificity; see Figure 1). A typical interview using the SUE technique would start with broad general questions (e.g., what did the suspect do and where did the suspect go on the date of the crime). Then, following along the EFM, the interviewer would present the evidence using a weak source and low specificity, then a strong source and low specificity and finally a strong source and high specificity. Since liars will typically avoid disclosing incriminating information, they will be more likely to produce statements that are inconsistent with evidence in response to general, non-specific, questions. The aim of the gradual disclosure of evidence is to induce guilty suspects to change their statement in response to the stronger and more precise evidence, thereby generating inconsistencies with earlier statements.

### **Figure 1**

*Example of using the Evidence Framing Matrix (EFM)*



**Note.** The evidence in this example is DNA-evidence placing a suspect at the central library in Turku, the scene of the crime

For example, if a valuable painting has been stolen and the interviewer has surveillance footage of a suspect being in the same hallway as the painting in the central library in Turku close to the time of the theft, an interviewer could present the evidence early, as is often done (Leo, 1996). When presented with this evidence, both an innocent and a guilty suspect would likely deny the theft but admit to being at the scene, leaving the police with potentially weak circumstantial evidence against the suspect. If the interviewer instead chose to use the EFM to structure the interview, the interview could proceed as follows:

The interviewer would start by asking broadly about the suspect's activities during the day the crime took place. Since a guilty suspect does not know how much the interviewer knows, he would likely avoid disclosing incriminating information, and could tell the interviewer he was at his sister's house all day. Since this statement contradicts the available evidence, the suspect has now produced an evidence-statement inconsistency, which is a potential sign of deception. If the suspect has an innocent explanation for the evidence this would probably be revealed at this point. The interviewer would then begin using the EFM by saying they have information (weak source) that the suspect was in central Turku (same general area i.e. low specificity) where the theft took place. A suspect who lied in response to the first question would now either have to deny the information or change his story to fit this new evidence. An innocent suspect would likely stick to the same story or have another chance to remember his activities more accurately. The next step in the matrix would be to

use a strong source and low specificity. Now the interviewer would tell the suspect they had surveillance camera footage of the suspect in central Turku. If the suspect denied the evidence at the previous question, he has again been inconsistent with the evidence. At this point, he might admit to being in the area and present another explanation for being there and for not mentioning it earlier. In this case, he has produced a within-statement inconsistency. The final step of the matrix (strong source and high specificity) in this case could be the interviewer presenting the evidence to the suspect, “We have surveillance camera footage of you in the same hallway as the painting at the time of the theft”. A lying suspect would again present yet another change to the story to fit with the evidence. A truthful suspect would have been consistent in his story the whole interview. With both interview strategies, the outcome is the same; both suspects admit to being at the scene but deny stealing the painting. The difference is that use of the EFM produced many signs of deception in the account of the second suspect: inconsistencies between statements and the evidence, and inconsistencies between earlier and later statements.

### **Training in Interview Techniques**

In the field of child interviewing it has been demonstrated that even though most practitioners have received training in good interview practices with children, they often do not employ their knowledge in their interviews (Johnson et al., 2015). Training of interview techniques is most effective when done over a long period of time with opportunities to receive feedback and practice (Lamb, 2016). For police officers, it is not an option to practice the SUE technique, or any other interview technique, in real criminal investigations since this could jeopardize them. Another option would be to interview someone who is role-playing a suspect, which would be resource intensive and laborious. Also, it is unclear if such role-playing is realistic in terms of suspect behavior. Computer-generated avatars are a novel technique developed to remedy this problem, introduced by Pompèdda et al. (2015) to train participants in interviewing children in suspected child abuse cases. Using an avatar to practice interview techniques would not require the same kind of investment of time and resources to train someone in using the EFM technique as practicing with an actor would. In addition, any mistakes made will not have serious consequences, such as a guilty suspect being freed from suspicion or an innocent suspect being accused of a serious crime. In this study, we developed and used similar computer-based avatars to those of Pompèdda and colleagues to simulate interrogations.

## **The Current Study**

Our aim was to develop avatars that could be used to train practitioners in interviewing techniques. We wanted to examine if participants who would receive training in the use of the evidence framing matrix would be able to use the technique in interviews, and if they would be more successful in differentiating between truth-telling and lying avatars. We developed a fictional criminal case, based on a real case, and gave participants the same background information about it before they interrogated the avatar suspect. We also developed a training regimen consisting of written material and a video (Ahlgren, 2020), which explained the theoretical background of the EFM and how to use it. In practice, the avatars were computer-generated animated faces (see Panel A of Figure 3) of suspects that appeared on a screen and answered participants' verbal questions vocally. Our avatars held information about involvement in crime or innocent past actions that they revealed in response to verbal questions. An operator using a decision tree (See Appendices A and B) chose the answers the avatars gave among pre-recorded alternatives. Both avatars (innocent and guilty) used in the present study had their response styles based on available studies. Based on the aforementioned studies about liars' and truth-tellers' verbal strategies in interviews, the innocent avatar was designed to be forthcoming and honest, while the guilty avatar was made to avoid disclosing incriminating details in response to open questions. In practice, this meant that both avatars had the same ultimate explanation for the available evidence against them and they both denied guilt in response to direct questions about involvement. The main difference between the innocent and guilty avatar was that the innocent avatar did not hide or avoid mentioning anything in response to open questions or in free recalls of events. These differences were expected to become apparent if the interview is structured using the EFM.

## **Hypotheses**

We hypothesized that participants who received training in the EFM technique would:

1. Be more accurate in their judgements about deception by the avatar suspect.
2. Ask more questions before presenting the available evidence.
3. More often cite inconsistencies between earlier and later statements by the avatar suspect as factors they base their judgement of deception on.
4. More often cite inconsistencies between the statements by the avatar suspect and the evidence as factors they base their judgement of deception on.
5. Use fewer accusatory questions.

## Method

### Participants and Design

Participants were recruited through advertisements at the local universities in Turku and on social media (Facebook), and by snowball sampling. All participants based in Turku were offered a lunch coupon for a café in Turku as compensation for participation. Fluency in English was a requirement for participation. We tested participants' English with an online vocabulary test available at Lextale.com. A score of 60% correct or more was set as the threshold for fluency in our study, since this corresponds to a CEFR proficiency (Council of Europe, 2001) of upper intermediate (B2, Lemhöfer & Broersma, 2012). We excluded anyone who had received any form of formal training in interview or interrogation techniques. All participants read and signed an informed consent form before the experiment. We recruited 54 participants in total. Fourteen participants failed to load the website we used for our simulated interviews, resulting in a final sample of 40 participants (23 men and 17 women, mean age 30.4,  $SD = 11.5$ ).

We used a 2 x 2 between-subjects design that compared participants who received training in the EFM technique ( $n = 20$ ) with participants who did not receive training ( $n = 20$ ). In both groups, half of the participants interviewed a guilty avatar and half an innocent avatar.

### Procedure

Participants were randomly (using a random number created with the Random Integer Set Generator available at <http://random.org>) assigned to either the group that received training in the EFM technique ( $n = 20$ ) or a passive control group ( $n = 20$ ) that received no training. The EFM training consisted of written materials and a video (Ahlgren, 2020) that both explained the theoretical background of the technique and how to use it in interview situations. The video had the same informational content as the written material and was included to reinforce learning. The training material taught participants to withhold information (evidence) to elicit differences between liars and truth-tellers. The material also instructed participants to use a funnel-like structure in their interview and introduced the EFM to help participants construct their interviews. Participants who received the training also answered multiple-choice questions about the training. If they answered these questions wrong, they were asked to read the materials again to make sure they understood the materials before they started the interview. Participants were given 10 minutes to plan their interview.

All participants received the same background information about the fictional criminal case under investigation (inspired by an actual criminal investigation) and their task. In the background information they were informed that they were about to interview a suspect that

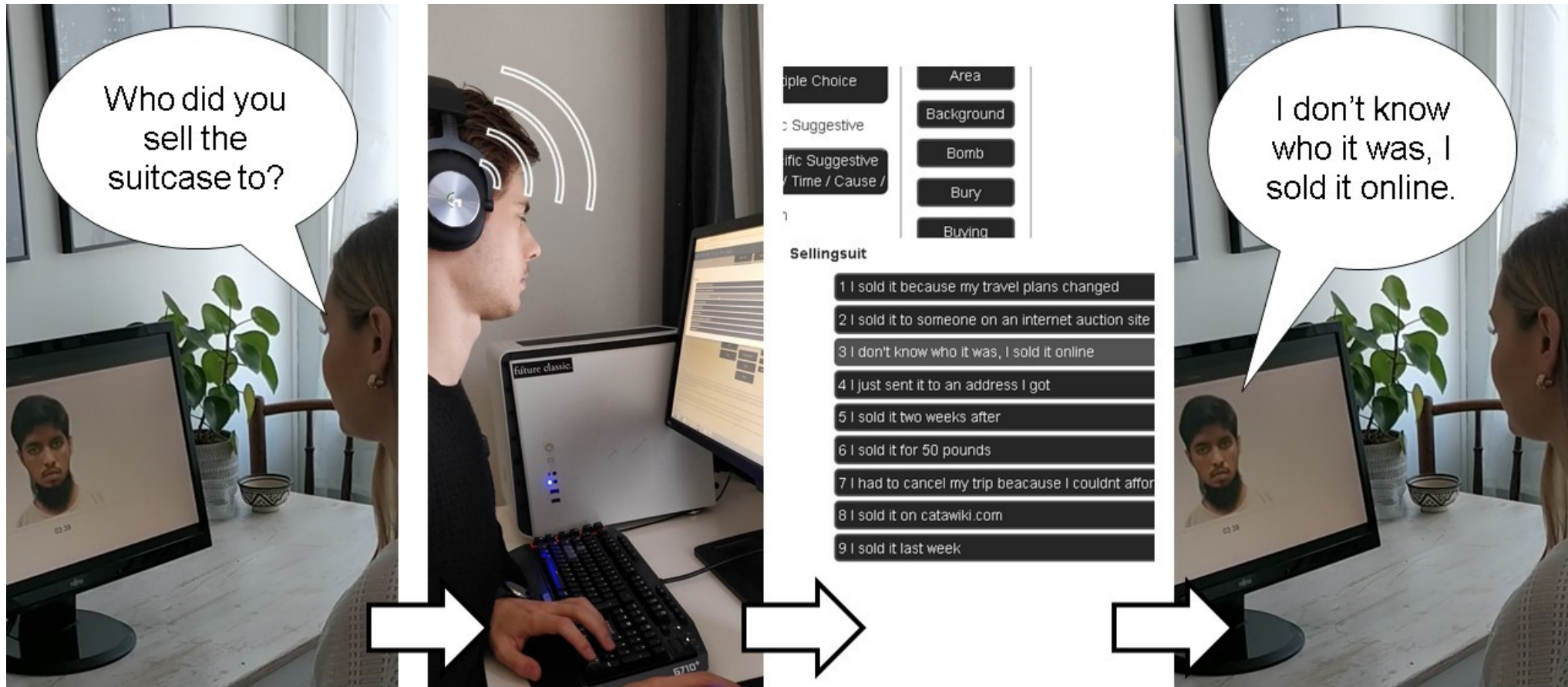
the police believed may have been involved in the planning of a terrorist attack. In the case, a large group of individuals was suspected of planning to smuggle liquid bombs onboard seven commercial flights. According to the intelligence gathered, the bombs were to be assembled and detonated mid-flight in many airplanes simultaneously. Participants were also informed that they had evidence (a surveillance camera still picture) that the suspect had bought a suitcase of the same make and model as one found buried containing explosives near where the suspect lived. Participants were instructed to use this evidence to elicit incriminating statements from the suspect during their interview and to determine if the suspect was lying during the interview or not. Participants were also informed that the police have already interviewed the suspect about background information. Participants were not allowed to present false evidence since this is not legal for police to do in Finland (see Esitutkintalaki 805/2011, chapter 7, 5 §).

### **The Simulated Interview**

All participants took part in a simulated interview (see Figure 2). Interviews were conducted remotely, and their audio was recorded. Audio from the remote data collection was recorded using the recording function in Zoom 5.3.1 (Zoom Video Communications, 2020). Audio from sessions where participants wished to use alternative software for remote communication was recorded using Open Broadcaster Software 23.1.0 (Bailey, 2020). All participants' questions were transcribed by the author for analysis. Half of all participants ( $n = 20$ ) interviewed a truth-telling, innocent, avatar and the other half of participants ( $n = 20$ ) interviewed an avatar that was deceptive and guilty. Participants did not know if the avatar they were interviewing was telling the truth or not. Participants could freely interview the avatar suspect for 10 minutes.

**Figure 2**

*Procedure for the Simulated Interview.*



**Note.** When a participant poses a question, an operator hears the questions and chooses the avatar's answer among alternatives using a decision tree (see Appendices A and B). When the operator has chosen an answer, the avatar will play the answer so the participant can hear it.

The avatars' faces did not belong to any real persons, they were realistic artist renditions of fictional people inspired by the people involved in the real case the scenario is based on (see Panel A of Figure 3). The voice for both the avatars was created using the text to speech feature on SitePal (Oddcast, 2014). An operator, a person not visible to the participant, listened to the questions being posed by the interviewer and chose the answer the avatar gave from available alternatives (i.e. pre-recorded video-clips of all possible avatar responses) using a decision tree (see Appendices A and B) to ensure the avatar responses were consistent and realistic. To make the avatars more natural, they had many answer possibilities with the same informational content formulated in slightly different ways to better fit different forms of questions. For example, the avatars had many ways of answering a direct question about involvement in a terrorist plot with denial using different replies ("I'm not a terrorist.", "I'm innocent.", and "I don't know anything about a bombing.").

After the interview, all participants were asked if they thought the avatar they interviewed was telling the truth or being deceptive, and to list factors they based their judgement of deception on (i.e. what made them think the avatar is lying or telling the truth). They could then choose factors from a list of alternatives if any of them impacted their decision. Participants did not see the alternatives before first answering freely. Participants were also asked how sure they were about their judgement of deception and how well they thought they followed instructions from the training they received (if any). Additionally, we asked for general feedback on anything related to the experiment.

### Measures

All measured variables are listed in Table 1.

**Table 1**

*Variables Measured in the Study.*

<b>Variable</b>	<b>Definition</b>
Judgement on deception	Whether the participants answered after the interview that they think the avatar was being truthful or not.
Confidence in judgement	How confident the participants answered they were in their judgement on a scale from 0-10.



<b>Variable</b>	<b>Definition</b>
Factors judgement was based on	All participants were free to list any factors that they based their judgement of deception on in an open text box. After the open question, we also listed possible factors that participants could choose.
How well participants felt they followed instructions	How well participants felt they followed the instructions they received in the training (if they received training) on a scale from 0-10.
Perceived interview realism	How realistic the participants felt the simulated interview was on a scale from 0-10, 0 labeled completely unrealistic and 10 labeled perfectly realistic.
Questions asked before presenting the evidence	The number of questions participants asked before they presented the evidence they had. To be considered presenting the evidence a participant must reveal having proof that the suspect bought the suitcase.
EFM dimensions used	Which of the dimensions in the EFM participants were using: None, weak to strong source, low to high specificity, or both. If a participant varied their presentation of the evidence on one of these dimensions once or more in the correct direction (weak to strong source, low to high specificity), we counted it as having used that dimension of the matrix.
Amount of accusatory questions	How many accusatory questions participants used in their interview. Accusatory questions were questions that were deemed confrontational and guilt-presumptive by the author.
English proficiency	Participants score (% of correct answers) in LexTale. A threshold score of 60% was required for participation.

### **Ethical Permission**

The study received permission by the Ethical Review Board of Faculty of Arts, Psychology and Theology at Åbo Akademi University.

### **Statistical Analyses**

All statistical analyses were conducted in IBM SPSS Statistics 26.0 for Windows.

To test the first hypothesis, we performed a Pearson's  $\chi^2$  test to see if trained participants differed in regard to correct conclusions about avatar guilt.

To test our second hypothesis, we performed an independent samples *t*-test to examine if trained participants differed from untrained participants in the amount of questions posed before presenting the evidence.

For our third and fourth hypotheses, we performed a Pearson's  $\chi^2$  test to compare trained and untrained participants frequency of choosing within-statement inconsistencies and evidence-statement inconsistencies respectively as at least one of the factors that impacted their decision.

To test our fifth hypothesis, we performed an independent samples *t*-test to compare the amount of accusatory questions posed between trained and untrained participants.

To analyze if training affected participants' confidence in their judgements on the avatars guilt (ideally increasing confidence in correct judgements and lowering confidence in incorrect ones), we created a variable that combined their reported confidence and whether they were correct in their conclusion or not. We multiplied participants' reported confidence with 1 for participants who came to the correct conclusion, and with -1 for those who came to the wrong conclusion. This resulted in a scale from -10 (strong confidence in the wrong conclusion) to 10 (strong confidence in the correct conclusion).

To measure the inter-rater reliability of choosing avatar answers (i.e. would someone else using the same decision tree make the avatar answer with similar responses), we had an additional rater choose answers for the avatar for a subset of 20% of the interviews. Since the avatar has many similar answers for each category and theme to add realism to the simulated interview, we chose to examine the inter-rater reliability for the broader category or theme of answer to avoid an artificially low inter-rater reliability. Our Cohen's  $\kappa$  indicated substantial agreement between the two raters for the subsample,  $\kappa = .76$  (95% CI, .679 to .839),  $p < .0005$ .

For directional hypotheses, one-sided significance testing was used.

### **Pre-Registration**

We registered all hypotheses and the planned statistical analyses in advance on the Open Science Framework (Ahlgren, 2020).

## Results

### English Proficiency

Participants had an average LexTale score of 83% ( $SD = 10$ ). Participants' LexTale score had no correlation with the number of questions posed,  $r(38) = -.06, p = .69$ , nor with the continuous variable combining the confidence and correctness of their judgement  $r(38) = -.14, p < .38$ . The LexTale scores were not significantly different between participants who came to the correct conclusion about the avatar's guilt ( $M = 82.6, SD = 10.3$ ) and those who did not ( $M = 83.8, SD = 9.7, t(38) = 0.37, p < .717$ ).

### Interview Realism

Participants rated the realism of the interview an average of 6.33 out of ten ( $SD = 1.67$ ).

### Following Instructions

Participants who received training before their interrogation thought that they followed the instructions they received in their interview ( $M = 6.10, SD = 2.49$ ). Even so, they rarely varied the presented strength of the source for their evidence in accordance with the EFM. Trained participants barely outperformed untrained participants in this regard, with only 20% varying the strength even once, compared to 15% of untrained participants who did so ( $\chi^2(1) = 0.17, p < .50$ ). Trained participants performed better at presenting varying levels of specificity of their evidence, with 45% varying at least once the specificity of the evidence in their interview, compared to 10% of untrained participants who did so ( $\chi^2(1) = 6.14, p < .013$ ). Only 10% of participants who received training (vs. 5% of those who did not) varied their presentation of both the specificity of the evidence and the strength of their source in accordance with the EFM. See Panel F of Figure 3. A binary logistic regression was calculated to predict use of varying strength of source for presented evidence based on how well the participant felt they followed instructions in the training. No statistically significant regression equation was found, ( $B = 0.28, SE = 0.28, p < .309, OR = 1.33, 95\% [0.77, 2.28]$ ). Subjective estimation of following instructions did not significantly predict performance on varying the specificity of the source either, ( $B = 0.31, SE = 0.21, p < .150, OR = 1.36, 95\% CI [0.90, 2.01]$ ).

### Overall Performance in Detecting Guilt

Participants in our study came to the correct conclusion about the avatars guilt in a majority of cases (62.5%). Among participants who interrogated a truth-telling avatar 75% incorrectly thought the avatar was lying, and 25% thought that the avatar was telling the truth.

Every participant who interviewed a guilty avatar correctly concluded that the avatar was lying. A clear guilt bias was therefore detected.

### **Trained Versus Untrained Participants**

Participants who received training outperformed those who did not in coming to the correct conclusion about the suspect's guilt (75% correct versus 50% correct), but the difference was not statistically significant ( $\chi^2(1) = 2.67, p < .095$ ). Participants who did not receive training always thought the avatar they interviewed lied in the interview, truth-telling and lying avatars alike. Trained participants performed better by correctly identifying all lying suspects while also correctly identifying suspects who told the truth in 50% of cases ( $\chi^2(1) = 6.67, p < .016$ ). These results partially supported our first hypothesis. See Panel B of Figure 3.

To examine if training made participants more certain in their correct conclusions and less certain about incorrect conclusions, we multiplied participants' reported confidence with 1 for participants who came to the correct conclusion, and with -1 for those who came to the wrong conclusion. This resulted in a scale from -10 (strong confidence in the wrong conclusion) to 10 (strong confidence in the correct conclusion). Results indicated a non-significant trend in the predicted direction for participants who received training to perform better ( $M = 3.10, SD = 6.07$ ) than untrained participants ( $M = -0.25, SD = 6.89, t(38) = 2.18, p < .075$ ). See Panel E of Figure 3.

Participants who received training posed fewer questions ( $M = 16.85, SD = 7.73$ ) than participants who did not receive training ( $M = 24.35, SD = 11.58$ ), but the difference was not statistically significant ( $t(38) = -2.41, p < .060$ ). Among participants who presented their evidence during the interview (i.e., told the suspect they had evidence the suspect bought the suitcase), participants who received training posed fewer questions ( $M = 5.00, SD = 3.05$ ) before presenting the evidence, than did participants who did not receive training ( $M = 6.36, SD = 6.97$ ), with a statistically significant effect in the opposite direction of our prediction ( $t(24) = -0.62, p < .020$ ).

Contrary to our hypothesis, trained participants did not cite within-statement inconsistencies as a factor that impacted their decision more (50%) than participants who did not receive training (40%,  $\chi^2(1) = 0.41, p < .525$ ). Trained participants based their judgement of avatar deception on evidence-statement inconsistencies more often (40%) than those who did not receive training (15%). This result was consistent with our prediction, albeit with a result that was not statistically significant ( $\chi^2(1) = 3.14, p < .077$ ).

### **Factors With Impact on Guilt Judgement**

After the interview, we asked participants to report all factors that impacted their decision on the avatar's guilt, first with an open question, afterwards using fixed answer alternatives. Of the participants, 32.5% reported that the suspect's weird behavior was one of the factors that impacted their decision, 27.5% based their decision on the suspect saying something that was inconsistent with the evidence, 45% did not believe the suspect's story, and 45% reported that changes in the suspect's story impacted their decision.

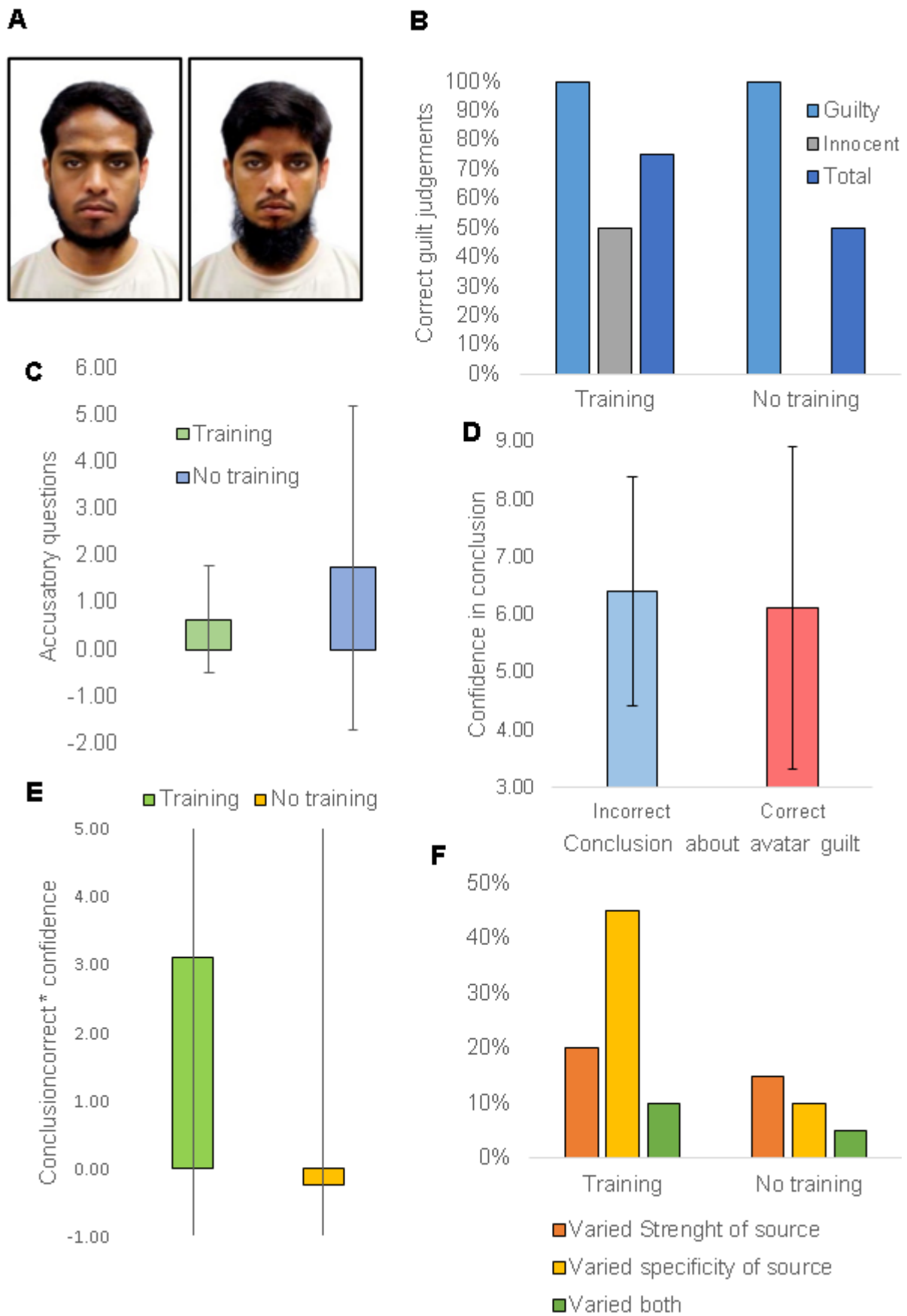
### **Use of Accusatory Questions**

Participants in our study did not use many accusatory questions in their interviews ( $M = 1.20$ ,  $SD = 2.59$ ). Trained participants posed significantly fewer accusatory questions ( $M = 0.65$ ,  $SD = 1.14$ ) than participants who did not receive training ( $M = 1.75$ ,  $SD = 3.45$ ),  $t(38) = 3.84$ ,  $p < .030$ , see Panel C of Figure 3. This result was in line with our hypothesis.

### **Confidence in Conclusion**

Participants in our study were relatively confident in their conclusions regarding the suspect's guilt ( $M = 6.23$ ,  $SD = 2.51$ ). Participants' higher reported confidence in their judgement did not predict a correct conclusion. The regression equation found an effect in the opposite direction that was not statistically significant,  $B = -0.05$ ,  $SE = 0.13$ ,  $p < .729$ ,  $OR = 0.96$ , 95% CI [0.73, 1.24]. See Panel D of Figure 3.

Figure 3



*Note.* Panel A: Avatar suspects. Panel B: Trained and untrained participants' performance in detecting avatar guilt. Panel C: Amount of accusatory questions posed by trained and untrained participants. Error bars are standard errors. Panel D: Participants' self-reported confidence in their conclusion among trained and untrained participants. Error bars are standard errors. Panel E: Participants' confidence in their conclusion. Positive values are confidences in correct conclusions, negative values are confidences in incorrect conclusions. Error bars represent standard errors. Note that the standard errors were so large that they would have extended beyond the graph. Panel F: How often trained and untrained participants varied the strength and specificity of the evidence in line with the EFM-technique.

## **Discussion**

In the present study, we aimed to develop an interrogation simulation setup with avatars and validate its use in training of interview techniques for criminal suspects. We also tested if training in the SUE technique and use of the EFM improved participants' performance in detecting guilt. Our avatars showed potential to be used in training of interview techniques for practitioners, but they need to be developed further first.

Participants in our study who received training in SUE and the use of the EFM achieved a deception detection accuracy of 75%. This was lower than the 85% detection rate that police academy trainees in Sweden achieved (Hartwig et al., 2006) with training in the SUE, but higher than the 65% that police officers in the USA obtained (Luke, Hartwig, Joseph, et al., 2016) with training in the SUE. With or without training, all our participants correctly identified lying suspects perfectly. However, this was in part because without training in the SUE, all our participants always concluded that the suspect they interviewed was lying. In fact, training in the SUE only significantly improved participants' ability to correctly identify truth-telling suspects, but we did not find any improvement in correctly identifying liars. Participants who received training reported that they followed the instructions they received, but only 10% of them actually used the EFM correctly, varying both presentation of strength of source and specificity of evidence. Considering this relatively low compliance with the instructions, the improvement in ability to identify truthful suspects is promising.

We did not find support for our second hypothesis. On the contrary, among participants who presented the evidence in their interview, untrained participants posed more questions than trained participants before doing so. This could have been a result of different strategies between trained and untrained participants. Untrained participants seemed to try to find confirmation for innocent explanations for the evidence that they thought of. For

example, many untrained participants started their interviews with questions about upcoming trips abroad. Trained participants tended to start their interview in accordance with the training material, that is, with asking the suspect about the day they knew the suspect bought a suitcase.

The third and fourth hypotheses were also not supported. Trained and untrained participants did not statistically significantly differ in their tendency to rely on within-statement inconsistencies and evidence-statement inconsistencies as factors impacting their decision regarding the suspect's honesty. Participants reported often basing their judgement on the vagueness of the suspect's story, the suspect's inability to answer certain questions or that the suspect did not remember or know things participants assumed they should be able to. This probably reflects the limitations of the response alternatives available for the avatar.

Training in the SUE-technique made participants use fewer accusatory questions, which was in line with our fifth hypothesis. This is a positive finding, since use of an accusatory interview style is associated with a bigger risk of false confessions, and yields fewer verbal cues of deception (Meissner et al., 2014; Vrij et al., 2007).

Training did not make our participants more certain in their correct conclusions or less certain of their incorrect conclusions. This could be in part because our participants did not use their training well, and therefore did not use the correct signs of deception in their decision-making, and relied instead on intuitive signs of deception, that may not be evidence-based (DePaulo et al., 2003). Participants' confidence in their judgement did not predict their accuracy. This result was in line with previous research (DePaulo et al., 1997).

Contrary to our hypothesis untrained participants posed more questions than participants who received training. We assumed participants who did not receive training would start with presenting the evidence, and then poke holes in the suspect's explanation for it. Instead, many untrained participants started with asking directly for explanations they thought would be possible for the evidence. As mentioned above, many untrained participants started with asking if the avatar had plans to travel anywhere.

### **Limitations**

Our results were heavily distorted by the fact that all untrained participants, regardless if they interviewed an innocent or guilty avatar, thought the suspect was guilty. This was in large part because our participants did not believe even the innocent suspect's explanation for the evidence against him. Participants might also have been biased towards suspecting guilt due to the nature of the simulated situation. The crime the suspect was questioned about was very serious, and the evidence against him was strong, albeit circumstantial. Avatars with



different types of scenarios and evidence should be developed in the future to control for this possible bias.

The avatars' behavior and answer patterns were based on studies mainly conducted in laboratory settings. This means that their behavior could differ from how real suspects might behave in interviews. A common intuitive critique of simulated studies where participants do not experience the same amount of pressure and stress that suspects in real criminal investigations do is that the stress and high stakes of a real interrogation make suspects behave differently. Some studies have used minor financial incentives for successful lies, but even then, the amount of pressure to perform is hardly comparable to the stress of being suspected of a crime. A meta-analysis of studies so far found that a strong emotional state or motivation to successfully lie had no bearing on the detectability of the lie (Hartwig & Bond, 2014). This could be because the same factors apply to both truth-tellers and liars. There could still be other systematic differences between behaviors of suspects in simulated studies and suspects in real criminal cases, which could also mean our avatars do not realistically emulate real suspects. Our participants were not police, and they knew the interview situation and suspicion were not real. Still, many participants reported that they were nervous during the interview. Our participants rated the realism of the interview 6.33 out of ten. This too is probably related to the limited amount of response options for the avatars, which could be improved in future iterations of the setup.

Available studies on the verbal strategies of truth-tellers and liars also had contradictory results, especially in relation to richness of detail in suspects' accounts. In our study, the avatars were designed to present a simple story, and were not able to adequately answer detailed follow-up questions about some parts of their story. This made several participants suspicious even of the innocent avatars. Some participants also chose to thoroughly ask about background information of the avatar suspect. Since the avatars were not equipped with detailed answers to these questions, this also raised suspicions about their truthfulness. We tried to avoid these kinds of strategies in advance by advising participants that they had limited time to interview the suspect, and by informing them that the suspect had already been interviewed about background information. Providing participants with a transcript of the process of obtaining the background information might present a partial solution to this problem in future studies. Many participants also found the innocent avatar's explanation for the evidence against him hard to believe. We aimed for the avatars to have the same ultimate explanation for the evidence against them to control for the effect of their

ultimate explanation, but in this case the explanation biased participants to conclude the suspect was lying.

Using software featuring avatars to train in the use of interview strategies does not require someone to role-play a suspect and is therefore less resource intensive than traditional training methods. Still, in the current version of the software, someone is needed to operate the avatar and choose what answers it gives in response to questions. This can be done remotely, and the answers given are systematically chosen, but it still requires another person to work concurrently with the simulated interrogation. With the current setup, the practical benefit of using avatars instead of role-playing a suspect is substantial. However, in future versions of the avatars, we would hope to be able to automate the process of choosing avatar answers using artificial intelligence and voice recognition technology.

We asked participants to report themselves which factors they based their judgement of deception on, which might be inaccurate. It is possible that participants are not fully aware of all the factors that influence their judgement. Participants also only had 10 minutes to interview the avatar, which is a shorter timespan than a typical interview in a criminal investigation setting, although research on police interrogation durations has yielded a wide range of average durations (Baldwin, 1993; Kassin et al., 2007; Williamson, 1990).

### **Conclusions and Future Research**

This was the first time an approach with simulated avatars has been tried in the field of interrogation technique training. The potential of developing a working interactive interrogation simulation where practitioners can practice use of new evidence-based techniques in a safe, realistic and cost- and time-efficient way shows huge promise.

Future studies could use more elaborate training regimens with more sessions to see if avatars similar to the one used in our study would be suitable for use in training of professional interviewers (e.g. police personnel, border agents or psychiatrists). Scenarios of different difficulty, different background scenarios and different suspects could be developed to increase their ecological validity. Having the participants interview several avatars would also make it possible to add receiving feedback, which would enhance learning as Pompedda et al. (2015, 2020) have found in their studies with a similar setup for training in interview techniques with children. In the present study only theoretical training was given to the participants followed by a test of performance without giving them the opportunity to practice the skills followed by feedback.

## Swedish Summary – Svensk Sammanfattning

### Effekterna av träning i bevispresentationsmatrisen i simulerade förhör med avatarer

#### Abstrakt

Att kunna skilja mellan sanna och falska påståenden är ytters viktigt inom polisförhör. När vetenskapligt kunnande om tekniker för att kunna skilja åt lögner och sanning ökar, begränsas deras implementering av praktiska orsaker. I denna studie utvecklade vi avatarfigurer och en nätsida för att kunna träna människor i användning av intervjustrategier i simulerade förhör. Vi rekryterade deltagare som inte hade fått skolning i användning av intervjustrategier och gav hälften av dem träning i strategisk bevishantering (SUE) och bevispresentationsmatrisen (EFM), en teknik inom SUE för att presentera bevis i mindre delar stegvis. Vi jämförde dessa två grupper och fann att de deltagare som fick träning bättre kände igen misstänkta som talade sanning. Deltagare som inte fick träning klassade alla misstänka oberoende om de talade sanning eller inte som skyldiga. I vår studie hade avatarfigurerna ett begränsat antal svarsalternativ om vissa teman försökspersoner frågade om, som många av dem tyckte var misstänksamt. Genom att vidare utveckla avatarerna kunde de potentiellt användas i framtiden för att mer resurseffektivt kunna skola människor i användning av intervjutekniker.

#### Introduktion

Att kunna skilja på sanna och falska påståenden är ytterst viktigt inom polisförhör, men forskning visar att det är svårt. Både i populärkultur och i polisens träningsmanualer utgår man från att människor som ljuger beter sig systematiskt annorlunda än människor som talar sanning (Vrij & Granhag, 2007). Forskning som gjorts inom området hittills visar ändå att människor är värdelösa på att på ett tillförlitligt sätt försöka skilja mellan sanna och falska påståenden. I en metaanalys där 206 studier ingick kom Bond och DePaulo (2006) fram till att människor i lögn-detektion presterar på chansnivå, med en medeligenkänningsprocent på 54 %. Experter på området, till exempel poliser, klarar sig inte bättre än lekmän (Ekman & O'Sullivan, 1991; Bond & DePaulo, 2006; Aamodt & Custer, 2006). Hittills har inga starka verbala eller icke-verbala tecken på lögner hittats. Studier tyder på att icke-verbala tecken som även yrkesmänniskor ofta anser vara tillförlitliga tecken på lögner, såsom undvikande av ögonkontakt och ändring av kroppshållning, inte har något samband med lögner (Strömwall & Granhag, 2003; Vrij & Semin, 1996; Sporer & Schwandt, 2007). I den mest omfattande metaanalysen som hittills utförts inom forskningsområdet analyserades över 50 tecken på

lögner, varav endast 14 hade något diagnostiskt värde och även dessa tecken hade små effektstorlekar (DePaulo et al., 2003).

### ***Misstänkts strategier i förhör***

För att utveckla förhørsstrategier har man i studier undersökt strategier som misstänkta, både de som talar sanning och de som ljuger, använder sig av i förhör. De som ljuger rapporterar att deras strategi oftast består av att de undviker att avslöja för många detaljer i sin berättelse (Granhag och Strömwall, 2002). I en studie där brott simulerades av Strömwall, Hartwig och Granhag (2006) jämfördes strategier för det verbala innehållet i misstänkts berättelser. De som ljög använde sig oftast av en strategi där de strävade efter att ge en så simpel berättelse som möjligt, medan de som talade sanning valde att berätta om saken som den var ("tell it like it was"). I en annan liknande studie ombads deltagarna beskriva den strategin de tänkte använda sig av i ett kommande förhör. Deltagarna som skulle ljuga i studien rapporterade att de tänkte berätta en detaljrik berättelse, undvika så långt som möjligt att ljuga och att återge en sammanhängande berättelse. De deltagare som inte ombads att ljuga i studien rapporterade oftast som strategi att berätta hela sanningen (Hartwig, Granhag och Strömwall, 2007). Skyldiga misstänka, speciellt de som har kriminell bakgrund, tenderar att undvika att avslöja inkriminerande information både som svar till generella och mer specifika frågor (Granhag et al., 2009). Endast en studie av Strömwall och Willén (2011) har undersökt misstänkts verbala strategier i riktiga förhör. I studien intervjuades fängslade brottslingar om deras strategier. De vanligaste strategierna för innehållet i deras berättelser var att hålla sig nära sanningen, hålla berättelsen simpel och att ge en så detaljrik berättelse som möjligt.

### ***Strategisk bevishantering***

Strategisk bevishantering (eng. *Strategic Use of Evidence*; SUE) är en intervjuteknik där man strävar efter att bättre kunna skilja mellan de som talar sanning och de som ljuger i förhör (Hartwig, Granhag & Luke, 2014). Både de som ljuger och de som talar sanning i förhör delar ett gemensamt mål om att övertyga intervjuaren om att de är oskyldiga. SUE-tekniken baserar sig på premissen om att de som talar sanning och de som ljuger använder sig av olika strategier för att nå detta mål. Enligt forskning tenderar de som ljuger att undvika att avslöja kritiska detaljer i förhör om de kan, medan de som talar sanning vill framföra sin oskuld genom att berätta ärligt så många detaljer som möjligt (Hartwig, Granhag, Strömwall, Doering 2010; Strömwall, Hartwig & Granhag, 2006). SUE-tekniken strävar efter att utnyttja dessa skillnader i beteenden för att få den misstänkte att göra motstridiga

uttalanden som motsäger bevisen, eller något den misstänkte själv berättat. Båda dessa typer av motstridigheter har inom forskning konstaterats vara avändbara tecken på lögn (Hartwig et al. 2014). För att framkalla dessa motstridigheter använder man sig av en trattstruktur i intervjuer där SUE-tekniken tillämpas. Man inleder intervjun med generella och öppna frågor istället för att presentera de bevis man har. Under intervjuns förlopp ställer man sedan alltmer specifika frågor efter hand. De bevis man har att använda sig av presenterar man också strategiskt i delar istället för att börja med att presentera bevisen och be den misstänkta förklara sig. I en metaanalys fann man att SUE-tekniken pålitligt förstärker tendensen hos de som ljuger i förhör att producera motstridigheter mellan sin berättelse och tillgängliga bevis (Hartwig, Granhag, Luke, 2014). Inom forskning har man också funnit stöd för att SUE-tekniken effektivt avslöjar även lögn av barn och grupper av misstänkta (Clemens et al. 2010, Granhag, Rangmar & Strömwall, 2015). Tekniken har också framgångsrikt använts för att få misstänkta att avslöja ny och avgörande information (eng. *admissions*) och för att identifiera misstänkta som ljuger om sina intentioner (Tekin et al., 2015; Tekin, Granhag, Strömwall & Vrij, 2016; Clemens, Granhag & Strömwall, 2011). Studier på effekterna av träning i SUE-tekniken har gett lovande resultat i både Sverige och Förenta staterna (Hartwig, Granhag, Strömwall, & Kronkvist, 2006; Luke et al., 2016). SUE-tekniken verkar fungera även om misstänkta vet om att SUE-tekniken kommer att användas i ett förhör med dem, och de misstänkta får möjlighet att komma på motstrategier mot tekniken (Luke, Hartwig, Shamash & Granhag, 2016).

Bevispresentationsmatrisen (eng. *Evidence Framing Matrix*, EFM) är en teknik inom SUE-ramverket för att strukturera ett förhör så att man presenterar de bevis man har i delar för att framkalla större skillnader mellan de som talar sanning och de som ljuger (Granhag, Strömwall, Willén & Hartwig, 2013). Om man till exempel har DNA-bevis som placerar en misstänkt vid brottsplatsen, kan detta presenteras till den misstänkta i sin helhet ("Vi har hittat ditt DNA vid brottsplatsen") eller på ett mindre specifikt sätt ("Vi har information om att du varit i Åbo"). Med hjälp av EFM kan man lättare komma på hur man kan presentera sitt bevis på varierande sätt. När man använder sig av EFM, varierar man på formuleringen av presentationen av beviset på två dimensioner: källans styrka (från svag till stark) och bevisets specificitet (från låg specificitet till hög specificitet, se Figur 1).

### **Figur 1.**

*Ett exempel på användning av EFM för att presentera bevis gradvis i ett förhör med en misstänkt.*

	Låg specificitet	Hög specificitet
Stark källa	Vi har DNA-bevis för att du var i Åbo	Vi har DNA-bevis för att du var på brottsplatsen
Svag källa	Vi har information om att du var i Åbo	Vi har information om att du var på brottsplatsen

När man använder sig av SUE-tekniken och EFM för att strukturera sin intervju inleder man med öppna och generella frågor (till exempel vad den misstänkta gjorde då brottet begicks). Sedan presenterar man med hjälp av EFM först en svag beviskälla med låg specificitet. Efter det använder man sig av en stark beviskälla med låg specificitet, innan man till slut använder sig av en stark beviskälla med hög specificitet. Målet med det gradvisa avslöjandet av bevis är att få en skyldig misstänkt att vara tvungen att flera gånger ändra på sin berättelse då den misstänkta försöker få berättelsen att överensstämma med det presenterade beviset. Man utnyttjat alltså skyldiga misstänkta personers tendens att undvika inkriminerande detaljer i svar på öppna frågor för att framkalla motstridigheter som enligt forskning är tecken på lögn. Genom att börja med öppna frågor istället för att börja med att presentera bevis i sin helhet ger man också oskyldiga misstänka möjligheten att komma fram med en förklaring till beviset, eftersom de inte vet vilka detaljer som är inkriminerande. På forskningsområdet om barnintervjuer visar studier även på att även om de som arbetar med barnintervjuer har fått skolning i god intervjupraxis använder de sig ofta inte av denna kunskap då de intervjuar. Man har också funnit att träning i intervjuteknik är mest effektiv då träningen utförs under en längre tidsperiod och då deltagarna har möjlighet att öva på teknikerna och få feedback (Lamb, 2016). För att poliser ska kunna öva på användning av SUE-tekniken, eller vilken som helst förhörsteknik, behöver de hjälp av någon som spelar en misstänkt i ett simulerat förhör. Praktisk träning med skådespelare under en längre tid kräver

dock mycket resurser och tid att förverkliga. Poliser skulle också kunna öva på olika tekniker i samband med verkliga fall, men då riskerar de att fördärva en pågående förundersökning.

För att försöka lösa detta problem utvecklade och använde vi avatarfigurer i vår studie.

Avatarfigurer är i praktiken animerade ansikten som svarar högt på verbalt ställda frågor. Vi använde liknande avatarfigurer i vår studie som Pompedda, Zappala och Santtila (2015) använde för att träna deltagare i att intervjua barn enligt rekommenderad praxis.

Avatarfigurerna i vår studie innehade information om brott eller oskyldiga tidigare handlingar som de avslöjade under förhören. I vår studie använde vi oss av två olika avatrar. Den ena avataren var misstänkt och talade sanning, medan den andra var skyldig till det misstänkta brottet och ljög i förhöret. Avatarfigurens svar valdes bland förbestämda alternativ av en operatör med hjälp av ett beslutsträd. Svartalternativen och avatarens verbala strategi i förhören baserade sig på den forskning som presenterats ovan. I praktiken resulterade detta i att avatrarerna i vår studie hade samma ultimata förklaring till beviset som fick dem att bli misstänkta. Båda avatrarerna förnekade också sin skyldighet till brott som svar på direkta frågor om skuld. Skillnaden mellan avataren som talade sanning och avataren som ljög var att den som talade sanning svarade öppet utan att dölja detaljer som svar på generella frågor, medan den skyldiga avataren undvek att nämna detaljer som var inkriminerande. Om man använde SUE- och EFM-teknikerna för att strukturera sin intervju blev skillnaderna mellan avatrarerna tydliga.

### ***Studiens syfte***

Syftet med studien var att utveckla avatrar som kunde användas för att träna människor i användning av intervjutekniker. Vi ville också utreda om deltagare som fick träning i användning av intervjutekniker skulle använda sig av teknikerna de lärt sig i simulerade förhör. Vi ville också utreda om de som fick träning i användningen av EFM bättre kunde särskilja misstänka som ljuger och misstänkta som talar sanning från varandra än de som inte fick någon träning. På basen av tidigare forskning kom vi fram till följande hypoteser:

Vi hypotetiserade att deltagare som fick träning i EFM-tekniken skulle:

6. Bättre skilja mellan avatrar som ljuger och avatrar som talar sanning.
7. Ställa fler frågor före de presenterar bevis.
8. Oftare basera sina slutsatser om den misstänkta avatarens skuld på motstridigheter inom berättelsen.

9. Oftare basera sina slutsatser om den misstänkta avatarens skuld på motstridigheter mellan avatarens berättelse och bevis.
10. Använda färre anklagande frågor.

## **Metod**

### ***Deltagare och design***

40 deltagare (23 män och 17 kvinnor, medel ålder 30,4,  $SD = 11,5$ ) deltog i studien. Deltagare rekryterades med annonser på sociala medier och universitet i Åbo. Alla deltagare erbjöds en lunchkupong till ett café i Åbo som belöning för deltagande. Kunskaper i engelska krävdes för delta i studien. Försökspersonernas kunskaper i engelska testades med ett vokabulärtest på Lextale.com. För att delta krävdes minst 60 % korrekta svar, eftersom detta motsvarar en GERS nivå på G2 (självständig användare, Lemhöfer och Broersma, 2012). Alla deltagare skrev under en blankett om informerat samtycke före deltagande i studien.

Vi använde oss av en 2 (EFM-träning versus ingen träning) X 2 (skyldig versus oskyldig avatar) mellanpersonsdesign. Hälften av alla deltagare fick träning i användning av EFM-tekniken medan andra hälften inte fick någon träning alls. Hälften av alla deltagare intervjuade en oskyldig avatar som talade sanning och andra hälften intervjuade en skyldig avatar som ljög.

### ***Procedur***

Deltagare delades slumpmässigt in i en av fyra grupper med hjälp av en algoritm (Random Integer Set Generator, <http://random.org>). Träningen i EFM-tekniken bestod av skriftligt material och en video som förklarade teoretiska bakgrunden till och användning av EFM-tekniken i förhör. Träningen lärde deltagarna att inleda intervjun med öppna frågor, att presentera bevis gradvis och senare i intervjun för att framkalla skillnader mellan misstänkta som talar sanning och misstänkta som ljuger. Träningsmaterialet lärde också deltagarna att använda en trattstruktur i sina förhör, det vill säga att börja med generella öppna frågor och att ställa mer och mer specifika frågor under förhörets lopp. För att säkerställa att de deltagare som fått träning förstått materialet ombads de svara på flervalsfrågor om materialet innan det simulerade förhöret. Om de svarade fel ombads deltagare läsa igenom materialet igen. Alla deltagare fick läsa samma bakgrundsinformation om det fiktiva brottsfallet före förhöret. I bakgrundsmaterialet informerades deltagarna att de skulle förhöra en person som misstänkts vara en del av ett planerat terrorattentat. Deltagarna fick också veta att de hade bevis i form av



en övervakningskamerabild för att den misstänkta hade köpt en likadan resväska som en väska som hittats begravnen med sprängämnen. Deltagarna fick instruktioner om att deras uppgift var att använda beviset för att ta reda på om den misstänkta talade sanning och om den misstänkta var skyldig eller inte. Alla deltagare tog del av ett simulerat förhör. Förhören utfördes alla på distans och deras ljud inspelades med inbyggda inspelningsfunktionen i Zoom 5.1.0. Alla förhör transkriberades av författaren. Hälften av försökspersonerna förhörde en oskyldig ärlig avatar och hälften förhörde en skyldig ljugande avatar, men försökspersonerna visste inte om avataren de förhörde talade sanning eller inte. Avatarens utseende och röst var kompositioner av flera riktiga människors egenskaper. Efter intervjuerna fyllde alla försökspersoner i en blankett där de fick välja om de tyckte avataren talade sanning eller inte, om den var skyldig eller inte och de ombads lista vilka orsaker de baserade sitt beslut på. Vi frågade också hur säkra försökspersonerna var på sin slutsats (på en skala från 0 till 10), hur bra de tyckte de följde eventuell träning de fått (0 till 10), och vi bad om feedback på träningsmaterialet och avatarsen.

För att mäta reliabiliteten av avatarsvaren, det vill säga skulle en annan operatör välja samma svar för avataren, bad vi en annan person välja svar för ett delsampel på 20 % av intervjuerna.

## **Resultat**

Överlag kom deltagare i vår studie fram till rätt slutsats om avatarens skyldighet i lite över hälften av fallen (62,5 %). Tränade försökspersoner svarade rätt gällande den misstänkta skuld i 75 % av fallen, medan försökspersoner som inte fått träning svarade rätt i 50 % av fallen. De deltagare som fick träning i EFM-tekniken presterade bättre än de som inte fått träning på att känna igen avatarer som talade sanning, men inte på att känna igen avatarer som ljög. Försökspersonerna som inte fick träning svarade alltid, både de som förhörde en skyldig avatar och de som förhörde en oskyldig avatar, att den misstänkta ljög. Bland försökspersonerna som förhörde en avatar som talade sanning svarade 75 % att avataren ljög, och 25 % att den talade sanning. De försökspersoner som inte fått träning som intervjuade en ärlig misstänkt svarade alla att avataren ljög. Bland de försökspersoner som fått träning och intervjuade en avatar som talade sanning kom 50 % fram till den rätta slutsatsen att avataren talade sanning. Träningen var alltså effektiv på att hjälpa försökspersoner känna igen misstänkta avatarer som talar sanning bättre. Eventuell effekt av träning på förmågan att urskilja ljugande misstänkta kunde inte urskiljas då alla försökspersoner oberoende träning kände igen den ljugande misstänkta. Försökspersoner som fick träning rapporterade att de tyckte att de följt instruktionerna de fått. Trots detta varierade inte tränade försökspersoner på presentationen av specificiteten på beviset

eller styrkan på källan av beviset såsom träningen uppmanade. Endast 10 % av deltagarna varierade på både specificiteten av beviset och styrkan av källan i sin intervju. Tränade försökspersoner ställde i medeltal mindre frågor ( $M = 16,85$ ,  $SD = 7,73$ ) än de som inte fick träning ( $M = 24,35$ ,  $SD = 11,58$ ). Detta resultat gick emot vår hypotes. Bland försökspersoner som presenterade sitt bevis för den misstänkta under intervjun skilde sig inte de försökspersoner som fått träning i mängden frågor ( $M = 5,00$ ,  $SD = 3,05$ ) de ställde före de gjorde det såsom vi hypotetiserat från de försökspersoner som inte fått träning ( $M = 6,36$ ,  $SD = 6,97$ ).

Försökspersonerna som fick träning rapporterade inte oftare än de som inte fått träning att de baserade sitt beslut på motstridigheter inom den misstänkta berättelse (50 % versus 40 %),  $\chi^2(1) = 0.41$ ,  $p < .525$ . Tränade deltagare baserade inte heller sina beslut signifikant mycket oftare än otränade deltagare på motstridigheter mellan beviset och den misstänkta berättelse (40 %) än deltagare som inte fick träning (15 %),  $\chi^2(1) = 3.14$ ,  $p < .077$ . Dessa resultat stämde inte överens med våra hypoteser gällande faktorerna som påverkat deltagares slutsatser om den misstänkta ärlighet.

## Diskussion

Avatarens beteende och svarsstrategi i denna studie var baserade på studier som nästan alla är gjorda i laboratorier, där försökspersoner inte är utsatta för samma stress och nervositet som man kan anta att misstänkta, både skyldiga och oskyldiga, känner i riktiga förhör. Vissa studier har försökt skapa incentiv genom att ge bättre belöningar åt försökspersoner som lyckas övertala förhöraren om sin oskyldighet. Därmed är det möjligt att avatarens beteende och svarsstrategi inte är motsvarande till hur en riktigt misstänkt skulle bete sig i ett liknande scenario. Vissa resultat om misstänkta strategier var också motstridiga mellan olika studier, till exempel när det gällde hur detaljerad berättelse misstänkta strävar efter att ge.

En stor begränsning med vår studie var att avatarerna verkade skyldiga till en stor andel av deltagarna. Enligt feedbacken vi fått beror detta till en stor grad på att den oskyldiga avatarens förklaring till beviset inte var trovärdigt. Bråttet som utreddes i det simulerade fallet var också allvarligt, och beviset emot den misstänkta kunde tolkas som starkt. Dessa faktorer kunde påverka försökspersoners tendens att komma till slutsatsen att den misstänkta ljugar. För fortsatta studier borde man utveckla avatarens berättelse så att den är mer trovärdig. Många deltagare blev också misstänksamma då avataren inte tillräckligt detaljrikt kunde svara på bakgrundsfrågor eller detaljerade följdfrågor. Avatarerna kunde utvecklas så att de har ett större urval av svarsalternativ. I framtida studier kunde man också utveckla flera avatarer med

flera olika scenarion och förklaringar för att kunna motverka effekten av enskilda avatars berättelser eller bakgrundsscenarion.

## References

- Aamondt, M. G., & Custer, H. (2006). Who can best catch a liar? A meta-analysis of individual differences in detecting deception. *The Forensic Examiner*, 15(February).
- Ahlgren, R. (n.d.). *How to use the Evidence Framing Matrix*. <https://youtu.be/bP-8HLdVty8>
- Ahlgren, R. (2020). *Effects of the Evidence Framing Matrix (EFM) technique training in simulated interrogations with avatars*. [osf.io/rv24s](https://osf.io/rv24s)
- Bailey, H. "Jim." (2020). *Open Broadcaster Software*. <https://obsproject.com/>
- Baldwin, J. (1993). Police interview techniques: Establishing truth or proof? *The British Journal of Criminology*, 33(June 1990), 66–72.
- Bond, C. F., & DePaulo, B. M. (2006). Accuracy of deception judgments. In *Personality and Social Psychology Review* (Vol. 10, Issue 3). [https://doi.org/10.1207/s15327957pspr1003\\_2](https://doi.org/10.1207/s15327957pspr1003_2)
- Bond, C. F., & DePaulo, B. M. (2008). Individual Differences in Judging Deception: Accuracy and Bias. *Psychological Bulletin*, 134(4). <https://doi.org/10.1037/0033-2909.134.4.477>
- Clemens, F., Granhag, P. A., & Strömwall, L. A. (2011). Eliciting cues to false intent: A new application of strategic interviewing. *Law and Human Behavior*, 35(6), 512–522. <https://doi.org/10.1007/s10979-010-9258-9>
- Clemens, F., Granhag, P. A., Strömwall, L. A., Vrij, A., Landström, S., Hjelmsäter, E. R. af, & Hartwig, M. (2010). Skulking around the dinosaur: Eliciting cues to children's deception via strategic disclosure of evidence. *Applied Cognitive Psychology*, 24(7). <https://doi.org/10.1002/acp.1597>
- Council of Europe. Council for Cultural Co-operation. Education Committee. Modern Languages Division. (2001). *Common European Framework of Reference for Languages: learning, teaching, assessment*. Cambridge University Press.
- DePaulo, B. M., Charlton, K., Cooper, H., Lindsay, J. J., & Muhlenbruck, L. (1997). The accuracy-confidence correlation in the detection of deception. *Personality and Social Psychology Review*, 1(4), 346–357. [https://doi.org/10.1207/s15327957pspr0104\\_5](https://doi.org/10.1207/s15327957pspr0104_5)
- DePaulo, B. M., Malone, B. E., Lindsay, J. J., Muhlenbruck, L., Charlton, K., & Cooper, H.

- (2003). Cues to deception. In *Psychological Bulletin* (Vol. 129, Issue 1).  
<https://doi.org/10.1037/0033-2909.129.1.74>
- Ekman, P., & O'Sullivan, M. (1991). Who Can Catch a Liar? *American Psychologist*, *46*(9).  
<https://doi.org/10.1037/0003-066X.46.9.913>
- Granhag, P. A., Clemens, F., & Strömwall, L. A. (2009). The usual and the unusual suspects: Level of suspicion and counter-interrogation tactics. *Journal of Investigative Psychology and Offender Profiling*, *6*(2). <https://doi.org/10.1002/jip.101>
- Granhag, P. A., Rangmar, J., & Strömwall, L. A. (2015). Small Cells of Suspects: Eliciting Cues to Deception by Strategic Interviewing. *Journal of Investigative Psychology and Offender Profiling*, *12*(2), 127–141. <https://doi.org/10.1002/jip.1413>
- Granhag, P. A., & Strömwall, L. A. (2002). Repeated interrogations: Verbal and non-verbal cues to deception. *Applied Cognitive Psychology*, *16*(3). <https://doi.org/10.1002/acp.784>
- Granhag, P. A., Strömwall, L. A., Willén, R. M., & Hartwig, M. (2013). Eliciting cues to deception by tactical disclosure of evidence: The first test of the Evidence Framing Matrix. *Legal and Criminological Psychology*, *18*(2). <https://doi.org/10.1111/j.2044-8333.2012.02047.x>
- Hartwig, M., & Bond, C. F. (2014). Lie detection from multiple cues: A meta-analysis. *Applied Cognitive Psychology*, *28*(5), 661–676. <https://doi.org/10.1002/acp.3052>
- Hartwig, M., Granhag, P. A., & Luke, T. (2014). Strategic Use of Evidence During Investigative Interviews: The State of the Science. In *Credibility Assessment: Scientific Research and Applications*. <https://doi.org/10.1016/B978-0-12-394433-7.00001-4>
- Hartwig, M., Granhag, P. A., & Strömwall, L. A. (2007). Guilty and innocent suspects' strategies during police interrogations. *Psychology, Crime and Law*, *13*(2).  
<https://doi.org/10.1080/10683160600750264>
- Hartwig, M., Granhag, P. A., Strömwall, L. A., & Doering, N. (2010). Impression and Information Management: On the Strategic Self-Regulation of Innocent and Guilty Suspects. In *The Open Criminology Journal* (Vol. 3).
- Hartwig, M., Granhag, P. A., Strömwall, L. A., & Kronkvist, O. (2006). Strategic use of evidence during police interviews: when training to detect deception works. *Law and Human Behavior*, *30*(5), 603–619. <https://doi.org/10.1007/s10979-006-9053-9>

- Hartwig, M., Granhag, P. A., Strömwall, L. A., & Vrij, A. (2004). Police Officers' Lie Detection Accuracy: Interrogating Freely Versus Observing Video. *Police Quarterly*, 7(4), 429–456. <https://doi.org/10.1177/1098611104264748>
- Hines, A., Colwell, K., Hiscock-Anisman, C., Garrett, E., Ansarra, R., & Montalvo, L. (2010). Impression management strategies of deceivers and honest reporters in an investigative interview. *European Journal of Psychology Applied to Legal Context*, 2(1).
- Johnson, M., Magnussen, S., Thoresen, C., Lønnum, K., Burrell, L. V., & Melinder, A. (2015). Best Practice Recommendations Still Fail to Result in Action: A National 10-Year Follow-up Study of Investigative Interviews in CSA Cases. *Applied Cognitive Psychology*, 29(5), 661–668. <https://doi.org/10.1002/acp.3147>
- Kassin, S. M., Leo, R. A., Meissner, C. A., Richman, K. D., Colwell, L. H., Leach, A. M., & Fon, D. La. (2007). Police interviewing and interrogation: A self-report survey of police practices and beliefs. *Law and Human Behavior*, 31(4), 381–400. <https://doi.org/10.1007/s10979-006-9073-5>
- Kassin, S. M., & Norwick, R. J. (2004). Why people waive their Miranda rights: The power of innocence. *Law and Human Behavior*, 28(2). <https://doi.org/10.1023/B:LAHU.0000022323.74584.f5>
- Lamb, M. E. (2016). Difficulties translating research on forensic interview practices to practitioners: Finding water, leading horses, but can we get them to drink? *American Psychologist*, 71(8). <https://doi.org/10.1037/amp0000039>
- Lancaster, G. L. J., Vrij, A., Hope, L., & Waller, B. (2013). Sorting the Liars from the Truth Tellers: The Benefits of Asking Unanticipated Questions on Lie Detection. *Applied Cognitive Psychology*, 27(1), 107–114. <https://doi.org/10.1002/acp.2879>
- Lemhöfer, K., & Broersma, M. (2012). Introducing LexTALE: A quick and valid Lexical Test for Advanced Learners of English. *Behavior Research Methods*, 44(2). <https://doi.org/10.3758/s13428-011-0146-0>
- Leo, R. A. (1996). Inside the interrogation room. *Journal of Criminal Law and Criminology*, 86(2). <https://doi.org/10.2307/1144028>
- Luke, T. J., Hartwig, M., Joseph, E., Brimbal, L., Chan, G., Dawson, E., Jordan, S., Donovan, P., & Granhag, P. A. (2016). Training in the Strategic Use of Evidence technique:

- Improving deception detection accuracy of American law enforcement officers. *Journal of Police and Criminal Psychology*, 31(4). <https://doi.org/10.1007/s11896-015-9187-0>
- Luke, T. J., Hartwig, M., Shamash, B., & Granhag, P. A. (2016). Countermeasures Against the Strategic Use of Evidence Technique: Effects on Suspects' Strategies. *Journal of Investigative Psychology and Offender Profiling*, 13(2), 131–147. <https://doi.org/10.1002/jip.1448>
- Meissner, C. A., Redlich, A. D., Michael, S. W., Evans, J. R., Camilletti, C. R., Bhatt, S., & Brandon, S. (2014). Accusatorial and information-gathering interrogation methods and their effects on true and false confessions: a meta-analytic review. *Journal of Experimental Criminology*, 10(4), 459–486. <https://doi.org/10.1007/s11292-014-9207-6>
- Moston, S., & Engelberg, T. (1993). Police questioning techniques in tape recorded interviews with criminal suspects. *Policing and Society*, 3(3). <https://doi.org/10.1080/10439463.1993.9964670>
- Oddcast. (2014). *Sitepal*. <http://www.sitepal.com/>
- Pompedda, F., Palu, A., Kask, K., Schiff, K., Soveri, A., Antfolk, J., & Santtila, P. (2020). Transfer of simulated interview training effects into interviews with children exposed to a mock event. *Nordic Psychology*, 0(0), 1–25. <https://doi.org/10.1080/19012276.2020.1788417>
- Pompedda, F., Zappalà, A., & Santtila, P. (2015). Simulations of child sexual abuse interviews using avatars paired with feedback improves interview quality. *Psychology, Crime and Law*, 21(1). <https://doi.org/10.1080/1068316X.2014.915323>
- Sporer, S. L., & Schwandt, B. (2007). Moderators of nonverbal indicators of deception: A meta-analytic synthesis. In *Psychology, Public Policy, and Law* (Vol. 13, Issue 1). <https://doi.org/10.1037/1076-8971.13.1.1>
- Strömwall, L. A., & Granhag, P. A. (2003). How to detect deception? Arresting the beliefs of police officers, prosecutors and judges. *Psychology, Crime and Law*, 9(1). <https://doi.org/10.1080/10683160308138>
- Strömwall, L. A., Hartwig, M., & Granhag, P. A. (2006). To act truthfully: Nonverbal behaviour and strategies during a police interrogation. *Psychology, Crime and Law*, 12(2), 207–219. <https://doi.org/10.1080/10683160512331331328>

- Strömwall, L. A., & Willén, R. M. (2011). Inside criminal minds: Offenders' strategies when lying. *Journal of Investigative Psychology and Offender Profiling*, 8(3), 271–281. <https://doi.org/10.1002/jip.148>
- Tekin, S., Granhag, P. A., Strömwall, L. A., & Vrij, A. (2016). How to make perpetrators in denial disclose more information about their crimes. *Psychology, Crime and Law*, 22(6). <https://doi.org/10.1080/1068316X.2016.1168425>
- Tekin, S., Granhag, P. A., Strömwall, L., Giolla, E. Mac, Vrij, A., & Hartwig, M. (2015). Interviewing strategically to elicit admissions from guilty suspects. *Law and Human Behavior*, 39(3). <https://doi.org/10.1037/lhb0000131>
- Vrij, A., & Granhag, P. A. (2007). *Offenders' Memories of Violent Crimes* (S. Christianson (ed.); pp. 279–304). Wiley.
- Vrij, A., & Granhag, P. A. (2012). Eliciting cues to deception and truth: What matters are the questions asked. *Journal of Applied Research in Memory and Cognition*, 1(2), 110–117. <https://doi.org/10.1016/j.jarmac.2012.02.004>
- Vrij, A., Mann, S., Kristen, S., & Fisher, R. P. (2007). Cues to deception and ability to detect lies as a function of police interview styles. *Law and Human Behavior*, 31(5). <https://doi.org/10.1007/s10979-006-9066-4>
- Vrij, A., & Semin, G. R. (1996). Lie experts' beliefs about nonverbal indicators of deception. *Journal of Nonverbal Behavior*, 20(1). <https://doi.org/10.1007/BF02248715>
- Williamson, T. M. (1990). *Strategic changes in police interrogation: an examination of police and suspect behaviour in the Metropolitan Police in order to determine the effects of new legislation, technology and organisational policies*. University of Kent at Canterbury.
- Zoom Video Communications. (2020). *Zoom* (5.3.1). <https://zoom.us/>

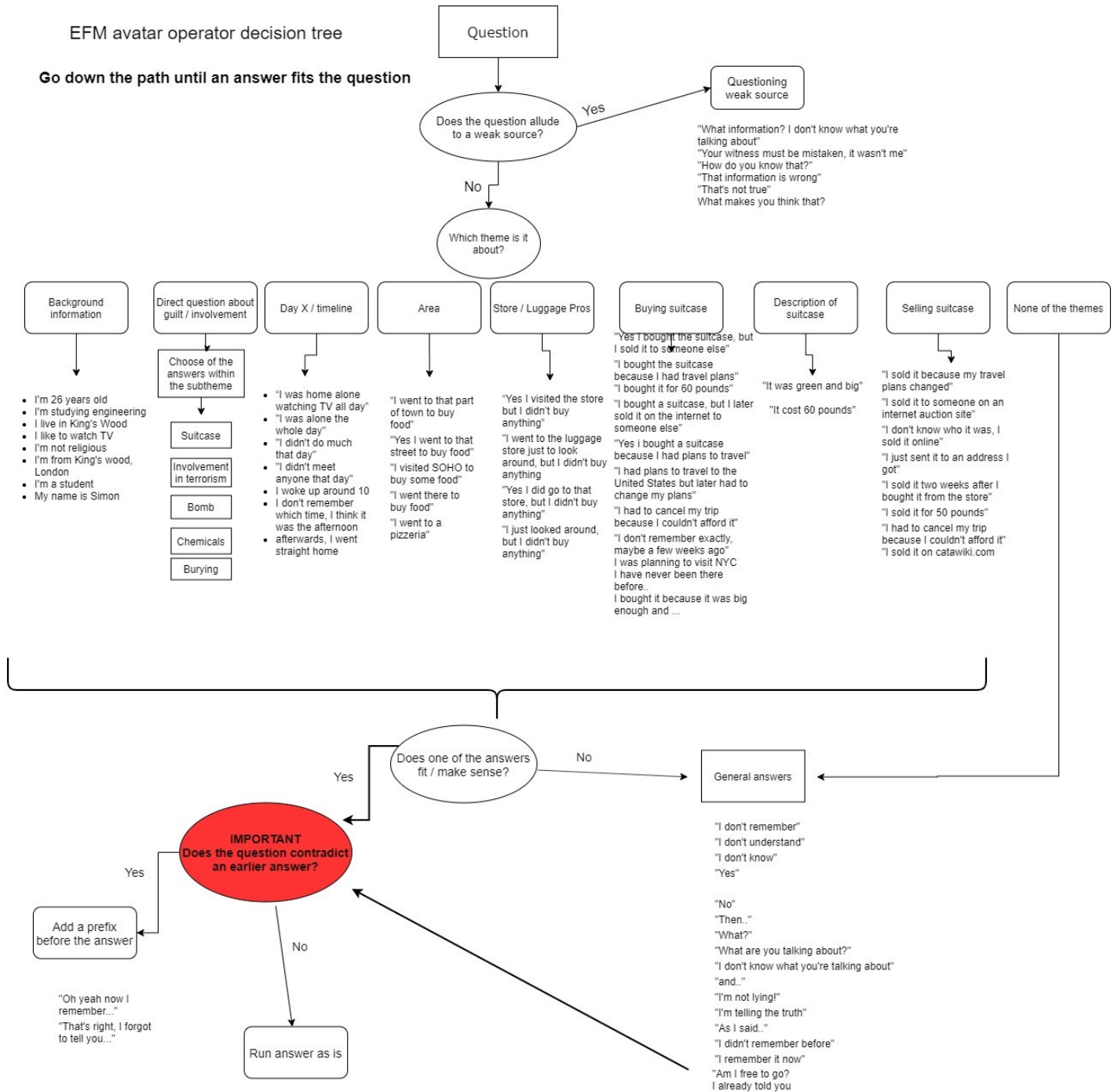


## Appendix A

### Operator Decision Tree for Guilty Avatar

EFM avatar operator decision tree

Go down the path until an answer fits the question

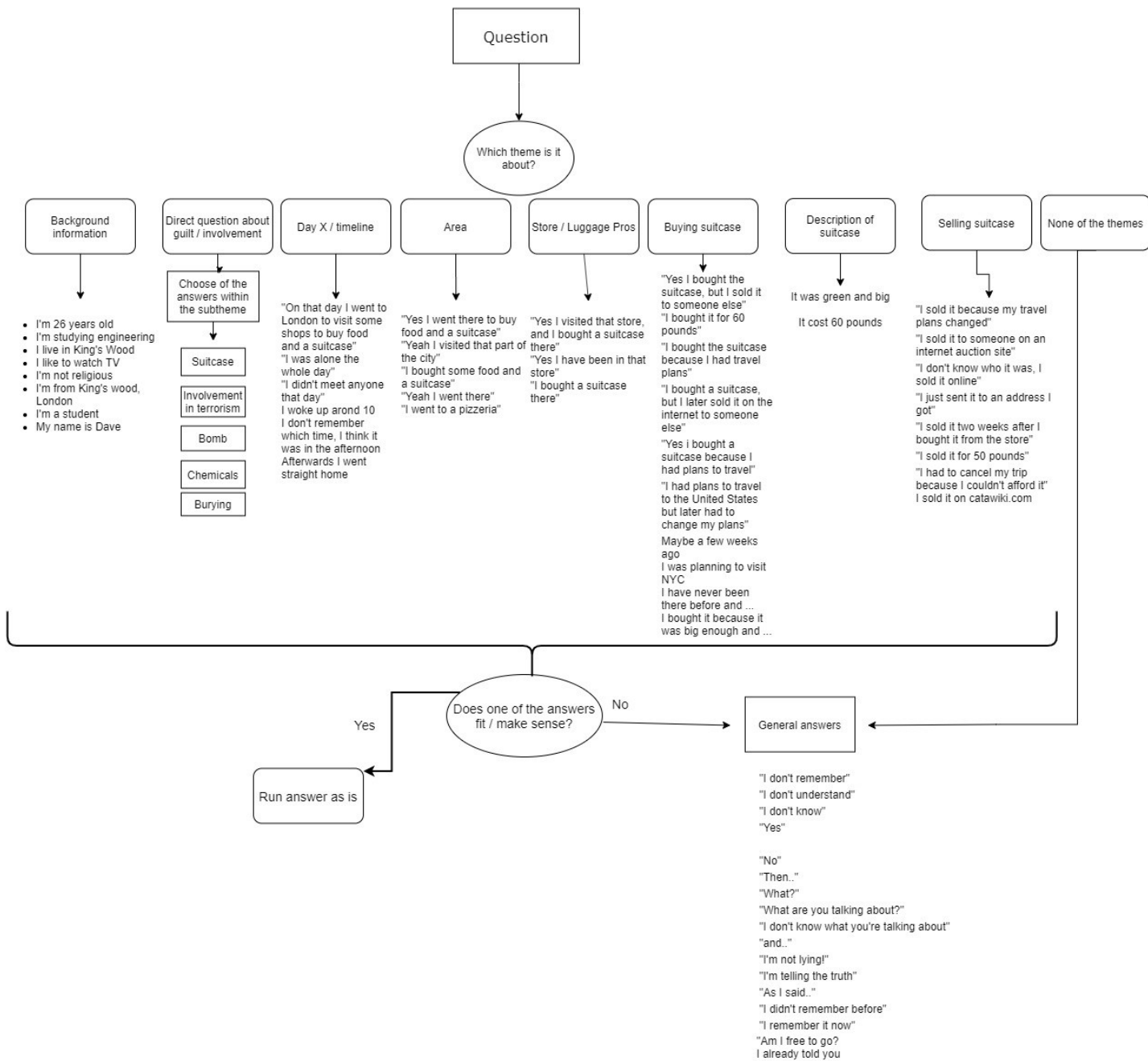


## Appendix B

### Operator Decision Tree for Truth-Telling Avatar

EFM avatar operator decision tree

Go down the path until an answer fits the question



## PRESSMEDDELANDE

Simulerade intervjuer med avatarfigurer verkar kunna användas för träning i förhörstekniker, Pro gradu-avhandling i psykologi

Fakulteten för humaniora, psykologi och teologi, Åbo Akademi

Resultaten från en pro-gradu avhandling i psykologi tyder på att simulerade förhör med avatarfigurer verkar kunna användas för träning i förhörstekniker. Vi jämförde två grupper, en som fick träning i i strategisk bevishantering (SUE) och bevispresentationsmatrisen (EFM), och en kontrollgrupp som inte fick träning. Försökspersoner som fick träning var bättre på att korrekt identifiera misstänkta som talade sanning, men inte misstänkta som ljög. Dessa resultat är lovande med tanke på att försökspersonerna som fick träning inte följde instruktionerna de fått särdeles bra. Alla otränade försökspersoner trodde alla misstänkta avatarer ljög, vilket tyder på brister i avatarfigurernas design och gör eventuella skillnader i förmåga att korrekt känna igen misstänkta som ljuger omöjligt. Framtida studier kunde utveckla avatarfigurerna vidare med fler svarsalternativ och flera olika misstänkta brott. Detta var första studien som utforskade möjligheten att använda avatarfigurer i simulerade förhör för att skapa ett billigt och effektivt sätt att träna användning av förhørsstrategier utan att vara tvungen att använda sig av en skådespelande misstänkt eller äventyra riktiga förundersökningar.

Avhandlingen utfördes av Rasmus Ahlgren under handledning av Pekka Santtila PsD och Pär-Anders Granhag PsD.

Ytterligare information fås av: Rasmus Ahlgren

Tel. 0503801068

Email: [rahlgren@abo.fi](mailto:rahlgren@abo.fi)