

Police officers' use of evidence to elicit admissions in a fictitious criminal case

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Abstract

We examined how police officers planned to interview suspects in a situation where they lacked information about a critical phase of a crime (i.e., the time during which the crime took place), but possessed information about less critical phases of the crime (i.e., the time before and/or after the crime took place). The main focus was the officers' planned use of the available information (evidence) to elicit admissions about the critical phase. A survey was distributed to police officers ($N = 69$) containing a fictitious murder case for which they were to prepare an interview with a suspect. The investigators planned to disclose the evidence more often in a strategic manner (obtaining the suspect's statement and exhausting alternative scenarios before revealing the evidence) than in a non-strategic manner (revealing the evidence before requiring an explanation). The investigators' most frequently reported reason for their planned evidence use was to collect additional information about the particular phase to which the disclosed evidence pertained. It was rare that the investigators planned to disclose the evidence about a less critical phase of the crime in order to elicit admissions about the more critical phase (e.g., by disclosing the evidence to try to shift the suspect's counter-interrogation strategy from less to more forthcoming). The investigators may benefit from recent research showing that strategic evidence disclosure can be used as a means to elicit admissions about a phase of a crime for which information is lacking.

Keywords: suspect interviews, police officers, evidence disclosure, admissions

Police officers' use of evidence to elicit admissions in a fictitious criminal case

Consider a woman having been murdered. The crime took place sometime between 1.30 and 2.30 am on a Sunday when she was walking back home from a party. The investigation led to the arrest of a suspect. At the point of arrest, the police had no clear link between the suspect and the crime scene. The police lacked information pertaining to the critical phase of the crime (i.e., between 1.30 and 2.30 am), but possessed information pertaining to less critical phases of the crime. For example, they had several pieces of information (evidence) about the suspect's activities before the crime (the suspect's browser history showed that the victim's Facebook profile had been visited repeatedly two days before she was killed) and after the crime (the suspect made two phone calls to a friend after 3 am on the night of the murder). This scenario mirrors features that are rather frequent in real-life investigations. That is, investigators possess evidence about several phases of a crime, but lack information about the more critical phase. However, little is known about how police officers interview suspects in such situations. The present study aims to fill this void by examining police officers' use of the available evidence in situations where it is necessary to elicit admissions regarding the critical phase for which information is lacking. Admissions are defined as new and critical information that can provide new leads for further investigation or establish links between a suspect and a crime without the suspect acknowledging responsibility for the crime (e.g., Perry, 2012).

Previous research examining real-life interviews and investigators' self-reports shows no consensus on the timing of evidence disclosure for suspect interviews. For example, studies conducted in the U.S. (Leo, 1996) and Canada (King & Snook, 2009) showed that investigators generally disclose the evidence early in the interview. That is, suspects are typically made aware of the evidence held by the investigator before their statement is obtained. In contrast, in England

and Wales, investigators tend to reveal the evidence either gradually (drip-feeding the evidence) or late (in a lump at the very end) in the interview (Smith & Bull, 2014; Walsh, Milne, & Bull, 2015). In such interviews, open-ended and specific questions are posed to obtain the suspect's statement before disclosing the evidence (for a detailed description of the PEACE model adopted in England and Wales, see Milne & Bull, 1999). The fact that investigators have different interview purposes may account for the inconsistent research findings. That is, the aim of the interview, to either obtain a confession or to gather information, may affect the investigators' preferred timing of disclosing the evidence.

It is plausible to refer to late and gradual disclosure of evidence as 'strategic' because such disclosure has been found to yield more desirable interview outcomes, such as useable cues to deceit and more comprehensive statements, compared to early disclosure of evidence (see Bull, 2014; Hartwig, Granhag, & Luke, 2014). For instance, research has shown that strategic use of evidence (i.e., not revealing the evidence until a suspect's statement is obtained and alternative explanations to the evidence are exhausted) provides the opportunity to observe possible inconsistencies between the suspect's statement and the evidence, and these so-called statement-evidence inconsistencies are diagnostic cues to deceit (Hartwig et al., 2014). More specifically, a guilty suspect in denial, without knowing what information the investigator holds, typically provides a statement inconsistent with the evidence. In contrast, an innocent suspect is typically forthcoming with information and therefore shows a much lesser degree of statement-evidence inconsistency (Hartwig, Granhag, & Strömwall, 2007; Strömwall, Hartwig, & Granhag, 2006). Hence, the degree of statement-evidence inconsistencies can be used to detect deception or truth (e.g., Clemens, Granhag, & Strömwall, 2011; Hartwig, Granhag, Strömwall, & Vrij, 2005). However, disclosing the evidence at the onset of the interview runs the risk of providing a

guilty suspect the chance to construct a story consistent with the evidence. A guilty suspect, knowing what information the investigator holds, typically avoids contradicting the investigator's knowledge. In sum, early disclosure of evidence makes it difficult for an investigator to discriminate between a guilty and an innocent suspect (Hartwig et al., 2005).

A further possible outcome of strategic evidence disclosure is the collection of new information. In recent years, laboratory-based studies, examining the effect of evidence disclosure on eliciting admissions, found that if the available evidence was used strategically, admissions could be obtained from mock suspects about a critical phase of a crime for which information was lacking (Tekin et al., 2015; 2016). The interview tactic tested in these studies rested on the assumptions that; (a) a suspect's perception of how much evidence the interviewer held would affect his or her counter-interrogation strategies, and (b) these counter-interrogation strategies would affect what the suspect reveals or conceals during the interview. In these studies the perception of the evidence referred to the suspect's view about the amount of information the interviewer held about the crime (Hartwig et al., 2007). Research shows that guilty suspects typically form a hypothesis about what information the interviewer might have about them (e.g., Moston & Engelberg, 2011; Sellers & Kebbell, 2011). Moreover, counter-interrogation strategies refer to the suspect's attempts to convince the interviewer of their innocence (Granhag & Hartwig, 2008).

The goal of the interview tested by Tekin and colleagues was to influence guilty suspects' perception of the evidence through strategic interviewing, to make them more forthcoming. The interviewer first focused on the phases of the crime for which s/he possessed evidence. By using the evidence strategically (i.e., obtaining the suspect's statement before disclosing the evidence pertaining to that particular phase), the interviewer obtained statement-evidence inconsistencies.

In the next instance, the interviewer confronted the suspect with these inconsistencies to affect his or her perception of the evidence (i.e., to make the suspect think: 'The interviewer seems to have more information than I first thought'). This resulted in the suspect overestimating the amount of evidence that the interviewer held, and consequently shifted his or her counter-interrogation strategy, from a withholding to a more forthcoming strategy. Finally, the interviewer turned to the critical phase (for which s/he in fact lacked information). When the interviewer posed open-ended questions about the critical phase, the suspect was then more forthcoming in order to be consistent with the information s/he believed the interviewer to possess. In sum, the guilty suspects who were interviewed with this interviewing tactic disclosed more admissions about the critical phase (e.g., admitting to being at the crime scene) compared to the guilty suspects in the conditions where the evidence was disclosed at the onset of the interview or not disclosed at all. In essence, the interviewer's strategic use of evidence influenced the suspects' perception of how much information s/he held against them. The inflated perception of the evidence about the critical phase (for which information was lacking) affected the suspects' level of forthcomingness for this particular phase.

Furthermore, Walsh and Bull (2015) examined the association between the timing of the evidence disclosure and the interview outcome, and found that gradual and late disclosure models (vs. early disclosure) resulted in more comprehensive accounts. However, it is unclear from this study whether these accounts consisted of an expanded knowledge of the phase of the crime to which the disclosed evidence pertained or admissions about a critical phase to which evidence was lacking.

The present study

The first aim of the present study was to fill a gap in the literature by examining investigators' planned use of evidence when possessing evidence about less critical phases of a crime (before and after), but lacking information about the most critical phase (the time during which the crime took place). The critical phase was defined as the phase for which new information could enable the investigator to infer whether there were any links between the suspect and the crime. The second aim was to advance current knowledge by examining the reasons behind the investigators' preferred evidence disclosure mode. The term 'reason' here refers to the goal an investigator strives to achieve by his or her way of disclosing the evidence.

To address these aims, investigators were given a fictitious murder case and were asked to plan for an interview with a suspect. The case was created to mimic a situation in which the investigators possessed evidence about several less critical phases of a crime, but lacked information about a more critical phase. The available evidence pertaining to the suspect's activities *before* and *after* the crime raised suspicion about the suspect's involvement in the crime, but was insufficient to link the suspect to the actual crime. In brief, eliciting admissions about the critical phase was key to the investigation.

METHOD

Sample and procedure

A survey was administered to police investigators who conduct suspect interviews on a regular basis. Of the 112 investigators who were approached, 74 agreed to participate in the study. Of these 74, five reported not to be interviewing suspects (we did not possess information about their interviewing experience in the past) and were thus excluded. In the end, the responses from 69 investigators from various police departments in the Netherlands ($n = 50$, 72%), in Norway ($n = 15$, 22%), and in the U. K. ($n = 4$, 6%) were analysed. The variables explored in this study

were (a) the investigators' planned use of evidence, and (b) the investigators' reasons behind their preferred evidence disclosure mode.

The sample consisted of 36 males (54%) and 31 females (46%), aged between 24 and 59 ($M_{years} = 42.1$, $SD = 9.3$; two investigators did not provide demographic information). The experience as an investigator ranged from 1 to 28 years ($M = 9.9$, $SD = 6.8$). The average number of hours per week the investigators spent interviewing suspects was 6.1 ($SD = 5.6$). Forty-four (66%) investigators reported to have received special training in suspect interviewing.

The investigators were approached through contact persons at the police academies and at various police departments. The investigators received either an online version (through the emailing lists consisting of investigators in the Netherlands and in Norway and through personal email in the U.K.) or a pen and paper version of the survey (the first author visited several training courses at the police academies in the Netherlands and in Norway).

The investigators received a consent form and agreed to take part in the study either by signing the form or by clicking 'I agree to take part in this study' button on the online survey. They were informed that their participation was voluntary, and that their data would be kept anonymous. The survey took approximately 20 minutes to complete. After the completion of the survey, the investigators were debriefed and thanked for their participation. They were also provided with the contact details of the researchers in case they were interested in obtaining the results of the study. The study was approved by the Science Faculty Ethics Committee at the University of Portsmouth.

Materials

The questionnaire consisted of an introduction, details of a fictitious murder case, a set of questions regarding how the investigators would plan an interview with the suspect in the case,

and questions about the investigators' demographic characteristics. The survey was translated from English into Dutch and Norwegian by native speakers. Then, a researcher in the Netherlands (who had experience in the field of legal psychology) and a police officer in Norway ensured that the translations matched the language used by the police in these countries.

Introduction

The introduction provided the investigators with a summary of the case. The respondents were informed that a murder had taken place and that a suspect had been arrested. The suspect denied any involvement in the crime, but was willing to cooperate and to take part in an interview. The prosecutor's assessment was that the evidence collected thus far was insufficient, and that more information was required to prosecute the case. The task for the investigators was to plan an interview with the suspect based on the case details. Importantly, the investigators received a specific objective: *'You are now asked to plan an interview with the suspect based on the case information you will read soon. In this interview, your objective is to collect new information from the suspect. Specifically, we would like you to focus on eliciting new information to be able to infer whether there is any link (of any strength) between the suspect and the crime scene'*. Following this, it was stressed that there was no right and wrong answers, and that the study was exploratory.

The fictitious case

Next, the investigators received details about the fictitious case and the reasons for the suspect's arrest (see Appendix A). Before reading the case, the investigators were informed that there was no need to memorise the details because they could always go back to the given information whilst answering the questions. The case details guided the investigators through the information that the police investigation had yielded. The case details were created by drawing

upon inspiration from a real murder case and with additional help from two experienced investigators (not participants in the study).

Questions regarding planning

This section consisted of questions aiming to capture the investigators' preferred use of evidence. Before answering these questions, investigators were informed that the suspect had no knowledge about which information the police possessed, except that he was suspected of the murder in question. They were also reminded of the objective (see above) of the interview that they were asked to plan. Moreover, the investigators were told that, if they needed to conduct multiple interviews to meet the objective, they should think of these interviews as one whilst answering the questions.

The investigators first listed a maximum of 15 pieces of information they believed to be critical in the case (*'We would like to know what you would ask the suspect related to the available information in this case. First, please write down which pieces of information you think are critical'*). This aimed to provide the investigators the opportunity to focus on what they believed to be important in the case. The number of critical pieces was limited due to the time constraints on behalf of the participants. Next, the investigators were asked to pick the three most important pieces from their list and answer the following two questions for each of these pieces: *'What question would you ask related to this piece of information?'* and *'What do you want to achieve with that question?'*. These two questions intended to capture the investigators' planned use of the evidence and the reasons behind their preferred evidence disclosure mode. The rationale behind limiting the number of responses to three was to obtain a sufficient number of responses that would enable us to infer the investigators' preferred evidence use while taking up as little of their time as possible. See Figure 1 for an example response to these questions.

Finally, the investigators rated their perception of the strength of evidence against the suspect on a 7-point Likert scale (1 = *very weak*, 4 = *neither weak nor strong*, 7 = *very strong*).

Demographic questions

The final part of the survey collected the following demographic information from the investigators: age, gender, the length of service as an investigator, the average number of hours they spend conducting suspect interviews in a week, and a yes/no question regarding whether they have received special training about suspect interviewing.

Figure 1 about here

Coding

To be able to code the data, all responses were translated from Dutch and Norwegian into English by native speakers of these languages.

Evidence use

Three primary categories were used to assess the investigators' planned use of evidence: (a) strategic, (b) non-strategic, and (c) other. A piece of information was considered as having been used strategically if the investigator invited the suspect for a free recall and/or exhausted the suspect's possible alternative explanations to the evidence before revealing it (e.g., one investigator planned to strategically use the eyewitness statement indicating that the suspect was drunk at the party by posing the following question: 'Can you tell me what you have drunk at the party?'). A piece of information was considered as having been used non-strategically if the investigator revealed it early on in his or her line of questioning (e.g., 'We have eyewitness evidence indicating that you were drunk at the party. Tell me what you have drunk').

Responses were placed into the 'other' category if the question (a) was unclear as to whether it targeted the piece of information listed (e.g., one investigator planned to use the piece of information 'the search of the victim's Facebook profile' by posing the following question: 'How much do you value your privacy?') or (b) did not concern any piece of information (e.g., 'What were you doing at the time of the crime?'). This categorisation was developed based on past research examining the outcome of different evidence disclosure modes (e.g., Dando & Bull, 2011; Hartwig, Granhag, Strömwall, & Kronkvist, 2006; Hartwig et al., 2005). Two coders coded a random 20% of the responses based on these pre-determined categories. The percentage of agreement was good, 81.9% (Cohen's $\kappa = .69$, 95% CI [.56, .83]). The disagreements were settled in a discussion between the coders, and one of the coders subsequently coded the remaining responses. Based on this coding, the investigators were categorised into three groups: Investigators who planned to use (1) each piece of evidence in a strategic manner, (2) each piece of evidence in a non-strategic manner, or (3) some pieces in a strategic manner, and some pieces in a non-strategic manner. Please note that this categorisation was completed based on the pieces of evidence for which the investigators formulated questions.

Reasons behind evidence use

The investigators reported what they aimed to achieve with the questions they formulated for the pieces of information that they assessed as critical. The first author initially reviewed all responses and created a list of seven categories. These were: (1) To obtain new information about the evidence already held, (2) To obtain new information about the critical phase of the crime, (3) To obtain new information about a theme unrelated to the crime, (4) To compare the suspect's statement with the evidence already held, (5) To 'encircle' (e.g., exploring and ruling out possible alternative explanations to the evidence, see Van der Sleen, 2009), (6) To support a

hypothesis, and (7) Other (statements not captured by any of the categories above). See Table 1 for example statements reported by investigators for each of these categories.

Two coders (the first and the third authors) coded a random 20% of the responses based on the list of categories above. The percentage of agreement was 50.77% (Cohen's $\kappa = .42$, 95% CI [.28, .56]). Since the inter-rater reliability was unsatisfactory, we deemed it necessary to switch to another approach. After a long discussion, we concluded that the categorisation was conducted on somewhat unusual data. More specifically, the investigators' responses about their reasoning were very much related to the questions they had formulated with respect to how they would present the pieces of evidence they deemed critical. However, the first round of coding was done without much consideration given to the investigators' question formulations. In order to be fair to the thinking processes on behalf of the investigators, we had to look back at the questions, which made the categorisation unusually complex. Following this, we together meticulously reviewed the responses that we had previously coded separately, while now taking into account the investigators' responses regarding their planned evidence use. These extensive discussions led to an agreement for the categorisation of each response. When we were convinced that we had a similar understanding, one of us coded the remaining responses. For the few occasions ($n = 11$) in which categorisation was difficult, the coder consulted the second coder. This approach may have increased the subjectivity of the coding, but it is important to stress that our collective thinking led to high agreement.

Table 1 about here

RESULTS

Preliminary analyses

The investigators' ratings of the strength of evidence against the suspect ($M = 4.25$, $SD = 1.04$; 4 = *neither weak nor strong*) showed that the fictitious case successfully mimicked the type of cases of interest (i.e., cases in which the evidence raises suspicion about the suspect's involvement in the crime, but where the evidence is not conclusive). No difference was found between the online and the pen and paper versions of the surveyⁱ.

Evidence use

A total of 543 pieces of evidence were assessed as critical by the investigators. This was calculated by counting the number of pieces of evidence each investigator listed as critical. On the basis of the 543 pieces of evidence, 320 questions were formulatedⁱⁱ. Of these 320, 283 (88.4%) were questions in which the evidence was planned to be used (either strategically or non-strategically) as required. However, 37 (11.6%) were questions which did not involve using the piece of evidence assessed as critical, thus these fell into the 'other' category. The evidence was planned to be used in a strategic manner 70% of the time (i.e., obtaining the suspect's statement before disclosing a particular piece of evidence) and in a non-strategic manner 30% of the time (i.e., disclosing the evidence to the suspect before posing questions about it). A paired samples *t*-test revealed that the investigators planned to use the evidence strategically ($M = 2.87$, $SD = 2.42$) more often than non-strategically ($M = 1.23$, $SD = 1.67$), $t(68) = 4.25$, $p < 0.001$, $r = .46$, 95% CI [.25, .63]. Next, the investigators were categorised based on their overall planned use of evidence (i.e., how they planned to use the pieces for which they have formulated questions). Of the 69 investigators, 31 (44.9%) planned to disclose all pieces of evidence strategically, and 12 (17.4%) planned to disclose all pieces non-strategically. The remaining 26 (37.7%) investigators planned to disclose some pieces of evidence in a strategic manner and the other pieces of evidence in a non-strategic manner.

Reasons behind evidence use

The average number of goals the investigators strived to achieve in one interview was 2.61 ($SD = 1.30$, $n = 68$). This was calculated by adding up the number of independent categories coded for each investigator; hence it is a different measure than the total number of reported reasons per investigator. A one-way ANOVA with planned evidence disclosure mode (exclusively strategic vs. exclusively non-strategic vs. a combination of strategic and non-strategic) as the factor revealed no significant effect on the number of goals the investigators reported, $F(2, 67) = 1.35$, $p = 0.27$, $r = .19$, 95% CI [-.04, .42].

The investigators reported in total 294 reasons. Of these, 211 were reported for their planned strategic use, whereas 83 were reported for their planned non-strategic use. When planning to use the evidence *strategically*, the investigators' most often expressed reason was to compare the suspect's statement with the evidence (35.5%). This was followed by obtaining new information about the evidence already held (22.3%) and ruling out alternative explanations to the evidence, i.e., encirclement (12.8%). The least frequent reported reasons were to (a) obtain new information pertaining to the critical phase for which the investigators lacked information (9.5%)ⁱⁱⁱ, (b) obtain new information pertaining to a theme unrelated to the crime (9.5%), and (c) support a hypothesis (6.6%). Furthermore, the most frequent reasons to disclose the evidence *non-strategically* were to (a) obtain new information about the evidence already held (43.4%), (b) support a hypothesis (24.1%), and (c) compare the suspect's statement with the evidence (13.3%). It was rare that investigators aimed to (a) obtain new information about the critical phase (6.0%), (b) obtain new information unrelated to the crime (1.2%), and (c) rule out alternative explanations to the evidence, i.e., encirclement (1.2%). (See Table 1 for the frequency of the self-reported reasons for each category.) In sum, the investigators' goals for strategic and

non-strategic planned use of evidence commonly revolved around gathering information about the themes of evidence for which evidence already existed. The investigators planned to use very few pieces of evidence to obtain information pertaining to the critical phase.

DISCUSSION

The present study is the first to explore the planned use of evidence for suspect interviews for which the investigator possesses evidence on less critical phases of a crime, but lacks information on the most critical phase. The study also expands previous research by examining investigators' self-reported motivation behind their planned use of the evidence.

Evidence use

The investigators planned to use the evidence strategically more often than non-strategically. Furthermore, almost half of the investigators planned to use a strategic disclosure mode for each critical piece of evidence. These findings are consistent with the outcome of previous studies conducted in England and Wales (e.g., Smith & Bull, 2014; Walsh & Bull, 2015). This is not surprising considering that the current sample consisted of investigators from countries that have adopted an information gathering approach to suspect interviewing (KREATIV in Norway, see Fashing & Rachlew, 2009; The General Interview Strategy [GIS] in the Netherlands, see Hoekendijk & van Beek, 2015; PEACE model in England and Wales, see Milne & Bull, 1999). However, almost one fifth of the investigators planned to confront the suspect with the critical pieces of evidence early in their line of questioning, which suggests that they might not have fully adopted the recommended guidelines of suspect interviewing in their respective countries.

Two in every five investigators planned to use certain pieces of evidence in a strategic manner, and to use other pieces in a non-strategic manner. Stated differently, these investigators planned to alter between different evidence disclosure modes in the same interview. This finding

differs from the outcome of previous studies in which the investigators have reported to prefer one evidence disclosure mode over the other (e.g., Smith & Bull, 2014; Walsh et al., 2015). This difference may be attributed to the type of questions posed in the past studies exploring investigators' preferred evidence disclosure modes. Smith and Bull (2014) and Walsh et al. (2015) used forced-choice questions for which investigators were to choose one of the pre-determined options, with each option corresponding to only one disclosure mode. Such questions, unlike the open-ended questions used in the present study, may have limited the opportunity for the investigators to report their behaviour in full. In support of this, Granhag, Clemens, Strömwall, and Mac Giolla (2015) found a result similar to that of the present study by using open-ended questions to explore custom officers' preferred evidence disclosure mode. The results showed that a number of officers planned to employ different evidence disclosure modes for different pieces of evidence.

We believe that the finding that the investigators planned to use different evidence disclosure techniques for different pieces of evidence encourages the reconsideration of the prevailing view in research that strategic interviewing consists of one evidence disclosure mode only (e.g., early, gradual or late). To be more specific, researchers commonly categorise the use of evidence as strategic if the pieces of evidence are disclosed late or gradually in an interview, and as non-strategic if the pieces are disclosed at the onset of an interview (e.g., Dando & Bull, 2011; Hartwig et al., 2005). In brief, such a classification is too simplistic. For instance, a late disclosure of evidence can be non-strategic if an investigator fails to exhaust alternative explanations to the evidence before revealing it. Similarly, disclosing some, but not other, pieces of evidence early in an interview may be strategic. That is, the suspect may believe that the investigator does not hold more information than what s/he has already disclosed. Hence, the

suspect may contradict a piece of evidence that was not disclosed. Such a statement-evidence inconsistency, in some instances, may be more valuable than a statement in which the suspect contradicts several existing pieces of evidence. In sum, using different disclosure modes for different pieces of evidence can counteract the counter-interrogation strategy a suspect develops as a result of the investigator's initial strategy. In contrast, using the same disclosure mode for every piece of evidence may be counterproductive as this may help a suspect to predict the investigator's strategy, and, in turn, develop effective counter-interrogation strategies (Granhag & Hartwig, 2015).

Reasons behind evidence use

We found that the investigators adopted multiple goals for their planned interviews. These goals commonly revolved around gathering information irrespective of the preferred evidence disclosure mode (e.g., comparing the suspect's statement with the evidence and obtaining new information about the evidence itself).

The most common reasons behind the investigators' planned strategic use of the evidence concerned expanding the knowledge about the themes of evidence pertaining to the less critical phases of the crime. That is, the investigators commonly aimed at using a piece of evidence to (a) compare it with the suspect's statement, (b) gain new information about that particular theme of evidence, or (c) exhaust alternative explanations to that particular piece of evidence. For instance, one of the pieces of evidence was the suspect's browser history showing that the victim's Facebook profile had been visited repeatedly two days before she was killed. Consider that an investigator planned to use this piece of evidence in a strategic manner. The investigator would then aim at expanding his or her knowledge about this particular piece of evidence by (a) observing whether the suspect contradicted this fact in his statement, (b) finding out more about

the suspect's use of social media, or (c) asking whether someone else had access to his computer.

In sum, by planning to use the evidence strategically, the investigators aimed at gathering information that pertained to the theme of evidence for which they planned to pose questions.

Furthermore, very few pieces of evidence were planned to be used to gain new information pertaining to the critical phase for which information was lacking. For instance, if an investigator planned to use the evidence regarding the suspect's browser history (see the example above), s/he would then aim at gaining new information about the suspect's activities during the critical phase (e.g., by disclosing the evidence to try to shift the suspect's counter-interrogation strategy from less to more forthcoming). Taken together, our interpretation of these findings is that the investigators commonly planned to use strategic disclosure as *an end in itself* (to find out more about the theme of evidence asked about), rather than as *a means to an end* (to obtain information about the critical phase).

For the current scenario, it was crucial to attain admissions about the critical phase. The investigators were explicitly informed that their objective was to elicit new information that could help determine whether or not the suspect was linked to the crime scene. Yet, the investigators rarely focused on this objective when planning how to use the evidence. We offer four possible explanations for this finding. First, the investigators might have forgotten the objective whilst planning their interview. Second, they might have failed to understand the objective. Third, they might have understood the objective, yet (for one reason or another) adopted a different objective. Fourth, they might have tried to achieve the objective, but did not know how to use the evidence to arrive at the objective.

All these explanations may be valid, but we believe that the fourth explanation is the most plausible one. First of all, the objective was overtly and repeatedly stated in the survey.

Therefore, it is unlikely that the investigators would have forgotten or misunderstood the objective. Considering the third explanation, the investigators' self-reports suggest that it is possible that they adopted a different objective, which was to expand their knowledge about the themes of evidence. However, our data contains no lead for offering an explanation as to why a majority of the investigators would have disregarded the given objective. Hence, we believe that it is more likely that the investigators did not know how to use the available evidence in order to elicit new information about a phase for which they lacked information.

The recommended interviewing guidelines, based on information gathering approaches (e.g., the PEACE model), do not offer specific interviewing tactics for how to use evidence strategically in order to elicit admissions about a phase for which information is lacking. The investigators in this study were trained with these guidelines or not trained at all; therefore, it is not surprising that this goal was not commonly reported as a part of their planning. It is plausible to assume that if the investigators were acquainted with the notion of using known information as a means to gather unknown information, this would have been reflected in their planning.

The notion of using the evidence to elicit new and critical information is rather novel, and the studies addressing this matter are few and very recent (Tekin et al., 2015; 2016). These new findings demonstrate that an investigator may shift a suspect's counter-interrogation strategy from less to more forthcoming by using the evidence in a strategic manner. This shift may yield admissions that can, for instance, place the suspect at the crime scene (without the suspect admitting to have committed the crime). To our knowledge, this line of research is the only one thus far that offers an empirically supported interviewing tactic for obtaining admissions via strategic disclosure of evidence.

Limitations and future directions

The first limitation relates to the method chosen for the present study, i.e., obtaining investigators' self-reports. It could be argued that in self-report studies investigators may provide answers that are socially desirable, thus these responses may not fully reflect their behaviour in real-life. However, this concern may be unfounded since the findings from archival studies examining investigators' evidence use in various countries (in the US, Leo, 1996; in Australia, Sellers & Kebbell, 2011; in the UK, Walsh & Bull, 2015) were in line with the findings obtained from investigators' self-reports in the same countries (in the US, Kassin et al., 2007; in Australia, Smith & Bull, 2014; in the UK, Walsh et al., 2015).

Second, there was a lack of interaction between the investigator and the suspect. Hence, we cannot comment on the extent to which the investigators' pre-interview plans would change as a result of the suspect's behaviour. For instance, the disclosure of a certain piece of evidence may affect a suspect's perception of the strength of evidence, which, in turn, may result in the suspect changing his or her initial counter-interrogation strategy. As a result of this change, the investigator may revise and alter his or her initial evidence disclosure plan (for the pieces that has not yet been disclosed) to counteract the suspect's new strategy. We believe that it is important for future research to examine the influence of this interaction on investigators' initial evidence disclosure plans.

Third, the investigators may plan to use tactics not involving to disclose evidence to gain information on the critical phase of the crime. Future research should address this by exploring investigators' interviewing techniques and tactics on a broader level. Fourth, few, but still some of the investigators planned to use the evidence to elicit admissions about the critical phase. However, the study design did not allow for follow-up questions to be posed to these investigators with respect to the underlying mechanisms they would have trusted to yield

admissions as a result of their planned evidence use. Future research on the mechanisms through which investigators aim to elicit admissions with their evidence use is necessary. Finally, coding the reasons reported by the investigators was difficult. We solved this by discussing all reasons that were hard to categorise in detail. Future researchers are advised to develop better-working ad-hoc coding schemes.

Conclusions

The present study provides a deeper understanding of police officers' planned use of the evidence and their reasoning behind their planning. We found that investigators commonly planned to use the available evidence strategically. Furthermore, we found that this planned strategic disclosure was mostly used as a means to elicit new information about the themes for which evidence already existed, rather than to gather information about the critical phase for which information was lacking. Investigators may benefit from recent research showing how strategic use of evidence can be used as a vehicle to elicit critical information that can assist in establishing links between a suspect and a crime (Tekin et al., 2015, 2016). We believe that interviewing practice will improve if this strategic interviewing tactic is included in police training manuals as one of the many tools that can be used in suspect interviews.

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Table 1. Examples of self-reported reasons behind investigators' preferred use of evidence and the frequency of these reasons broken down by evidence disclosure mode

Categories	Example statement 'I plan to use this piece of evidence to...	Strategic Use of Evidence % (<i>n</i>)	Non-strategic Use of Evidence % (<i>n</i>)
1. To obtain new information about the evidence already held	...clarify why the suspect made two phone calls very late at night'	22.3 (47)	43.4 (36)
2. To obtain new information about the critical phase of the crime	...find out the suspect's route from the party to his home'	9.5 (20)	6.0 (5)
3. To obtain new information about a theme unrelated to the crime	...get to know his relationship with the housemate'	9.5 (20)	1.2 (1)
4. To compare the suspect's statement with the evidence already held	...compare the suspect's statement about the chain of events with the witness statements'	35.5 (75)	13.3 (11)
5. To encircle	...establish who else uses the phone'	12.8 (27)	1.2 (1)
6. To support a hypothesis	...prove beyond doubt that the suspect knew the victim'	6.6 (14)	24.1 (20)
7. Other	...increase pressure'	3.8 (8)	10.8 (9)

Note. *n* = the number of reported reasons that fell into that particular category

We would like to know what you would ask Frank (the suspect) related to the available information in this case. Please write down (in Column 1) which pieces of information you think are critical (one piece for each row).

Then please pick the most important 3 pieces of information and answer the questions in Column 2 and Column 3 only for those 3 pieces.

Column 1	Column 2	Column 3
The piece of information	What question would you ask related to this piece of information?	What do you want to achieve with your question?
The victim was killed with several blows to the head	How did you kill Linda?	Figure out how the crime has taken place and more importantly why.
Suspect's route leaving party		
The suspect was on the phone at night	What is your calling behaviour?	To check whether he calls more often at night
The red sweater	Where do you spend your income on? How much money do you spend on your hobbies? How much money do you spend on clothes? What kind of clothes do you like? What kind of clothes do you wear? What clothes did you wear to the party?	He cannot later say it was someone else who had his sweater
CCTV footage		
Suspect's browser history		

Figure 1. Questions regarding planned evidence use and an example response (the example was formed by bringing together responses from several investigators).

APPENDIX A

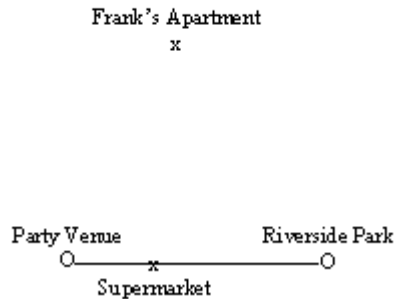
Case Details

Imagine today is May 11th, Monday. Linda, the deceased, was new in town and attended a party on Saturday May 2nd; a party that she found out about on Facebook. She left the party at approximately 1 am (May 3rd) and was talking to a friend on the phone whilst walking back home. Her friend heard Linda suddenly start screaming and then the line was disconnected. Linda's friend notified the police, and the police started to look for Linda. In the morning, Linda's body was found in Riverside Park, about 1.3 miles/2 km away from the party venue.

The name of the suspect is Frank. Here is what the police have found so far and the reasons for Frank's arrest:

- Linda had been beaten to death; the death was caused by numerous hits to her head by a blunt object. No one seems to have witnessed anything suspicious around the area. No traces or other DNA were found on the victim.
- The police officers found an empty and half-smashed beer bottle at the crime scene. Blood from Linda was found on the bottle. The analysis of the bottle revealed no other traces.
- The label of the beer bottle was Three Towns –a rather rare label.
- The police officers interviewed people who were at the party that Linda had attended. Every witness who reported to have seen Linda saw her at the party for the first time.
- One of the beer brands sold at the party was Three Towns. The Three Towns bottle that was found at the crime scene had the identical design to the Three Towns bottles sold at the party.
- One witness reported that a man named Frank (whom he had known from before) had left the party right after Linda. The witness had seen Frank walking behind her. He remembered that Frank had a black backpack.
- No one at the party (including the bartenders) remembered if Frank bought any alcohol. Nobody recalled seeing Frank drinking alcohol, either. However, one witness reported to have seen Frank almost falling down the stairs because he was drunk.
- Another witness said that Frank had a red sweater on that night.
- The police officers found one security camera along the route from the party venue to the Riverside Park. The camera monitored the entrance of a supermarket. The footage showed that at 1:08 am a person who looked like Frank was walking about 20 feet/6 meters behind Linda. He was wearing a sweater and a backpack matching the witness statements.

- Frank has no prior criminal record. He is a 23 year old high school dropout who runs a small auto repair shop inherited from his father. He lives in a shared flat that is about 20 minutes walking distance from the party venue.
- Here is a drawing of how the relevant locations are situated in relation to each other (remember that the park is about 1.3 miles/2 km away from the party venue):



- The police arrested Frank at his repair shop a week after the murder (imagine that is today).
- This is what he said during his preliminary interview:
'Yes, I was at that party on May 2nd. I've quit drinking recently and the party was really boring without drinking anything. So I left around 1 am and was home about 20 minutes after that. Look, I don't even know the girl who was killed. You have the wrong person- I have nothing to do with this!'
- The police officers went to Frank's apartment to interview Frank's housemate. The housemate said that he and Frank were not particularly close, but that they got along OK. According to his housemate, Frank sometimes overdrinks and then gets very aggressive. Here is the housemate's statement:
'The night of the crime I was watching my favourite show on TV- it airs really late. By the time the show was over at 2:30 am, Frank was still not home. I went to bed right after the show and don't know when Frank came home. I didn't fall asleep or go to any other room while I was watching the show. Also, Frank needs to walk through the living room (where I was sitting) to go to his room. So there is no way I could have missed him if he came home before 2:30 am.'
- The police officers searched Frank's apartment. During the search, they checked Frank's browser history, which revealed that he had visited Linda's Facebook profile two days before the crime was committed. 44 different picture links had been accessed, and Linda was present in almost all the pictures. Neither a black backpack nor a red sweater were found during the search.
- The police checked Frank's cell phone records. The records showed that he had made two calls on the night of the murder, at 3:00 am and at 4:15 am; each of which lasted around 5 minutes. The police contacted the friend that Frank had called. The friend told them that he had stayed up late since it was a weekend and that they talked about mundane things in both conversations. Previous cell phone records showed that they normally do not call each other after 10 pm.

ⁱ To compare the online and the pen and paper versions with respect to the investigators' planned use of evidence, a 'strategic use' and a 'non-strategic use' ratio were calculated for each investigator by dividing the number of pieces planned to be used strategically and non-strategically respectively, by the total number of pieces for which investigators formulated questions. No difference was found between the two versions of the survey with respect to the investigators' planned strategic use, $t(67) = -0.19$, $p = 0.85$, $r = .002$, 95% CI [-.21, .26], (online, $M = 0.59$, $SD = 0.06$; pen and paper, $M = 0.61$, $SD = 0.34$) and planned non-strategic use, $t(67) = 1.34$, $p = 0.18$, $r = .16$, 95% CI [-.08, .38], (online, $M = 0.33$, $SD = 0.35$; pen and paper, $M = 0.22$, $SD = 0.28$). Moreover, the two versions of the survey did not differ with respect to (a) the number of pieces of evidence assessed as critical, $t(67) = 0.59$, $p = 0.56$, $r = .07$, 95% CI [-.17, .30], (online, $M = 5.67$, $SD = 3.57$; pen and paper, $M = 5.17$, $SD = 2.99$), (b) the number of questions formulated for the critical pieces of evidence, $t(67) = 1.58$, $p = 0.12$, $r = .19$, 95% CI [-.05, .41], (online, $M = 4.47$, $SD = 2.93$; pen and paper, $M = 3.42$, $SD = 1.93$), and (c) the number of reasons reported for the planned evidence use, $t(66) = 1.11$, $p = 0.27$, $r = .14$, 95% CI [-.10, .37], (online, $M = 4.61$, $SD = 3.07$; pen and paper, $M = 3.79$, $SD = 2.55$).

ⁱⁱ Of the 69 investigators, 41 did not follow the instruction to formulate questions for three pieces only, thus the number of questions per investigator ranged between 1 and 13 ($M = 4.10$, $SD = 2.66$). Two investigators formulated only one question; five investigators formulated two questions. The remaining 62 formulated three or more questions.

ⁱⁱⁱ Only 33% ($n = 23$) of the investigators reported to adopt this goal as a part of their planned interview.