

**Examining an adaptation of the Strategic Use of Evidence approach when interviewing suspects**

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Bachelor's Thesis

University of Twente, Enschede

July 2019

BMS faculty: Department of Behavioral, Management and Social Science

Subject: Psychology

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### Abstract

Recent studies have shown that the usage of evidence is important in suspect interviews. The Strategic Use of Evidence (SUE) framework examines this idea more in depth. It is a conceptual idea for how to affect the suspects' perception of the interviewer's knowledge about a committed crime. This study examines the effectiveness of the 'Shift-of-Strategy' (SoS) approach, which belongs to the SUE framework. The SoS approach (evidence was disclosed after each answer of the suspect) was compared against the Late disclosure of evidence approach (evidence was disclosed at the end of the suspect interview). Participants (N=50) conducted a mock crime and were afterwards interviewed as a suspect. The participants were interviewed with one of two evidence disclosure approaches. In the Late evidence disclosure condition the interviewer asked the participants to freely respond to evidence focused questions before the evidence was disclosed. In the SoS condition the interviewer (a) disclosed a piece of evidence immediately after an evidence focused question had been answered and (b) saved the questions for which critical evidence was missing to be posed in a bulk at the end of the interview. This study is based on a study from Tekin et al. (2015) and mirrors an adjusted form of its setting. However, this study differentiates in regard of the questions asked in the interview for the missing information. Tekin et al. (2015) concentrated on one missing piece of evidence, whereas this study established three pieces of evidence to concentrate on. Thus, the two interview conditions differed in the shift of attention on the missing pieces of evidence. The adapted SoS approach elicited significantly more new crime relevant information than the Late evidence disclosure approach. As an explanation the counter-interrogation strategies of the suspects can be used, as it was expected that the suspects in the SoS approach will shift their strategy from a withholding to a more forthcoming strategy. In fact, this study supports the use of the SoS approach in suspect interviews.

*Keywords: Strategic Use of Evidence, Shift-of-Strategy, Late evidence disclosure, counter-interrogation strategy*

### **Examining an adaptation of the Strategic Use of Evidence Framework when interviewing suspects**

How would it be possible to gather information from a guilty suspect about a committed crime? This is a challenge that many police officers and public prosecutors face every day. Although sometimes evidence can clearly connect the suspect to the crime, it is more common that the evidence is insufficient to find the suspect guilty beyond a reasonable doubt. Recently, the public got an insight into this issue with the case of the murder of Jamal Khashoggi.

Jamal Khashoggi was a journalist in Saudi-Arabia and a media consultant for the Saudi-Arabian prince Turki Ibn Faisal (CNN, 2019). Further, he lived and worked in the US for some years now. In October 2018 he went to the Saudi consulate in Istanbul in order to collect some documents (CNN, 2019). As he never came back, the police suspected that he was killed in, or kidnapped from the Saudi consulate. Foreign countries started accusing the Saudi-Arabian government, specifically the crown prince Mohammed bin Salman. In the beginning, the Saudi Arabian government denied having knowledge about Khashoggi's whereabouts and stated that he left the consulate (Matamoros, 2018). However, when the Turkish government disclosed the gathered evidence, the Saudi Government changed their propositions. Since there exist no camera footage of Khashoggi leaving the country, in combination with the fact that evidence was found in the consulate that Khashoggi must have been killed there, the Saudi government stated that Khashoggi died in the consulate due to a consequence of a fight (Matamoros, 2018).

Still, this case is not solved completely, as the body of Khashoggi has not been found yet, and the Saudi Royal Family denies any involvement. However, this case shows the possibility to influence suspects to modify their account as a consequence of how the existing evidence is disclosed to them. More specifically, the interaction between the foreign countries and the Saudi-Arabian government shows a pattern. The Turkish authorities posed evidence focused questions towards the Saudi-Arabian government and immediately disclosed the held evidence after the Saudi's response. Then, the Saudi-Arabian government modified their stories and admitted e.g. that Khashoggi has not left the consulate, but that he died there. In the end, the Turkish authorities asked three crime-relevant questions, which still need further clarification. Thus, it is to examine what happens with the three questions posed at the end of the interview and whether they are effective for eliciting new crime-relevant information.

In order to improve the interview techniques of police officers and therein increase the provision of missing information, the research community has studied several ways to interview

suspects of crime. It is striking that countries use different strategies, but the most used strategies are an accusatory method (used in the United States, many Asian countries and Canada) and an information-gathering method (used in the United Kingdom, Australia, New Zealand, and Norway) (Meissner, et al., 2014; Miller, Redlich, & Kelly, 2018). The accusatory method has already been proven to be unethical and ineffective. Hence, focusing on and improving the information-gathering method is a better focus for enhancing suspect interviews and thus rise the clarification of crimes.

This study focuses on a part of the information-gathering method. Often, suspect interviews do not lead to the intended outcome (in most of the cases: finding the guilty suspect), hence it is important that suspect interview methods are examined more closely. Moreover, finding new and better ways to conduct a suspect interview should improve the number of solved cases and should also reduce the number of false-confessions.

### **Accusatory Methods vs. Information-Gathering Methods**

The accusatory method to interviewing is shaped by psychological manipulation, such as isolation, presenting false evidence ploys, and the “bad cop/good cop” technique (Meissner et al., 2014). Moreover, closed-ended and confirmatory questions are asked, and the main goal is to secure a full confession by the suspect. Almost as a contrast to the accusatory method is the information-gathering method (Meissner, Redlich, Bhatt, & Brandon, 2010; Meissner et al., 2014). A main difference between these two approaches lies in the goal of the interview. As the accusatory method has the goal to receive a confession, the information gathering method has the goal of getting closer to the truth by gathering accurate and complete information. The interviewer uses open-ended questions to let the suspect explain the situation from their perspective. Then, if necessary, the suspect is challenged with any inconsistencies between his or her account and the existing evidence (referred to as statement-evidence inconsistency). Furthermore, a critical component of the information gathering approach is to establish rapport, thus highlighting the weight of honesty, truth telling, and requesting a free-narrative of suspect about the events (Meissner et al., 2014).

### **The Strategic Use of Evidence Framework**

As the police wanted to improve their suspect interview techniques so that they can implement open-minded interviews which result in truthful accounts from suspects, the PEACE (Planning and Preparation, Explain and Engage, Account, Closure, Evaluation) approach was

developed in 1992. Further, the motivation to develop such a model was to minimize the risk of false confessions and to decrease the provision of inaccurate information from vulnerable suspects. Several studies have demonstrated that the PEACE model is an effective method in that it elicits significantly more comprehensive accounts as well as admissions than an accusatory approach (Bull, 2018). Nevertheless, this model only represents what should not be done during suspect interviews and it lacks conclusive steps on what interviewers should do. Hence, this model is a basis for researchers to examine how to circumvent the ‘do-not’s and instead develop helpful ‘to do’s’. For example, Hartwig, Granhag and Strömwall (2007) stated that a police officer often does not use the full potential of the information they have against the suspect. So, they presented the SUE technique, which is part of the Account phase of the PEACE model. During the account phase of the PEACE model the interviewer poses questions and asks for free narratives of the suspect. This framework could help police officers to use the evidence they held more strategically (Granhag & Hartwig, 2015). Meaning, the police officers do not just disclose the evidence, but they do it in such a way that the suspect becomes more forthcoming. This is supported by Bull and Soukara (2010), who found that police officers interviewing in line with the PEACE model used specific tactics of evidence disclosure which lead to admissions from the suspect. The SUE framework belongs to the information-gathering approach and this study examines one approach within this framework more deeply.

The SUE framework is based on basic psychological principles and includes different interrogation techniques. The SUE framework works for example with principles like self-regulation, or cognitive control strategies. By considering these principles, it helps the interviewer to understand that people that lie use different strategies than people who tell the truth. One example is the way of self-regulation, e.g. liars have more information which they are likely to hold back because they are afraid that this information will help the interviewer to find them guilty. In contrast, the truth-tellers do not have to be afraid to expose their information (Hartwig, Granhag, & Luke, 2014). This is based on the theory of ‘belief in a just world’. In brief, this theory states that people hold the belief one gets what one deserves, meaning, good people will experience good things. Hence, the truth-tellers are not afraid to expose their information because they believe that they are believed in and that for telling the truth, nothing bad will happen to them (Hartwig et al., 2014). Moreover, truth-tellers think that the interviewer “sees” that he/she is telling the truth, and thus they are more willing to engage in an interrogation. This phenomenon is called the ‘illusion of transparency’ (Hartwig et al., 2014).

Based on these two theories, one can state that truth-tellers are more forthcoming during a suspect interview than liars (Hartwig, Granhag, Strömwall, & Vrij, 2005).

Furthermore, the counter-interrogation strategies of guilty and innocent suspects have shown to be different. Counter-interrogation strategies are described as strategies which are used by the suspects during an interrogation interview. More specifically, the way in which the suspect decides how much information he/she wants to reveal and how much information to withhold. The strategies can be non-verbal (e.g. trying to be not perceived as nervous) or verbal (e.g. posing lies) (Granhag & Luke, 2018). The counter-interrogation strategies are based on psychological principles. One principle is for example the self-presentation. Although the innocent and the guilty suspect both want to be perceived as innocent, both suspects need to put a different amount of effort into this. The guilty suspect has more to hide, so he/she also needs to put more effort into his/her self-presentation (Granhag & Luke, 2018). As guilty and innocent suspects have different mindsets during an interrogation interview, they differ in their counter-interrogation strategies. Innocent suspects adopt a more forthcoming way while talking to the interviewer. In contrast, guilty suspects are expected to prepare their possible answers. Therefore, they are more likely to try to anticipate the knowledge the interviewer holds. The more knowledge is anticipated, the more forthcoming the guilty suspect is (May, Granhag, & Tekin, 2017). Thus, guilty and innocent suspects differ in their information management in terms of their counter-interrogation strategies (Granhag & Luke, 2018).

The SUE framework draws from the knowledge about the difference of counter-interrogation strategies of truth-tellers and liars. Specifically, to increase the difference between liars and truth-tellers, the SUE framework attempts to influence the suspects perception of how much evidence the interviewer holds (Hartwig, et al., 2007). Consequently, the suspect's interrogating strategies and thus, their verbal responses, can be influenced in different ways (Granhag & Hartwig, 2015). As the name SUE suggests, the held evidence is used strategically, which could help to elicit more unknown information from the suspect. There are different techniques of the SUE framework to implement this strategically usage of the evidence and two well-known techniques are the Early disclosure technique and the Late disclosure technique. During the early disclosure technique, the held evidence is disclosed right at the beginning of the interrogation interview and the suspect then can react to this. In contrast, during the Late disclosure technique, the interviewer first asks evidence-focused questions about the crime and then discloses the evidence after the suspect has committed to an account. The basic idea is that suspects interviewed with the Early disclosure approach can directly modify their story so that

it fits the evidence. This leads to the assumption that they seem to be telling the truth. However, suspects interviewed with the Late disclosure approach cannot modify their story, because the evidence is disclosed after the suspects stated their stories and hence, they are not consistent with the evidence and are confronted with their statement- evidence inconsistencies (S-E inconsistencies) (Hartwig et al., 2014).

### **Previous Research on the SUE Framework**

Research on the Early and Late disclosure approach found that Late disclosure of evidence elicits more S-E inconsistencies than Early disclosure of evidence. This is because when evidence is presented early, the lying suspect can use this evidence by modifying their story so that their lies become more plausible. When evidence is presented late, the suspect has no knowledge of what the interviewer knows, and therefore has more difficulties to adjust their lies to fit the interviewer's knowledge (Hartwig, et al., 2014). Thus, the suspect in the Late disclosure condition is more inconsistent with the evidence.

### **Shift-of-Strategy Approach**

Although the Late disclosure of evidence approach showed promising results, the focus laid rather on eliciting S-E inconsistencies than eliciting admissions. Since an interview with a suspect is intended to elicit information about the crime, admissions are important. Thus, a new approach with the focus on eliciting admissions needed to be developed. This recently developed SUE technique, is the Shift of Strategy (SoS) approach (Granhag & Luke, 2018). The focus thereby is to influence guilty suspects to change their counter-interrogation strategy during the interview. Specifically, to influence guilty suspects to change from being withholding with information to become more forthcoming with information. This works in that the interviewer asks the suspect to freely answer evidence-focused questions without having disclosed the evidence to the suspect. The suspect may then anticipate that the interviewer does not hold evidence for the question posed, and thus decides to withhold critical information while answering the question. The interviewer then discloses the already known evidence to the suspect and the suspect is confronted with an inconsistency. For the next question, the suspect may anticipate that the interviewer confronts him/her again with a fact for which they already gathered evidence, and hence, the suspect discloses more information than he/she would have beforehand (May, et al., 2017). Consequently, the way the interviewer posed the evidence influenced how the suspect uses his/her counter-interrogation strategies. This then

leads to a shift of strategy of their counter-interrogation strategies, also referred to as shift of strategy (Granhag & Luke, 2018).

While using this approach, the interviewer uses two things: The interviewer (1) reveals his/her strategy to the suspect and (2) influences the suspect to overestimate the interviewer's knowledge. Because the suspect overestimates the interviewer's knowledge, it is expected that the suspect will become more forthcoming. Thus, the suspect discloses the critical piece of information, since the suspect may assume that the information is already known to the interviewer (May, et al., 2017).

### **Previous Research on the SoS Approach**

An important contribution to this topic is the research done by Tekin, et al. (2015). They tested their newly developed SUE confrontation tactic, which was later categorized to the SoS approach (Granhag & Luke, 2018), against the Early disclosure technique. In order to test the effect of the SoS technique they created a new idea how to set up the study. They implemented an experiment in which the participants firstly had to conduct a mock crime, and was then interrogated by the police. This represented the first study of the SoS approach.

The crime was divided into three phases (Phase A, B and C). Phase A represents the activities executed by the participant before the crime, Phase B represents the activities during the crime and Phase C represents the activities after the crime. For Phase A and B the interviewer holds evidence, whereas for Phase C the interviewer does not hold any evidence. During the interview, the suspect is firstly asked about Phase A and B and is then confronted with the inconsistencies. Phase C was addressed after the first phases with an open-ended question. In contrast, in the Early disclosure condition the interviewer disclosed the evidence directly and then posed follow-up questions about each phase. Questioning in Phase C had the same structure as in the SoS condition (May, et al., 2017; Tekin et al., 2015)

The SoS approach developed by Tekin et al. (2015) influenced the suspect's perception of the held evidence by firstly presenting the held evidence and thus creating a perception of knowledge about the crime. Accordingly, the participant got the perception that the interviewer knows a lot about the crime and that it might not be advantageous to lie anymore, because the interviewer has evidence anyways (Tekin et al., 2015). Through this, the suspect had to act in accordance with the evidence and thus, it was expected that the suspect is more forthcoming in Phase C of the SoS condition and hence discloses information which the interviewer lacked information of (Tekin et al., 2015). The results show that this was the case, meaning that the



suspect's perception got influenced by the SoS condition and they cooperated more with the interviewer during the critical phase (phase of which the interviewer lacked evidence about) (Tekin et al., 2015).

Drawn from the results of the studies from Tekin et al. (2015) and May et al. (2017), Granhag and Luke (2018) expanded the testing of the SoS approach. Their studies reflected the same elements as the study of Tekin et al., (2015): a mock crime, divided into three phases; an interview after the crime; the interviewer held evidence for the first two phases but not so for phase three. However, they used a new interview condition. During the interview the interviewer objectively introduced the interview, presented the suspect his/her inconsistencies and let him/her explain these and then objectively responded to their explanations. Resulting, this condition elicited more new crime relevant information than the early disclosure and the SoS approach of Tekin et al. (2015). This shows that the perception of how much information the interviewer holds can be influenced when the suspect is confronted with the evidence/inconsistency and is allowed to explain this. The interviewer influences the suspects' perception of the evidence held by him/her and thus, the suspect shifts his/her strategy, what the study was intended to show (Granhag & Luke, 2018).

To conclude, previous researches on the SUE framework have shown its effectiveness. Different approaches within this framework support that the way how evidence is presented is crucial for suspect interviews. Specifically, the SoS approach has proven to be effective in that it (1) confronts the suspect directly with his/her inconsistency, (2) let the suspect explain this inconsistency and thus (3) influences the perception of the suspect about the interviewer's knowledge, which leads to eliciting more new crime relevant information.

### **The Current Study**

The present study builds up on the basis of the study from Tekin et al. (2015) and Granhag and Luke (2018). On the basis of their findings, the focus in this study lies on three aspects of the SoS approach, namely: Inconsistencies, Admissions, and New crime-relevant information. The inconsistencies refer to the statement-evidence inconsistencies which were shown to be decreasing while using the SoS approach. Additionally, this study also focuses on within-statement inconsistencies (W-S inconsistencies), when the subject poses two different facts regarding an evidence throughout the interview. Further, the admissions referred to in this study represent any information stated during the interview, whether it was prior known to the

interviewer or not. In contrast, the New crime-relevant information in this study is defined as information about the crime which was not known prior by the interviewer.

On the basis of the Khashoggi case, it is expected that the suspect will reveal more new crime-relevant information during the last phase of the interview when more than one evidence is dealt with. As the study of Tekin et al. (2015) showed, overestimating the interviewer's knowledge leads to more admissions. Hence, this study tries to examine whether this principle works when more than one evidence is covered in the last phase of the interview (one question vs. three questions).

The case of Jamal Khashoggi presented motivation for this study. During the investigation the police found more and more evidence that the royal family is engaged in the murder of Khashoggi. After the suspects stated an account, they were confronted with their inconsistency due to the found evidence. The suspects then changed their accounts and stated new crime-relevant information which was not known prior by the interviewer. Since this way of interviewing showed to be effective, the Turkish authorities posed three new questions on which they lacked information and it was expected that the Saudi-Arabian suspects would reveal more new crime-relevant information. However, there is still no development in this case. Thus, this study tries to test whether the posing of the three questions in the end can be helpful in interviews to elicit more admissions and more new crime-relevant information. Hence, this study differs to the Tekin et al. (2015) study in that it not only addresses one missing piece of evidence but it addresses three pieces of evidence.

### **Advancing the Research on the SoS Approach**

In this study the SoS approach is tested against the strategy of Late Evidence disclosure, where the suspect is confronted with all evidence after he/she was asked several questions. The study mirrors some main features from the previous studies on the SoS approach. As in the study of Tekin et al. (2015), the participants were instructed to conduct a mock crime which was divided into three phases: Phase A, Phase B, and Phase C. Nevertheless, the division of the crime phases differ to that of Tekin et al. (2015). They had the phases (i) before the crime, (ii) during the crime and (iii) after the crime. In contrast, this study entails multiple crime phases. Meaning, the suspect has more admissions which he/she can give about the crime. For the interview, the interviewer held evidence for phase A, B and also one piece of evidence for phase C. This study will advance the previous research from Tekin et al., (2015), May et al. (2017) and Granhag and Luke (2018) in that it developed more evidence which the interviewer lacks

information of and in that it poses more questions regarding this critical phase. Whereas the previous designs of the SoS studies entailed one question regarding the critical phase, this study design entails three questions regarding the critical phase. Again, the manipulation in this study is represented by the way how the suspects' perception on how much evidence the interviewer holds is influenced. The focus on how effective the manipulation in this study is, lays on four aspects, namely the S-E inconsistencies, the W-S inconsistencies, the admissions and the new crime-relevant information elicited with the developed SoS approach.

Drawn from these results of the previous research and with the focus on the four aspects in mind, five Hypothesis were established to test the SoS technique against the Late disclosure technique.

**Inconsistencies.** It is predict that the suspects in the Late disclosure condition will pose more S-E inconsistencies in total than the SoS condition (Hypothesis 1a). Further, it is predicted that the Late disclosure condition will pose more S-E inconsistencies during the early phase of the interview than the SoS condition (Hypothesis 1b). Additionally, it is predicted that the Late disclosure condition will elicit more W-S inconsistencies in total than the suspects in the SoS condition (Hypothesis 2a). Moreover, it is predicted that the Late disclosure condition will elicit more (W-S inconsistencies during the last phase of the interview than the SoS condition (Hypothesis 2b). As the suspects in the SoS condition get confronted with their lies, it is expected that they will stop lying earlier than the suspects in the Late Disclosure condition. This is based on the principle that a late disclosure of evidence will work against a change of counter-interrogation strategy when the suspect is confronted with his/her inconsistencies (Granahag & Luke, 2018). Simply put, the suspects in the SoS condition will stop lying earlier and therefore be more consistent with the evidence than the suspects in the Late disclosure condition.

**Total admissions.** It is predicted that the suspects in the SoS condition will pose more admissions to crime-relevant information than the suspects in the Late disclosure condition (Hypothesis 3). This is based on the demonstrated efficacy of the SUE confrontation technique of Tekin et al. (2015) and Granahag and Luke (2018). The suspects in the SoS condition are expected to shift their strategy and thus become more forthcoming.

**Eliciting new crime-relevant information.** It is predicted that the SoS condition will elicit more new crime-relevant information in total than the Late disclosure condition (Hypothesis 4). Moreover, it is predicted that the SoS condition will elicit more new crime-relevant information during the last phase of the interview than the Late disclosure condition

(Hypothesis 5). This is based on the same assumption as for Hypothesis 3. Through influencing the suspects perception of how much the interviewer knows, it is expected that the suspects in the SoS condition engage in a shift of counter-interrogation strategies and thus, become more forthcoming than suspects in the late disclosure condition.

## Method

### Participants

This study was completed by 55= participant (23 men and 32 women). The mean age was 22 with a *range* from 19 to 28. Their nationalities were German (87 %), Dutch (4%) and others (9%). As a recruitment requirement, participants needed to complete a mission which included five broader parts, as well as an interview and a post-questionnaire. Participation was voluntarily and the participants received one course credit (SONA Points) and five euros as compensation. Participants were recruited through SONA Systems, an online platform for undergraduate Psychology Students of the University of Twente and through direct recruitment on the University Campus and through social media platforms (e.g., Facebook, WhatsApp). As a recruitment requirement it was noted that participants needed to have the Messenger 'WhatsApp' in order to complete the study. All participants received a standardized informed consent before the experiment. All participants were fully debriefed after the study. The pilot study was excluded from the analysis of the questionnaire, because of missing answers in the questionnaire (n=1). However, he/she is still included in the analysis of the interviews. Several participants were excluded from further analyses of both, the interview and the questionnaire, because of mistakes made during the interviews (e.g. not following the interview protocol) (n=4). Two outliers have been detected throughout the analyses. One of them was excluded from further analysis (n=1), the other one did not put as a huge threat to the outcomes as the excluded outlier did. Thus, this outlier was still included in the analysis. The exclusion of the outlier from the analysis still resulted in the significance of the results. In the end, data of 50 people was used for analysis of the interviews and that of 49 people for analysis of the questionnaire.

### Procedure

**Background and planning.** An experimental between-groups design was employed to study the effects of evidence disclosure techniques for interviewing criminal suspects. The participants were asked to imagine being an activist for animal rights. Their task was to

perform a mock crime in order to stop illegal animal experiments by a professor at the University. For that they completed several criminal activities around facilities of the University and were then interviewed about their criminal activities. Participants were randomly assigned either to the control interview (n=26) or to the SUE technique interview (n=24). The study was ethically approved by the Ethics committee of the University.

When the participants arrived, they were asked to take place in front of a desk in an empty room. They received the informed consent in paper form and were asked to read and agree to it (see Appendix A). They then received another paper with the background information about their mission and the situation they had to place themselves (see Appendix B). They were asked to imagine being an animal friend, and that they had heard rumors that a professor was performing unethical and cruel animal testing on dogs. The participants were informed that he/she already did several attempts to stop these experiments (e.g., contacting the professor, protesting at the University), but nothing had any effect. The participants were told that they now had decided to collect evidence about the unethical treatment of the animals in order to publish a story about it in the news. The participants were informed that they had already contacted an organization for animal rights for support. Unfortunately, the organization could not engage in any illegal activities themselves as they were currently under investigation for other illegal actions. However, the participants were told that the organization was willing to facilitate the collection of evidence against the professor if the participants would gather the information. After having read the instructions the researcher gave the participants the detailed instructions for the mock crime (in the form of a checklist, see Appendix C). The participants then had to execute the plan for collecting the evidence against the professor.

**The criminal activity.** The participant received three major steps which he/she had to perform, namely: (A) gain access to the office, (B) collect evidence in the office, and (C) provide the evidence to the accomplice. In order to achieve this, they received a checklist with smaller steps. The checklist for the implementation entailed 13 steps, which needed to be fulfilled step by step in order to complete the crime (see Table 1).

Table 1

*The three major activities executed by the participant, with the 13 specific steps and evidence attached.*

The three major activities	The 13 specific steps	Evidence theme
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Gain access to the office	<ol style="list-style-type: none"> <li>1. Receive text message</li> <li>2. collect envelope</li> <li>3. go into the office where you find information regarding the animal experiments</li> </ol>	<ol style="list-style-type: none"> <li>A. Subject received text message</li> <li>B. Witness saw subject picking up the envelope</li> </ol>
Collect evidence in the office	<ol style="list-style-type: none"> <li>4. collect necessary evidence on the computer</li> <li>5. search the file 'experiments' and copy it on the USB stick</li> <li>6. take the USB stick and the envelope and leave the office</li> </ol>	<ol style="list-style-type: none"> <li>C. witness saw subject near the office</li> <li>D. fingerprints on a piece of paper inside the office</li> </ol>
Provide the evidence to the accomplice	<ol style="list-style-type: none"> <li>7. go to room XXX (there you can find a secure computer)</li> <li>8. use the computer to log into your email- account</li> <li>9. send the files of the USB stick to (...) a journalist who wants to publish your story)</li> <li>10. take pictures of evidence</li> <li>11. send it via WhatsApp to your accomplice</li> <li>12. put the USB stick back into the envelope and place it into the folder 'private' (your accomplice will collect it)</li> <li>13. return to room XXX</li> </ol>	<ol style="list-style-type: none"> <li>E. webcam footage of computer showing the suspect in front of it</li> </ol>

The mission started as soon as the participants received a text message from an accomplice from the organization of animal rights. The text message entailed information about an envelope which the participants could find in a locker in the building. Further, it included the pin code for the locker, as well as for the computer which were needed to fulfil the task. The participants then collected the envelope and went straight to the office of the professor doing the animal experiments. There the participants collected evidence on his computer and copied it on the USB stick which could be found in the envelope previously collected. Next, they left the office, taking the envelope and the USB stick with them. Coming up, the participants needed to go to another room, where they could find a secure computer. The participants logged into their email account and sent the copied files to an e-mail address of a journalist who wanted to publish the story. Further, the participants collected more evidence by taking pictures of documents which could be found in a folder next to the computer. The participants then sent the picture to the number which contacted them in the beginning. Before leaving the room, the participants had to put back the USB stick into the envelope and put it into one of the folders lying next to the computer, because the accomplice would collect it later. Lastly, the participant went back to a room where further instructions could be found on a piece of paper on the table (see Appendix D). After executing the crime, the participants got five minutes to prepare before the suspect interview started.

### **The Interviews**

**The evidence.** For this study, five pieces of evidence (evidence themes) which the interrogation team collected were developed (see Table 1). The interviewer held evidence for the crime phases A B, and C (no difference between both conditions). Evidence for phase A included: (1) the participants received a text message from someone who is already under suspicion and (2) an eye witness seeing the suspect at the study area at the ground floor in the Cubicus building, picking up an envelope from a locker there. Evidence for phase B included: (3) an eye witness seeing the suspect around the office, and (4) fingerprints on a piece of paper inside the office. For phase C, the interviewer only held the evidence (5) of a webcam footage of a computer in another room showing the suspect sitting in front of it.

**The interview conditions.** After carrying out the mock crime the last step for the participants was to go to one last room. Inside this room, the participants could find a piece of paper with further instructions (see Appendix D). It was explained to them that the police was called because of criminal activities at the university and that they will be exposed to a police-

like interrogation. Further, they were instructed to convince the interviewer of their innocence and thus, a lawyer would not be needed and it would also be more convenient to talk to the police instead of remaining silent. Their motivation to keep up the role of someone innocent was that all their work would have been for nothing if the police finds them guilty, because the organization could otherwise be not able to publish the collected evidence.

Two SUE interview conditions were tested against each other, namely the SoS approach and the Late disclosure approach. The interviews both started with the same introductory phase: When the interviewer entered the room, he/she introduced him/herself and explained why the participants are under suspicion of committing the crime. The interviewer proceeded with asking questions regarding the involvement of the participants (e.g. "Do you confess or deny having engaged in any criminal activities?"). The participants then had to start with a free narrative of what he/she did at the University that specific day: "You can start by freely telling me how you arrived at the university today and what you did there."

After this, the interviews proceeded with a questioning phase. It is important to note that the two interview conditions differed in the way how the suspects' answers were processed in this phase (see below). For both conditions, the interviewer asked specific questions regarding the five pieces of evidence he/she held (e.g. "Have you been around at the study area on the ground floor of the Cubicus building today?"). However, for the SoS approach the answers of the suspect were processed in the following way: If the suspect came up with an answer which did not fit to the evidence the interviewer hold, it was continued with discrediting the suspect's response ( e.g. "What you say doesn't fit the evidence we have. A witness has seen you picking up an envelope from one of the lockers there. Would you like to respond to that statement?"). If the suspect answered with the truth, the interviewer accepted the suspect's response ( e.g. "What you say fits the evidence we hold, as a witness has seen you picking up an envelope from one of the lockers there."). The suspect had another chance to answer the interviewer after he/she was challenged with an inconsistency and then the interviewer continued with the next question. In contrast to this, in the Late disclosure condition, the interviewer did not respond in any way to the answers given by the suspect. Without commenting the answer he/she just went on with the next question. For both conditions, if the suspect answered shortly (e.g. with a yes) the interviewer requested the suspect to tell more about his/her whereabouts and actions ("Please tell me about that").

The main difference between the two interview conditions was in the last part (questioning about Phase C). During the SoS condition, the interviewer asked three specific



questions about the crime, on which he/she wanted information from the suspect (“Okay, I have three additional questions I need you to address before we end this interview. I need you to explain the text message you received just before going to the parking lot; you have to clarify what you did on the computer in the office; and I need you to describe exactly what you did in room XXX.”). Since every held evidence was presented beforehand, the interviewer could focus on the remaining information which was still missing. In contrast to this, in the Late disclosure condition, the interviewer did not ask any specific question regarding the critical phase of the crime, the phase of which the police is actually lacking evidence of. Since the interviewer did not disclose any evidence beforehand he/she disclosed every held evidence theme at this point and then asked the suspect to explain all these activities (Okay, thank you. We have collected some evidence that I would like you to address. Our tech team intercepted the text message you received today, shortly thereafter a witness saw you pick up an envelope at the parking lot. Later on another witness saw you near the office. We have also found your fingerprints inside the office, and a webcam has shown that you used the computer in room XXX. Before we conclude this interview, would you mind explaining all these activities.”). Again, if the suspect remained silent, the interviewer requested him/her to engage in the conversation.

Both interview conditions then ended in the same way. That is, the interviewer repeated the first question asked (“Do you confess or deny having engaged in any criminal activities?”). After the participants answered the question the interviewer closed the interview.

**The interviewers.** The five researchers involved in this study took the role of the interviewer. Each interviewer held 8 to 11 interviews, and it was similarly spread between the conditions. The interviewers were trained beforehand, and they were instructed to follow the standardized interview protocols word-for-word (see Appendix E). Thus, they were not allowed to deviate from this.

**Post-interview questionnaire.** After the interview the participants were informed that the role-play was over and they were asked to fill out a questionnaire truthfully. The first part of the questionnaire consisted of questions about demographic information (age, gender, nationality and occupation). Then, the participants rated on a 5-point Likert scale how motivated they were to engage in the role play (complete the role and convince the interviewer of their innocence) (1= *Not at all*, 7= *extremely*).

The second part contained questions for each evidence theme mentioned by the interviewer. Two questions focused on the expectations the participants held regarding the

evidence (e.g. “Did you expect the interviewer to know about you being at the study area?”). These questions were rated on a 5-point Likert scale (1= *did not expect at all*, 5= *did expect very much*). Two additional questions addressed their adaptability during the interview (e.g. “Did you feel the need to change your strategy when the evidence regarding you picking up an envelope in the study area was presented?” and “Were you able to develop a new way of dealing with the situation to help you through?”). These questions were rated on a 5-point Likert scale (1= *not at all* to 5= *very much/ absolutely*).

Finally, a question regarding the perception of how much information the interviewer holds was asked (“How much information do you think the interviewer had about the incident prior to your conversation?”) and answered with a 5-point Likert scale (1= *very little information* to 5= *a lot of information*). Another question was posed to rate whether the participants anticipated that the interviewer held the information of an evidence.

## Data Preparation

**Dependent variables.** Four dependent variables were used in the data analysis. The first dependent variable was the *S-E inconsistencies* variable. This variable represents an inconsistency stated by the suspect in regard to the evidence theme. The second dependent variable was the *W-S inconsistencies* variable. This variable represents an inconsistency stated by the suspect between his/her statements throughout the interview.

The third dependent variable was the *Total admissions* variable. This variable represents the information stated by the suspect during the interview. It entails the information stated by the suspect which was known as well as not-known by the interviewer before the interview.

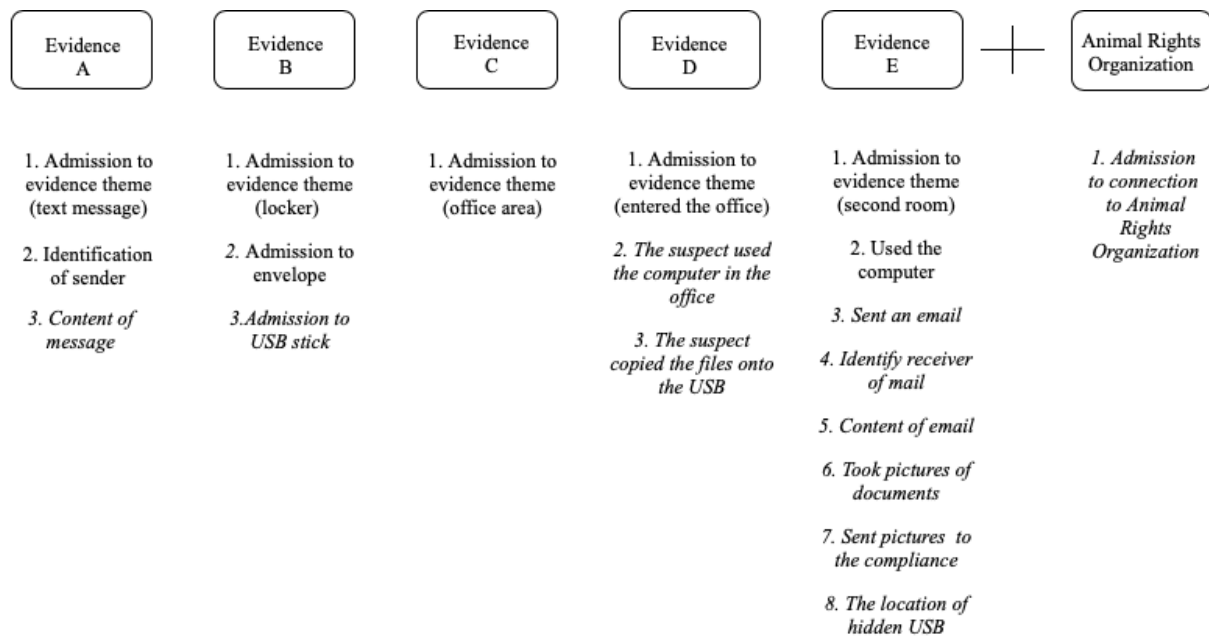
The fourth dependent variable was the *New crime-relevant information* variable. This variable represents the information stated by the suspect during the interview which was not known by the interviewer prior to the interview. This variable was also included in the variable *Total admissions*. However, to test whether the SoS approach elicits not only more admissions to crime relevant information but also new crime relevant information, this information is also tested separately. Each dependent variable was again split into three variables (see coding of the interviews).

**Independent variable.** The independent variable in this study is the *interview condition* variable. The suspects were divided into two interview conditions, namely the Late disclosure approach and the SoS approach. Hence, the dependent variables were tested against each other dependent on the interview condition.

**Coding of the interviews.** Each interview was transcribed by two of the researcher. The transcripts were then coded regarding different themes. Firstly, several units were coded for each evidence theme. For example, the evidence theme “The text message related to the crime” (Evidence A) entailed three units, namely “admission to evidence theme”, “Identification of sender”, and “content of message”. In the end, 18 units in terms of the five evidence themes were established (Evidence A= 3 Units, Evidence B= 3 units, Evidence C=1 unit, Evidence D=3 units, Evidence E= 8 units, see Figure 1). Further, one unit was coded for the Animal rights organization.

Throughout the interview, the suspect could reveal 19 pieces of information to the interviewer (18 pieces of information for the evidence themes and one piece of information for the Animal Rights organization). These 19 pieces of information are coded as *Total admissions*. An admission was coded only once per unit per interview, since the information could not be revealed twice to the interviewer, hence the amount of coded *Total admissions* ranged from 0 (no admission at all) to 19 (admission to every piece of information). To differentiate between the sections of the interview three new variables in terms of crime relevant information were created, *Total admissions beginning of the interview* (admissions stated before the last phase of the interview), *Total admissions end of the interview* (admissions stated during the last phase of the interview), and *Total admissions Sum* (Admissions Beginning + Admissions End).

Further, the *New crime-relevant information* which was revealed was coded. In total, 11 pieces of *New crime-relevant information* could be coded (out of 19 units of total information, see Figure 1). It is crucial that most new information could be elicited for the last phase of the crime, since the interviewer knew the least about that phase (Phase C). Again, three new variables were created. *New crime-relevant Information beginning of the interview* (new information revealed before the last phase of the interview), *New crime-relevant Information end of the interview* (new information revealed during the last phase of the interview) and *New crime-relevant Information Sum* (New Information Beginning + New Information End). Since the *New crime-relevant Information* could only be admitted once per interview, the coded amount ranged from 0 (no new crime-relevant information at all) to 11 (stated every new crime-relevant information).



*Figure 1.* Units coded for the five evidence themes. Further, the theme Animal Rights Organization is included separately because this information could be stated at any time and is not typical for one of the evidence themes. New crime-relevant information is highlighted in italics.

Two other aspects were coded, namely the *Statement-evidence inconsistencies* (S-E inconsistencies) and the *Within-statements inconsistencies* (W-S inconsistencies). The S-E inconsistencies were only coded once per evidence, thus they varied between 0 (no inconsistencies) and 5 (inconsistencies with every evidence). The coded W-S inconsistencies did not have a maximum. Again, three variables per code were created, *S-E inconsistencies beginning of the interview* (S-E inconsistencies elicited before the last phase of the interview), *S-E inconsistencies end of the interview* (S-E inconsistencies elicited during the last phase of the interview), and *S-E inconsistencies Sum* (S-E inconsistencies Early+ S-E inconsistencies Late); *W-S inconsistencies beginning of the interview* (W-S inconsistencies elicited before the last phase of the interview), *W-S inconsistencies end of the interview* (W-E inconsistencies elicited during the last phase of the interview), *W-S inconsistencies Sum* (W-S inconsistencies Early+ W-S inconsistencies Late).

**Interrater reliability.** Each of the two researchers who coded the interviews coded 50 percent. Further, the researcher exchanged their coding and the disagreements were discussed and adjusted accordingly. To test for the interrater reliability a one-way ANOVA examined the effect of the coding of the two researchers on the dependent measures: *the statement-evidence*

*inconsistencies Sum*,  $F(1, 49) = 0.02, p = .89$ ; *statement-evidence inconsistencies beginning of the interview*,  $F(1, 49) = 0.24, p = .63$ ; *statement-evidence inconsistencies end of the interview*,  $F(1, 49) = 0.63, p = .43$ ; *within-statement inconsistencies Sum*,  $F(1, 49) = 0.59, p = .44$ ; *within-statement inconsistencies beginning of the interview*,  $F(1, 49) = 0.57, p = .45$ ; *within-statement inconsistencies end of the interview*,  $F(1, 49) = 0.17, p = .68$ ; *Total admissions beginning of the interview*,  $F(1, 49) = 0.12, p = .74$ ; *Total admissions end of the interview*,  $F(1, 49) = 0.21, p = .65$ ; *Total admissions Sum*,  $F(1, 49) = 0.27, p = .61$ ; *New crime-relevant Information beginning of the interview*,  $F(1, 49) = 0.21, p = .65$ ; *New crime-relevant Information end of the interview*,  $F(1, 49) = 1.09, p = .30$ ; *New crime-relevant Information Sum*,  $F(1, 45) = 0.35, p = .56$ . Thus, the coding rate has a high reliability.

## Results

### Preliminary Analyses

**Motivation.** Since this study should mirror a realistic scenario of a real-life crime, the motivation of the participants to engage in the role play and to convince the interviewer were examined and compared between the two interview conditions by using an independent-samples t-test. The participants were moderately motivated to engage in the role play of the study ( $M = 4.06, SD = 0.69$ ) and they were moderately motivated to convince the interviewer of their innocence during the interview ( $M = 3.98, SD = 0.75$ ). There were no significant differences between the SoS technique and the Late disclosure condition on the role play motivation score ( $t(48) = 0.59, p = .13$ ) and on the innocence motivation score ( $t(48) = -0.95, p = .35$ ).

**Effectiveness of three questions.** To test the effectiveness of the three questions about the crucial phase of the crime (the one for which the interviewer did not hold any evidence), three independent-samples t-tests were executed to compare the mean scores between the two interview conditions. The tests showed a partial effect, since a significant difference was found for the question on the text message (SoS approach elicited more information on this question [ $M = 0.21, SD = 0.42$ ] than the Late disclosure approach [ $M = 0, SD = 0$ ],  $t(48) = -2.56, p = .01$ ). No significant differences were found between the two approaches for the second question ( $t(48) = -0.45, p = .65$ ) and for the third question ( $t(48) = -0.51, p = .61$ ).

**Interviewer effect.** To test for interviewer effects, a one-way ANOVA examined the effect of the interviewer on each dependent measure. There was no significant difference between the interviewer on any dependent measure: *the statement-evidence inconsistencies Sum*,  $F(4, 49) = 2.31, p = .07$ ; *statement-evidence inconsistencies beginning of the interview*,  $F(4, 49) = 0.96, p = .44$ ; *statement-evidence inconsistencies end of the interview*,  $F(4, 49) = 2.32,$

$p = .07$ ; within-statement inconsistencies Sum,  $F(4, 49) = 1.20$ ,  $p = .32$ ; within-statement inconsistencies beginning of the interview,  $F(4, 49) = 0.52$ ,  $p = .72$ ; within-statement inconsistencies end of the interview,  $F(4, 49) = 1.12$ ,  $p = .34$ ; Total admissions beginning of the interview,  $F(4, 49) = 0.80$ ,  $p = .53$ ; Total admissions end of the interview  $F(4, 49) = 1.41$ ,  $p = .25$ ; Total admissions Sum,  $F(4, 49) = 1.93$ ,  $p = .12$ ; New crime-relevant Information beginning of the interview,  $F(4, 49) = 0.75$ ,  $p = .56$ ; New crime-relevant Information end of the interview,  $F(4, 49) = 1.23$ ,  $p = .31$ ; New crime-relevant Information Sum,  $F(4, 45) = 1.06$ ,  $p = .39$ . Thus, no interaction effect of the interviewer was found.

### Hypothesis Testing

**The amount of inconsistencies.** Hypothesis 1a stated that the Late disclosure condition will elicit more S-E inconsistencies in total than the SoS condition. An independent samples t-test showed that the Late disclosure technique elicited more S-E inconsistencies in total ( $M = 4.27$ ,  $SD = 0.78$ ) than the SoS technique ( $M = 3.83$ ,  $SD = 1.05$ ), but this outcome is not significant  $t(48) = 1.68$ ,  $p = .10$ . Thus, Hypothesis 1a was not supported.

Hypothesis 1b stated that the Late disclosure condition will elicit more S-E inconsistencies beginning of the interview than the SoS condition. An independent-samples t-test showed that the Late disclosure condition elicited more S-E inconsistencies in the beginning phase of the interview ( $M = 3.62$ ,  $SD = .64$ ) than the SoS technique ( $M = 3.08$ ,  $SD = .83$ ),  $t(48) = 2.55$ ,  $p = .01$ . Thus, Hypothesis 1b was supported.

Hypothesis 2a stated that the Late disclosure condition will elicit more W-S inconsistencies in total than the SoS condition. An independent samples t-test showed that the Late disclosure technique elicited less W-S inconsistencies ( $M = 0.23$ ,  $SD = 0.59$ ) than the SoS technique ( $M = 0.50$ ,  $SD = 0.59$ ), but this outcome is not significant  $t(48) = -1.62$ ,  $p = 0.11$ . Thus, Hypothesis 2a was not supported.

Hypothesis 2b stated that the Late disclosure condition will elicit more W-S inconsistencies end of the interview than the SoS condition. An independent-samples t-test showed that the Late disclosure condition elicited less W-S inconsistencies in the last phase of the interview ( $M = .23$ ,  $SD = .59$ ) than the SoS technique ( $M = .25$ ,  $SD = .44$ ), but this outcome is not significant  $t(48) = -.13$ ,  $p = .89$ . Thus, Hypothesis 2b was not supported.

**Total admissions revealed during the Interview.** Hypothesis 3 stated that the SoS condition will elicit more Total admissions in sum than the Late disclosure condition. An independent-samples t-test showed that the SoS technique ( $M = 4.54$ ,  $SD = 3.09$ ) elicited more

Total admissions in sum than the Late disclosure technique  $M= 2.08$  ( $SD= 1.98$ ),  $t(48)= -3.33$ ,  $p= .00$ . Thus, Hypothesis 3 was supported.

**New crime-relevant information reveled during the interview.** Hypothesis 4 stated that the SoS condition will elicit more new crime-relevant information in total than the Late disclosure condition. An independent-samples t-test showed that the SoS technique elicited more new information in total ( $M= 0.91$ ,  $SD= 1.18$  ) than the Late Disclosure technique ( $M= 0.27$ ,  $SD= 0.67$ ),  $t(48)= -2.42$ ,  $p= .02$ . Thus, Hypothesis 4 was supported.

Hypothesis 5 stated that the SoS condition will elicit more New crime-relevant Information end of the interview than the Late disclosure condition. An independent samples t-test showed that the SoS technique elicited more new information end of the interview ( $M= 0.50$ ,  $SD= 0.88$ ) than the Late disclosure technique ( $M= 0.27$ ,  $SD= 0.68$ ), but this outcome is not significant  $t(48)= -1.05$ ,  $p= 0.30$ . Thus, Hypothesis 5 was not supported.

### Exploratory Analyses

**Correlation S-E inconsistencies and total crime-relevant information end of the interview.** A Pearson correlation examined whether there is a relationship between the early S-E inconsistencies on admissions during the last phase of the interview. The test showed no relationship between the variables ( $r= -.23$ ,  $p= .10$ ).

**Correlation W-S inconsistencies and total crime-relevant information end of the interview.** A Pearson correlation examined whether there is a relationship between the early W-S Inconsistencies on admissions during the last phase of the interview. The test showed that there is a not significant negative correlation ( $r= -0.17$ ,  $\alpha= 0.24$ ). A correlation analysis could only be executed for the SoS technique, since there have been no early W-S inconsistencies found for the Late disclosure technique. The SoS technique shows a non-significant negative correlation ( $r= -.18$ ,  $p= .39$ ).

### Discussion

This study confirms that the adapted SoS approach outperforms the Late disclosure approach for interviewing guilty suspects. More specifically, the SoS approach elicits more crime-relevant information (total and new) than the Late disclosure approach. It was expected that the SoS approach will elicit less S-E inconsistencies and W-S inconsistencies, but although these effects could not be demonstrated in this study there are still some promising tendencies which will be discussed.

### The Experimental Set-Up

The aim of this study was to test an adjusted form of the SoS approach in an interrogative setting. Thus, we developed an experimental study, which should mirror a real-life crime setting. The results of the examined questionnaire show that the participants were moderately motivated to both, engage in the role-play and to convince the interviewer of their innocence. Further, no significant difference was found between the two tested interview conditions. Thus, one could state that it was reached to develop a nearly real-life setting to test our adjusted SUE framework. Additionally, it was tested whether the three questions for the crucial part of the crime had a significant effect. A partial effect was found, since a significant difference was found on one of the questions. The SoS approach elicited more new crime-relevant for this question, which supports the effectiveness of this approach. Hence, further studies can build up on this finding and investigate the partial effect.

### Inconsistencies Elicited in this Study

**S-E inconsistencies.** The four independent-samples t-tests which examined the differences between the SUE approaches on the *Inconsistencies* mainly show not-significant results. It was anticipated that the suspects in the SoS condition will in general elicit less inconsistencies because it was expected that they shift their strategy from withdrawing to more forthcoming and thus, will end up in less lie-telling and thus in less inconsistencies. This pattern was supported with the test on *S-E inconsistencies beginning of the interview*. It showed that the Late disclosure approach in fact elicited more S-E inconsistencies in the beginning than the SoS approach. This can be explained because the suspects in the SoS approach were confronted with their inconsistency and then shifted their strategy to a more forthcoming one. Thus, they resulted in less S-E inconsistencies in the beginning, whereas the suspects in the Late disclosure condition stayed with a withdrawing-strategy.

Nevertheless, the test on *S-E inconsistencies Sum* did not result in any significant outcomes. This can be explained in relation to the results of the collected total admissions. While the results show a significant difference between the conditions in case of the *Total admissions Sum*, one can see that the standard deviation of the SoS approach is quite high. Accordingly, the not-significant results can be explained because many suspects often did not engage in truth-telling in this study and thus elicited more *S-E inconsistencies Sum* in the interview. Even though these results can lead one to the assumption that the confrontation in the SoS approach does not lead to a shift of counter-interrogation strategies and thus, that this



approach is not effective, this can be discredited. The suspects in the SoS approach were firstly asked the same question as in the late disclosure condition (e.g. “Have you been around at the study area on the ground floor of the Cubicus building today?”). To this question, they could pose any answer, which often represented a S-E inconsistency, no difference between the conditions. However, the suspect in the SoS condition then was confronted with the inconsistency and had the chance to change the answer, which often lead to an admission to the evidence theme. So, regardless of how many S-E inconsistencies the suspect in the SoS condition posed, he/she could also pose the same amount of admissions.

The fact that the suspects in the SoS approach could state an admission and an inconsistency to the evidence is a very important aspect of this study. The suspects in the SoS approach can pose not only a statement-evidence inconsistency to one evidence, but they can also state an admission to this evidence. Meaning, the suspect in the SoS approach has the chance to not only state one thing to the evidence (an admission or an inconsistency), but he/she can also state both. By giving the suspect the chance to react to his/her inconsistency, the interviewer increases the chance that the suspect stays in the game (May et al., 2017). Meaning, the suspect gets the possibility to keep up his/her credibility and thus, the suspect is more prone to admit new information about the committed crime and thus, less S-E inconsistencies (Granhag & Luke, 2018). This pattern can be seen in this study, because the SoS approach elicited less S-E inconsistencies in the beginning of the study than the Late disclosure approach. Nevertheless, this study could not support that the S-E inconsistencies in total are less for the SoS approach, thus, this pattern needs to be examined further.

In contrast, the suspect in the Late disclosure condition was confronted in the end with every evidence theme, and hence they often did not change their strategy because they were confronted all at once and not step-by-step. Giving the suspect the feeling that the interviewer knows more than he/she anticipated more often rises the possibility that the suspect changes his/her counter-interrogation strategies. They more often have to think about how much information the interviewer holds and get more often the feeling that the interviewer holds more information because they get confronted with the knowledge every time they state an answer (May, et al., 2017).

**W-S inconsistencies.** This might also explain the differences between the two conditions in regard of the *W-S inconsistencies*. Because the suspects in the SoS approach were able to directly change their testimonies, they more often engaged in a W-S inconsistency. However, the difference was not significant because there were not many W-S inconsistencies

found in either of the conditions. This can be explained by the fact that although the suspects in the Late disclosure condition were confronted with the evidence in the end, they stayed with the more withdrawing strategy. Meaning, they stayed with their before stated answers or they just said that the evidence is wrong. Thus, they stated no W-S inconsistency. For the SoS approach, this can also be the case, although the suspects were confronted with their inconsistencies directly. Another reason for the low rate of W-S inconsistencies in the SoS condition can be that they shifted their strategy quite early to a more forthcoming approach and hence they did not state an within inconsistency. In this study, the suspects stated a high amount of S-E inconsistencies, and thus it is rather likely that the suspects did not shift their strategy. However, this tendency can be investigated in future research.

### **Crime-relevant Information Elicited in this Study**

As predicted, the SoS approach elicited more *Total admissions in sum* than the Late disclosure technique. This was expected since the study of Granhag and Luke (2018) have also elicited this result with their SoS approach. As in their study, one can anticipate that this happened because the suspect in the SoS approach was confronted with his/her inconsistencies and thus needed to change his/her counter-interrogation strategy. Through confronting the suspect with the held evidence one influences their perceptions of how much the interviewer knows about their involvement of the crime. When the suspect then believes that the interviewer holds more information than he/she actually holds, the suspect might elicit more information. Hence, the suspect in the SoS condition elicited more admissions to the evidence than the suspects in the Late disclosure condition because he/she shifted his/her strategy from withdrawing to more forthcoming. So, our results support the effectiveness of the SoS approach in eliciting admissions to crime-relevant information from suspects.

The results of this study also show that the SoS approach elicited more *New crime-relevant Information in total* than the Late disclosure technique. This is also in line with previous research (Tekin et al., 2015; Granhag & Luke, 2018) and can be explained by the same principle which explained the higher amount of admissions in the SoS approach, namely the shift of counter-interrogation strategies. The suspect in the SoS approach was expected to admit more new information because it was expected that he/she shifts his/her strategy to a more forthcoming one because of the confrontation with the evidence. Thus, this result supports the assumption which was also supported by the other studies. This part is a very important aspect for the study because eliciting new information was the goal of the study. The suspects should

be influenced by the interview technique in such a way that they will become more forthcoming and thus tell the interviewer information which he/she did not know beforehand. Hence, one can state that the study was effective to prove the effectiveness of the SoS approach.

Nevertheless, the results of the *New crime-relevant Information end of the interview* variable do not show a significant difference between the two SUE approaches. Meaning, the crucial part which differentiated this study from other ones could not be proven to be effective. This could have the reason that the suspects were instructed to use a withholding strategy and to think about other reasons why they have been at certain places to a certain time. They have been confronted with their inconsistencies in their beginning and thus saw the necessity to change their testimonial in order to stay credible. But in the end of the interview, the suspects were not confronted with any evidence, since the interviewer did not hold any evidence. Thus, they just told the interviewer anything and he/she could not call the suspect's attention to his/her inconsistencies. They did not feel the necessity to change their testimonial since no inconsistency could be found. But, this was not the result which was expected. Still, the results show a tendency that the SoS approach elicited more *New crime-relevant Information end of the interview*, which is a basis for further research.

The fact that the SoS approach elicited more *New crime-relevant Information in total* but not more *New crime-relevant Information end of the interview* can have the reason of the division of the New information units. The *New crime-relevant Information* variable included 11 pieces which the suspect could have elicited to the interviewer. One piece could be stated at any point during the interview (connection to organization) and seven of the pieces cover the crucial part of the crime of which the interviewer lacks evidence. This phase is also just addressed in the end of the interview. The other three pieces of new information cover aspects in the earlier phase of the crime, of which the interviewer holds evidence. Accordingly, when the interviewer poses the question about the evidence-covered events, it is likely that the suspect also mentions some of the three pieces of new information. This can explain the fact that the amount of *New crime-relevant Information* is higher in total for the SoS approach. However, the amount of *New crime-relevant Information* which the suspect reveals in the last phase of the interview is not significantly higher in the SoS approach. This could be explained because in the ending phase of the interview, the suspect needs to reveal information which is not known to the interviewer. So, the probability that the suspect reveals this information is not so high, because the suspect is motivated to stay innocent in the view of the interviewer. But, as stated above the tendency shown in the results can be a focus of future research.

### Exploratory Analyses

The correlation analyses both showed a negative correlation between the *Inconsistencies beginning of the interview* and the *Total admissions end of the interview*. This means that the more inconsistencies are stated during the first phase of the interview, the less admissions are given in the last phase of the interview. Thus, it shows the tendency that the suspects who were not forthcoming in the beginning were also not forthcoming in the end. This was not expected, since previous studies suggested that the suspects in the SoS approach will engage in more shifts of strategy and hence will become more forthcoming than suspects in other SUE conditions (Granhag & Luke, 2018). The correlation examined in this study was stronger in the Late disclosure condition (at least for the S-E inconsistencies), thus, it can be supported that the suspects in the SoS condition did engage in a shift of interrogation-strategies. Although the results do not show a significant difference between the conditions, a tendency can be seen and this can be investigated further.

### Limitations and Recommendations

As this study was a new adaptation of the SoS approach, some limitations are included. One main limitation which needs to be taken into account is the strength of the used evidence. The results show that the suspects revealed more new crime-relevant information on the text-message theme. This theme represents a technology one. As Tekin et al. (2015) have suggested, suspects see a technical evidence as more incriminating, because they anticipate that when the interviewer has access to one technological evidence, then it is more likely that he/she has access to more technological evidence. Since this study has also got an evidence from a technological nature, it is likely that the suspects revealed more information about the text message based on this. Still, the second question also refers to a technology-based theme and does not show any significant effect. This can be explained because the suspects are confronted with the evidence that the interviewer knows that he/she received a text message. Hence, then they might anticipated that the interviewer also knows more about the text message (such as content and sender). This happened in both conditions. Nevertheless, the results show that the SoS approach was more effective in eliciting information about the text message. Thus, one can argue that the SoS approach was indeed effective with making the suspect more forthcoming. This stays against the fact that the technology evidence is perceived as more incriminating. Hence, this limitation can possibly be disproved. However, this study might have shown an

effect of technological-based evidence and future studies should examine the effect of this further.

Further, a limitation of this study is that it only examines the SoS approach with a guilty sample. Thus, the results cannot be translated to every suspect. It is not examined how suspects are influenced with this approach when they are innocent. The accusatory approach for example has resulted in many false confessions, which posed a huge threat to suspect interviews. Although it does not seem that the three questions posed in the end are accusative, one cannot say for sure how the three questions influence innocent suspect. Accordingly, it is important to also examine the effect of an approach on an innocent sample. However, previous researches on the SUE framework have shown that innocent suspects use a more forthcoming interview strategy (Oleszkiewicz & Granhag, 2019). Thus, it can be anticipated that the approach used in this study reveal the same pattern so that it should be fair to innocent suspects. Moreover, this study has shown promising results for guilty suspects and hence it is important to examine it with innocent suspects to support its effectiveness.

## **Conclusion**

Police officers can use their knowledge differently in suspect interviews. The SUE framework has elicited good results and is presented in different approaches. Using their knowledge strategically throughout the interview influences the suspects to become more forthcoming. This is also shown in the case of Jamal Khashoggi. The suspects have revealed more and more information because they anticipated that the police already has this knowledge. In general, this study supports this assumption. The SoS approach has proven to be effective and specifically our results for admissions show a tendency that this SoS approach works on the right dimensions so that the suspect becomes more forthcoming. Still, the factors like S-E inconsistencies and W-S inconsistencies need further investigation, especially on the relationship with the admissions stated by the suspect in the end of the interview. This study presents a tendency of a negative correlation which can be investigated further. Overall, although the SoS approach is effective in eliciting admissions, it is still not more effective in circumventing more inconsistencies than the Late disclosure condition. However, due to the remaining findings one can state that this study positively supported the investigation of the SoS approach and contributed a basis for further research.

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**Appendices**  
**Appendix A**  
**Criminal Decision Making**  
**Informed Consent**

**Purpose**

This study is about criminal behavior. An important feature of a criminal investigation is to understand the behavior of suspects of crime. The current study will examine your perceptions and behaviors as a suspect who commits a mock crime.

More detailed information regarding the theoretical background, such as underlying concepts or frameworks, cannot be disclosed at the present moment to ensure that you behave as normal and natural as you would in reality. Any detailed information will be provided upon request after the experiment is done.

**Procedure**

As a participant in this study, you will be instructed to perform some criminal activities and afterwards you will be interviewed about it and fill in a questionnaire about your perceptions of your experiences. The interview will be audio recorded.

Once you have filled in the questionnaire the study is completed. Because it is important to protect the validity of psychological experiments (i.e., that you behave as normal and natural as possible during the operation), we cannot tell you everything about the study at this time. After the study is complete you will be fully debriefed and we will answer any questions that you may have about the study. If you decide to enroll in this study, your involvement will last for up to 60 minutes and you will receive 1 SONA credit for your participation. To ensure confidentiality, your responses will be anonymous (i.e., personal identifying information cannot be matched with your answers) and we only analyze group averages (i.e., individual performances will not be analyzed). The recorded data is treated confidentially and only available to the research team. In case of publication, it is obligatory to store the material for up to 10 years.

**Participant Rights**

Your participation is voluntary. You may choose not to take part in the study or to stop participating at any time, for any reason, without consequences. Also, the audio recordings will be destroyed immediately at your request. You will receive the full compensation also if you stop participating. For further information about this study, contact the principal investigator Simon Oleszkiewicz, Ph.D. at [s.oleszkiewicz@utwente.nl](mailto:s.oleszkiewicz@utwente.nl)



**Consent and Authorization Provisions**

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Your signature indicates that you voluntarily agree to participate in **Criminal Decision Making**, that the study has been explained to you, that you have been given the time to read the document, and that your questions have been satisfactorily answered.

Name

---

I consent to participate in the study on  
criminal behavior

Signature

---

I consent to be audio recorded during the  
interview

Signature

---

## **Appendix B**

### **Background**

Imagine that you are a person who was raised in a house full of love for pets, especially cats and dogs. Having been around animals all your life you have developed a very special bond to them. Simply put, you love cats and dogs.

You are currently studying at the UT and from your fellow students, you just heard some rumors that made your bones chill to the core: There is a professor at the University who does animal testing on dogs. You found out that this professor is doing his research on animals illegally, and that he violates the strict ethical procedures for animal handling. However, it seems as if the university is turning a blind eye. Because of your love for animals, you decided that this was too much: There is no way such cruel treatment of animals can be justified, you had to do something to make it stop!

Since your gruesome discovery, you have made several attempts to put an end to this horror. You have emailed the professor directly, you have arranged demonstrations, talked with the heads of several faculties, the HR department, study advisors, you name it. However, this has only resulted in straight out denials – nobody acknowledges any unethical animal treatment. At this point in time, your hard work and efforts have not paid off at all, and you conclude that only one option remains: To collect evidence about the unethical behavior and forward it to an investigative journalist that will publish a story about it in the news.

To collect the evidence you need help, so you contacted the organization *Rights for Animals*. However, this organization is currently under investigation for other crimes. Therefore, they cannot play any major role in gathering evidence, but they are willing to help you work out the necessary activities to secure the necessary evidence.

### **What you are going to do**

You're planning to collect evidence that the UT is involved in illegal and cruel treatment of animals. The organization *Rights for Animals* supports you. Soon, they will get into contact with you and help you with your mission. The collected evidence will then be forwarded to an employee at *Rights for Animals*.

Briefly put, to complete your mission you have to (specific instructions will follow later):

(1) gain access to the office

- (2) collect evidence in the office
- (3) provide the evidence to your accomplice

You will next receive detailed instructions for what you have to do to collect and forward the evidence. Read the instructions carefully so you know it by heart. You will be allowed to take these instructions with you, so you do not need to memorize every word. Feel free to check this paper if you get insecure or can't remember what to do next.

## Appendix C

### Instructions

These instructions will be performed in consecutive order. Meaning that once you have ticked of a box, you move to the next box directly under it. Do not jump between boxes; you have to follow the order from top to bottom.

- received text message from your contact person from the animal rights organization  
(mission starts) → WhatsApp message
- collect envelope at the given location established by the text message
- go into the office where you find information regarding the animal experiments (room XXX)
- start the computer and plug in the USB stick to collect the necessary evidence
- search the file 'experiments' and copy it on the USB stick (located on Desktop)
- take the USB stick and the envelope and leave the office
- go to room XXX (there you can find a secure computer)
- use the computer to log into your email- account
- send the files of the USB stick to KalleBlomNews@gmail.com (a journalist who belongs to *Rights for Animals* who wants to publish your story)
- next to the computer, search for the folder 'contracts' and take a picture of the Documents which you find inside. They serve as additional evidence.
- send it via WhatsApp to the person who contacted you in the beginning
- put the USB stick back into the envelope and place it into the folder 'private' (your accomplice will collect it)
- return to room XXX

## Appendix D

### Instructions for participant (before the police interview starts)

In 5 minutes, you will be interviewed by a police officer. You are instructed to interact with the police, so please try to imagine how you would answer possible questions in reality. The police already held several interviews with suspects, collected fingerprints from all involved (including you) and checked back alibis.

Please imagine that you have already concluded that it is important for you to give an innocent appearance and that this will best be done by speaking with the police. Hence, you concluded that using your right to remain silent will only make you seem more suspicious. In addition, during the interview you will be asked whether you want to have a lawyer present. Please imagine that you have already considered this option and decided it was best to not invite a lawyer, because in this way you look more innocent. Hence, you are instructed to answer this question with a 'No'.

Don't forget: You are an activist for animal rights. While getting your information about the cruel researcher, you were, however, committing a crime. In order to complete your mission, you should try to convince the interviewer of your innocence. Otherwise, *Rights for Animals* won't be able to publish your findings as their work will be linked to your criminal activity; all your work would be for nothing. Please imagine that this is very important for you: If you don't come across as innocent during the interview you will fail to save the animals.

Please note that it is the interviewer who will end the interview. The interviewer will then tell you what you need to do after the interview is over.

**Appendix E**  
**Interview protocol - SUE Condition**

“Hello, my Name is XXX. I am part of the team investigating a crime that was committed here at the University today. Someone broke into the University’s facilities and stole confidential data. There is reasonable suspicion that you have committed this crime, and I will therefore ask you some questions about your behavior and your observations around the University today. Because of the suspicion against you, you do have the right to have a lawyer present during this interview. Would you like to consult one?  
I also want to mention that you have the right to remain silent and that you do not have to answer any of my questions.

#Response of Suspect

Do you confess or deny having engaged in any criminal activities?

#Response of Suspect

You can start by freely telling me how you arrived at the university today and what you did there.

#Response of Suspect

Thank you. I have a few more specific questions.

---

**Evidence 2: Seen at study area in the Cubicus building**

Have you been around/ You mentioned being at the study area on the ground floor of the Cubicus building today?

\*\*\*if suspect remains silent after the first question of each evidence theme, prompt once by saying: Please tell me about that\*\*\*

**Discredit:** What you say doesn't fit the evidence we have. A witness has seen you picking up an envelope from one of the lockers there. Would you like to respond to that statement?

#Response of Suspect

\*\*\*Go to the next question\*\*\*

**Accept:** What you say fits the evidence we hold, as a witness has seen you picking up an envelope from one of the lockers there.

\*\*\*Go to the next question\*\*\*

---

### **Evidence 3: Proximity to the office**

Have you been around/you mentioned you were around the office of one of the professors after being at the study area?

**Discredit:** What you say does not fit the evidence, as an employee has seen you there today. Can you explain what you did there?

#Response of Suspect

\*\*\*Go to next question\*\*\*

**Accept:** Okay, very good. We have evidence that supports your answer. An employee saw you there today at that time.

\*\*\*Go to next question \*\*\*

---

### **Evidence 4: Fingerprints on object**

Have you recently entered/ you mentioned that you entered the office of a professor?

**Discredit:** What you say does not fit the evidence. We found “an object” inside the office with your fingerprints on it. Would you mind explaining how they got there?

#Response of Suspect

\*\*\*Go to next question\*\*\*

**Accept:** Thanks for clarifying this. We did find your fingerprints on “an object” inside the office.

\*\*\*Go to next question \*\*\*

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### **Evidence 5: Webcam footage of Computer**

Have you entered/you mentioned that you entered another room after you left the office?

**Discredit:** What you say does not fit the evidence we hold. Our technical team accessed the webcam of a computer in room XXX and it shows clear footage of you. Would you mind explaining what you did on the computer?

#Response of Suspect

\*\*\*Go to next question\*\*\*

**Accept:** Thank you for working with me here. Our technical team accessed the webcam of the computer in room XXX and the footage clearly shows you at the computer.

\*\*\*Go to next question \*\*\*

---

### **The three questions:**

Okay, I have three additional questions I need you to address before we end this interview. I need you to explain the text message you received just before going to the lockers in the study



area; you have to clarify what you did on the computer in the office; and I need you to describe exactly what you did in room XXX.

#Response of Suspect

**Alternative Deceptive:** I would like to point out that you're better off, the more information you provide voluntarily. I'll give you one last chance to cooperate by answering my questions.

\*\*\*If suspect remains silent\*\*\*

So, do you have anything to add?

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Okay, before we end this interview, I will ask the same question I started with: Do you confess or deny having engaged in any criminal activities?

**Ending:**

Okay, thank you for your time. If we find something in need for further clarification, we will ask you to come back at a later time. Have a good day.

(Investigator opens the door for participant)

**Control Interview- Late disclosure**

“Hello, my Name is XXX. I am part of the team investigating a crime that was committed here at the University today. Someone broke into the University’s facilities and stole confidential data. There is reasonable suspicion that you have committed this crime, and I will therefore ask you some questions about your behavior and your observations around the University today. Because of the suspicion against you, you do have the right to have a lawyer present during this interview. Would you like to consult one?

I also want to mention that you have the right to remain silent and that you do not have to answer any of my questions.

#Response of Suspect

Do you confess or deny having engaged in any criminal activities?

#Response of Suspect

You can start by freely telling me how you arrived at the university today and what you did there.

#Response of Suspect

Thank you. I have a few more specific questions.

Have you been around/ You mentioned being at **the study area on the ground floor of the Cubicus building** today?

#Response of Suspect

\*\*\*if suspect remains silent or only answers with a ‘yes’ after the first question of each evidence theme, prompt once by saying: Please tell me about that\*\*\*

Have you been around/you mentioned you were around **the office of one of the professors** after being at the study area?

#Response of Suspect

Have you recently entered/ you mentioned that you entered the office?

#Response of Suspect

Have you entered/you mentioned that you entered **another room** after you left the office?

#Response of Suspect

Is there anything you would like to add at this point?

#Response of Suspect

Okay, thank you. We have collected some evidence that I would like you to address. Our tech team intercepted the text message you received today, shortly thereafter a witness saw you pick up an envelope from one of the lockers in the Cubicus building. Later on another witness saw you near the office. We have also found your fingerprints inside the office, and a webcam has shown that you used the computer in room XXX. Before we conclude this interview, would you mind explaining all these activities.

#Response of Suspect

**Alternative Deceptive:** I would like to point out that you're better off, the more information you provide voluntarily. I'll give you one last chance to cooperate by answering my questions.

#Response of Suspect

\*\*\*If suspect remains silent\*\*\*

So, do you have anything to add?

\*\*\*If suspect objects or complains, simply read out the evidence again\*\*\*

---

Okay, to conclude this interview I will ask the same question I started with: Do you confess or do you deny having engaged in any criminal activities?

Okay, thank you for your time. If we find something in need for further clarification, we will ask you to come back at a later time. Have a good day.

(Investigator opens the door for participant)