

1 **The combined effects of questioning technique and interviewer manner on** 2 **false confessions**

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21 **Abstract**

22 Although it is known that interrogation tactics can elicit false confessions and interviewer manner
23 may determine the outcome of an interview, the combined effects of questioning technique and
24 interviewer manner on false confessions have not been examined empirically. Following a false
25 accusation of theft, participants were interviewed in one of four questioning conditions
26 (minimisation, repetitive questioning, leading questions, and nonleading questions) in which
27 interviewers adopted a stern or friendly manner. Perceptions of pressure to confess and interviewer
28 behaviours were measured. Significantly more false confessions were elicited using nonleading
29 questions rather than repetitive questioning. More false confessions were elicited in the friendly
30 interviewer condition than in the stern interviewer condition. Neither interviewer manner nor
31 questioning technique had a significant effect on subjective ratings of pressure to confess. The
32 finding that false confessions may be elicited in the absence of coercive tactics may have
33 implications for informing best practices in investigative interviewing.

34 **KEYWORDS**

35 false confessions, interview tactics, interviewer demeanour

36

37 1 INTRODUCTION

38 False confessions are one of the most misunderstood causes of error during legal proceedings and
39 contribute to wrongful convictions (Innocence Project, 2017; Leo, 2009). Their elicitation poses a
40 major problem for the Criminal Justice System, the function of which is to deliver justice, punish the
41 guilty, and protect the innocent (Gov.UK, 2017). Although it is acknowledged that police-induced
42 false confessions are the most common type of false confession (Leo, 2009), many legal
43 professionals continue to question the existence of police-induced false confessions, even when
44 DNA evidence confirms a suspect's innocence (Findley & Scott, 2006; Hirsch, 2005; Kassin &
45 Gudjonsson, 2004). Therefore, to reduce the risk of false confessions, it is crucial that interviewing
46 officers understand fully the factors contributing to these being elicited.

47 Kassin and Wrightsman (1985) proposed a theoretical framework that describes three
48 psychologically distinct types of false confession. Coerced-compliant false confessions arise following
49 exposure to coercive or intimidating methods of interrogation. In this case, the suspect makes a
50 public admission of guilt, while maintaining a private belief of innocence, and the short-term
51 benefits of confessing appear to outweigh the long-term costs of confessing. Coerced-internalised
52 false confessions also arise following exposure to extreme interrogation methods. However, unlike
53 coerced-compliant false confessions, this type of false confession involves the suspect internalising a
54 belief of guilt, albeit temporarily. In contrast to coerced-compliant and coerced-internalised false
55 confessions, voluntary false confessions arise from an internal need to confess rather than due to
56 external pressure, for example, from the police (Kassin et al., 2010). Reasons for making voluntary
57 false confessions include the protection of the true perpetrator, a desire for notoriety, and a need to
58 be punished (G. H. Gudjonsson & Pearse, 2011).

59 In the United States, interrogators are permitted to use confrontational, suggestive, manipulative,
60 and stress-inducing tactics (Bull & Soukara, 2010; Drizin & Leo, 2004; Soukara, Bull, Vrij, Turner, &
61 Cherryman, 2009). Interrogators generally dominate the conversation (Inbau, Reid, Buckley, & Jayne,
62 2001) and use various tactics to minimise the perceived negative consequences of confessing and to
63 increase feelings of anxiety associated with denial (Kassin et al., 2010). In contrast to the more
64 accusatorial approach to interviewing often used in the United States (Vallano, Evans, Schreiber
65 Compo, & Kieckhafer, 2015), police officers in the United Kingdom commonly use an investigative
66 approach to interviewing (Clarke, Milne, & Bull, 2011).

67 However, during the 1980s and early 1990s, police suspects in England and Wales were interrogated
68 rather than interviewed (Williamson, 2006), and the focus on obtaining confessions using unethical
69 methods was a major concern (Shepherd, 1993). The introduction of the PEACE model of
70 interviewing in 1993 resulted in a shift from the interrogative method to the new investigative
71 interviewing approach (Clarke et al., 2011; Griffiths & Milne, 2006). The PEACE model was designed
72 to replace accusatorial, guilt-presumptive approaches with more ethical, noncoercive, information-
73 gathering approaches, which improve the quality of interviews and information obtained (G. H.
74 Gudjonsson & Pearse, 2011; Snook, Eastwood, Stinson, Tedeschi, & House, 2010). Rather than
75 focussing on seeking confessions (Clarke et al., 2011), the PEACE model encourages the use of open
76 questions (Walsh & Bull, 2012) to encourage suspects to provide accounts of events (Walsh & Bull,
77 2010). Techniques such as conversation management are employed to encourage communication
78 between the interviewer and interviewee and to increase the amount of information elicited (Clarke
79 & Milne, 2001).

80 During an investigative interview, officers may use techniques and tactics to encourage suspects to
81 provide information and truthful accounts of events (Beune, Giebels, & Sanders, 2009). However,

82 although specific tactics may persuade guilty suspects to tell the truth, proven false confession cases
83 illustrate that exposure to possibly coercive interview tactics can inadvertently also lead to
84 confessions by innocent suspects (Drizin & Leo, 2004). Therefore, the challenge for investigative
85 interviewers is to obtain true confessions from guilty suspects while minimising the possibility of
86 eliciting false confessions (Horgan, Russano, Meissner, & Evans, 2012; Meissner, Russano, &
87 Narchet, 2010). Despite the risks associated with the use of misplaced interview tactics, to date, with
88 a few notable exceptions (Blair, 2007; Klaver, Lee, & Rose, 2008; Narchet, Meissner, & Russano,
89 2011; Russano, Meissner, Narchet, & Kassin, 2005), not many experimental studies have examined
90 how different interview tactics may contribute to the elicitation of false confessions.

91 Minimisation is one tactic that can be used to obtain confessions by downplaying the perceived
92 seriousness of an alleged incident and the consequences of confessing (Blair, 2005; Moffa &
93 Platania, 2009; Russano et al., 2005). When using minimisation, the interviewer expresses sympathy,
94 adopts a friendly demeanour, normalises the crime, and uses “face-saving” strategies that blame the
95 victim and suggest the suspect's behaviour was accidental, provoked, or peer pressured (Horgan et
96 al., 2012; Moffa & Platania, 2009). These strategies may also imply leniency in sentencing (Kassin,
97 2015; Kassin & McNall, 1991; Ofshe & Leo, 1996, 1997). Minimisation may also elicit false con-
98 fessions particularly in cases of less serious offences when the interviewer offers a favourable
99 immediate outcome and the suspect feels trapped (Kassin, 2015; Kassin et al., 2010; Kassin &
100 McNall, 1991). In the United Kingdom, explicit use of minimisation is deemed unacceptable (Kassin
101 et al., 2010; Shawyer, Milne, & Bull, 2009) and is rarely used (Bull & Soukara, 2010). However,
102 interviewers may occasionally use more subtle forms of minimisation such as showing concern for
103 the suspect (Soukara et al., 2009), which may contribute to inducing a false sense of security.

104 Laboratory research documents consistently the coercive nature of minimisation in eliciting
105 confessions. For example, using the computer-crash paradigm (Kassin & Kiechel, 1996), Klaver et al.
106 (2008) found that minimisation elicited significantly more false confessions in contrast to
107 maximisation. Maximisation is considered a more aggressive form of persuasion used to scare,
108 intimidate, and induce anxiety in suspects (Horgan et al., 2012; Kassin & McNall, 1991; Narchet et
109 al., 2011). Using a more ecologically valid paradigm, Russano et al. (2005) found that after accusing
110 participants of cheating during a problem-solving task, exposure to minimisation elicited both true
111 and false confessions.

112 Incorporating the Russano et al. (2005) paradigm, Narchet et al. (2011) found that when trained
113 interrogators believed participants were guilty of cheating, they were more likely to use tactics
114 designed to increase pressure to confess, particularly minimisation and maximisation. In this
115 important body of work documenting the deleterious effects of minimisation, participants were
116 generally presented with preprepared, handwritten false confessions, which they were asked to sign
117 following the false accusation (e.g., Blair, 2007; Klaver et al., 2008; Russano et al., 2005). In a limited
118 number of studies, rather than simply being asked to sign a false confession, participants have been
119 interrogated following a false allegation (e.g., Narchet et al., 2011). Therefore, it would be beneficial
120 to further explore the persuasive nature of minimisation in interviews conducted with mock
121 suspects.

122 Repetitive questioning is a further tactic, which may induce guilty suspects to confess despite initial
123 denials (Bull & Soukara, 2010; Penney, 2012). However, this tactic also appears to be associated with
124 the elicitation of false confessions (St-Yves & Deslauriers-Varin, 2009). Repetitive questioning implies
125 that an initial response is incorrect, or unacceptable, and that a change in response is required
126 (Baxter, Boon, & Marley, 2006; G. H. Gudjonsson, 2003). Whether used intentionally or
127 unintentionally, repetitive questioning, a form of interrogative pressure, may increase uncertainty,

128 heighten the perceived social demands of the situation, and increase susceptibility to interrogative
129 suggestibility (G. H. Gudjonsson & Clark, 1986; Schaaf, Alexander, & Goodman, 2008). This tactic,
130 which has been described as aversive, intimidating (Leggett, Goodman, & Dinani, 2007), and guilt
131 assumptive (Baldwin, 1992), may increase vulnerability during an investigative interview.

132 Repetitive questioning is not recommended by the PEACE model of interviewing (Walsh & Bull,
133 2012). However, an examination of police interview practices in England and Wales reported the
134 frequent use of repetitive questioning when attempting to obtain information from suspects
135 (Soukara et al., 2009). Although the negative effects associated with repetitive questioning are
136 acknowledged (St-Yves & Deslauriers-Varin, 2009), to date, there has been no empirical examination
137 of the extent to which repetitive questioning may be associated with suspects making false
138 confessions.

139 Leading questions, another form of interrogative pressure (Baxter et al., 2006), which prompt an
140 interviewee to respond in a certain way (G. H. Gudjonsson, 2003; G. H. Gudjonsson & Clark, 1986;
141 Soukara et al., 2009), have also been associated with known false confession cases (Garrett, 2010).
142 Asking leading questions, which may contain plausible but misleading information, may result in
143 memory for an event being supplemented, distorted, and reconstructed (Busey & Loftus, 2007;
144 Loftus, 1975, 1979, 2002). The use of leading questions can also introduce erroneous information,
145 impair accurate recall, induce uncertainty, and make it difficult to differentiate sources of
146 information (G. H. Gudjonsson & Clark, 1986; Loftus, 1975, 2002, 2005).

147 Leading questions, which the PEACE model discourages (Walsh & Bull, 2015) in the United Kingdom,
148 are also a possible breach of Sections 76 and 78 of the Police and Criminal Evidence Act 1984 (Clarke
149 & Milne, 2001). Leading questions are generally observed infrequently in interviews conducted by
150 officers in the United Kingdom (Clarke et al., 2011; Read, Powell, Kebbell, Milne, & Steinberg, 2014).
151 However, Soukara et al. (2009) reported the use of leading questions, which did not contain
152 misleading information, in 30 of the 31 confession interviews with suspects conducted in an English
153 police force. Due to the dangers associated with leading questions, it would be prudent to examine
154 whether this practice could potentially elicit false confessions.

155 The dangers associated with coercive interview tactics may be particularly salient during interviews
156 with vulnerable individuals. There is no universal definition of what constitutes a vulnerable witness
157 (Bull, 2010). However, those who might be considered vulnerable include child witnesses (Bull,
158 2010), individuals with mental illnesses and personality disorders (O'Mahony, Milne, & Grant, 2012),
159 and individuals with intellectual disabilities (G. Gudjonsson & Joyce, 2011). For example, individuals
160 with an intellectual disability may be more susceptible to leading questions (Bowles & Sharman,
161 2014) and misleading questions (Henry & Gudjonsson, 2007). However, research indicates that when
162 individuals with learning disabilities are questioned in an appropriate manner using questions that
163 are nonleading, simple, and free from abstract words or ideas (Jacobson, 2008), they can be capable
164 of providing accurate statements (Milne & Bull, 2001).

165 In addition to the use of coercive tactics, interviewer attitudes and demeanours may also contribute
166 to determining the outcome of an interview (e.g., Bain & Baxter, 2000; Baxter, Jackson, & Bain,
167 2003) and influence the decision to make a true or a false confession (Holmberg & Christianson,
168 2002; Leo, 2009; Walsh & Bull, 2012). Ethical interviewing, exemplified by the PEACE approach
169 (Heydon, 2012), involves using a fair approach that increases the likelihood of eliciting a truthful
170 account of events while reducing a suspect's stress and uncertainty (Milne & Bull, 1999). However,
171 in certain situations, an interviewer's behaviour may be perceived as negative, thereby increasing a
172 suspect's resistance to cooperate (Holmberg & Christianson, 2002). This may occur, for example,

173 when officers are under pressure to elicit information within time restraints, or if a suspect does not
174 respond to questions.

175 If an aggressive interviewer manner is adopted, even unintentionally, inappropriate pressure may be
176 applied (Baldwin, 1992; Baxter, 2004). An abrupt and/or aggressive interviewer manner may induce
177 anxiety and feelings of powerlessness in a suspect, thereby creating psychological distance between
178 the interviewee and interviewer and increasing susceptibility to suggestibility (Bain & Baxter, 2000).
179 It has been hypothesised that under these circumstances, vulnerability to falsely confessing may
180 increase (Baxter & Boon, 2000; G. H. Gudjonsson & Lister, 1984). An accusatorial style of
181 interviewing that reduces self-confidence and does not enable a suspect to state her or his
182 innocence may also result in a false confession (Leo, 2009). Therefore, there is a need to examine
183 empirically whether interviewer manner may elicit false confessions.

184 To summarise, specific questioning techniques and interviewer manners may adversely affect a
185 suspect and contribute to false confessions. Previous research examining interview tactics as
186 predictors of false confessions has tended to focus on minimisation and maximisation tactics, which
187 are more commonly used by interrogators in the United States (e.g., Blair, 2007; Klaver et al., 2008;
188 Narchet et al., 2011; Russano et al., 2005). To date, there has been no empirical examination of
189 repetitive questioning and leading questions as predictors of laboratory-induced false confessions.
190 Additionally, although it has been documented that an abrupt and aggressive interviewer manner
191 may increase vulnerability during a police interview (Bain & Baxter, 2000; Baxter & Boon, 2000;
192 Blandon-Gitlin, Sperry, & Leo, 2011), interviewer manner as a predictor of laboratory-induced false
193 confessions has not been examined.

194 The present study adopted a novel approach in which the combined effects of questioning technique
195 and interviewer manner on false confessions and perceptions of pressure to confess were
196 examined. In an attempt to improve realism, the study incorporated a new paradigm in which
197 participants were interviewed following a false accusation of theft. The false allegation was serious
198 in nature, personally meaningful to those involved and free from ambiguity. Based on previous
199 formative work (e.g., Baxter et al., 2003; Bull & Soukara, 2010; Klaver et al., 2008; Narchet et al.,
200 2011; Russano et al., 2005), it was predicted that coercive questioning techniques and a stern
201 interviewer manner would elicit more false confessions and higher ratings of perceived pressure to
202 confess in contrast to noncoercive questioning techniques and a friendly interviewer manner.

203 2 | METHOD

204 2.1 | Participants and design

205 A total of 120 members of the public and students were recruited. Fifty-three males and 67 females
206 aged 16 to 62 years ($M = 28.21$, $SD = 10.36$) participated. Participants were randomly assigned to
207 one of eight experimental conditions in a 2 demeanour (friendly vs. stern) \times 4 questioning technique
208 (minimisation, repetitive questioning, leading questions, and nonleading questions) between-
209 participants design (see Section 3.3 for further details).

210 2.2 Confederates

211 Four male undergraduate students responded to an advert in which confederates for a research
212 project were required. The principal investigator trained the confederates to interview participants
213 in each of the eight experimental conditions following a false allegation of theft. The confederates
214 were trained to use the interviewer demeanours outlined by Bain and Baxter (2000), and they
215 conducted the interviews using preprepared scripts (as outlined within Section 3.3).

216 3 MATERIALS

217 3.1 Interviewer behaviour rating scale (Bain & Baxter, 2000)

218 A5-point Likert scale was used to assess the extent to which the confederate interviewers displayed
219 18 interviewer behaviours (1 = not at all and 5 = very). The behaviours were as follows: nervous,
220 severe, friendly, understanding, assertive, confident, professional, firm, respectful, positive, formal,
221 warm, stern, organised, effective, authoritative, competent, and negative. This tool has been used in
222 studies examining the effect of interviewer behaviour on interrogative suggestibility (e.g., Bain &
223 Baxter, 2000; Baxter et al., 2003) and is considered a reliable method of measuring differences in
224 perceptions of interviewer behaviour.

225 3.2 Perceived pressure to confess scale

226 Incorporating a method used by Russano et al. (2005), we used an 11-point Likert scale to rate the
227 extent to which participants experienced pressure to confess (0 = no pressure and 10 = extreme
228 pressure).

229 3.3 Procedure

230 A pilot study was conducted to confirm that interviewer behaviour differentiated the stern and
231 friendly interviewer conditions. The four confederates were filmed conducting interviews in a stern
232 and friendly manner. University students (n = 104) rated the interviewers' behaviour using the 18-
233 item rating scale described above.

234 In the main study, participants were invited to participate in a study examining the relationship
235 between personality traits and task performance. Participants were tested individually and learnt
236 that on successful completion of two personality questionnaires, they might be entitled to receive a
237 £10 gift voucher. The vouchers were placed on the table at which the participant was seated. While
238 the participant completed the first questionnaire, the researcher left the room for two minutes on
239 the pretext of speaking to another participant. On return, and after the participant had completed
240 the questionnaire, the researcher counted the vouchers, announced that one voucher was missing,
241 and falsely accused the participant of theft. In reality, there was no missing voucher, and none of the
242 participants questioned the fact that they did not know how many vouchers were initially placed on
243 the table. The researcher excused herself or himself again, and two minutes later, one of the four
244 confederates entered the room.

245 The confederate introduced himself as part of the research team and advised the participant that it
246 was necessary to ask a few questions about the missing voucher. Incorporating Bain and Baxter's
247 (2000) interviewer manner technique, the confederate adopted either a friendly or stern manner. In
248 the friendly condition, in order to build rapport and appear warm and friendly, the confederate
249 introduced himself using his first name, maintained eye contact with the participant, smiled, and
250 adopted a relaxed posture. In the stern condition, in order to appear formal and abrupt, the
251 confederate introduced himself using his full name, did not smile, and adopted an assertive and
252 authoritative stance. The confederate then asked the participant to recall the event in her or his own
253 words and said he would make notes while listening to the participant's account of the event.
254 Following this free recall stage, and adhering to the relevant script, the confederate asked a number
255 of predetermined questions about the alleged incident and again noted the participant's responses.

256 In the minimisation condition, the confederate showed concern towards the participant and offered
257 face-saving strategies, for example, by stating, "Don't worry" and "I'm sure you didn't realise that
258 this was a big deal." In the repetitive questioning condition, participants were asked six times "Did

259 you take the missing voucher?" In the leading question condition, participants were asked questions
260 that prompted a desired response, for example, "The vouchers were clearly visible on the table, so it
261 would have been easy to take one wouldn't it?" and "So you were alone in the room for a few
262 minutes, weren't you?" Last, in the nonleading question condition, which adopted the noncoercive,
263 information-gathering approach advocated by PEACE, confederates asked questions such as "Who
264 was in the room at the start of the experiment?" "Did anyone else come into the room?" and "Were
265 you alone in the room at any point?"

266 At the end of the questioning stage, the confederate summarised the information provided and
267 asked the participant if she or he had anything else to add. Participants received their "statement,"
268 which included their responses and the declaration "I accept responsibility for the missing voucher,"
269 which constituted a false confession. The confederate asked the participant to sign the statement,
270 and participants who refused to sign after the first request were prompted up to two more times.
271 The confederate left the room, and the researcher reentered and advised the participant that the
272 study was examining false confessions. The researcher reestablished consent and asked the
273 participant to complete the two rating scales. Last, participants were debriefed fully.

274 4 ETHICAL CONSIDERATIONS

275 Ethical approval was granted by the university's research ethics committee. Participants could not be
276 exposed to accusations of a very serious nature or subjected to highly stressful, prolonged
277 interviews. Therefore, short interviews in which participants were accused of stealing a £10 gift
278 voucher were conducted. Due to the nature of the subject being investigated, the use of deception
279 was necessary. If a participant appeared upset or annoyed following the false accusation and/or
280 during the interview, the session terminated immediately. One participant appeared to be upset
281 after the researcher delivered the false accusation. A second participant withdrew from the study
282 after the confederate entered the room and before the interview commenced. In both cases, the
283 researcher debriefed the participant immediately and destroyed the participant's data. If, following
284 the false accusation, a participant attempted to prove that she or he did not have the voucher, for
285 example, by asking the researcher or confederate to search a bag or pockets, the participant would
286 have been told it was not possible to conduct such a search. In accordance with the British
287 Psychological Society (2014) Code of Human Research Ethics, participants were debriefed fully at the
288 end of the study and reminded that they could withdraw their data.

289 5 RESULTS

290 5.1 Pilot study

291 One-way multivariate analysis of variance was conducted, which found significant differences in
292 ratings between the stern and friendly interviewer conditions for 11 of the 18 interviewer
293 behaviours noted above (see Table 1). Interviewers in the stern condition were rated significantly
294 more severe: $F(1, 102) = 148.32, p < 0.001, \text{partial } \eta^2 = 0.60$; assertive: $F(1, 102) = 16.33, p < 0.001,$
295 $\text{partial } \eta^2 = 0.14$; firm: $F(1, 102) = 41.73, p < 0.001, \text{partial } \eta^2 = 0.29$; stern: $F(1, 102) = 79.37, p <$
296 $0.001, \text{partial } \eta^2 = 0.44$; authoritative: $F(1, 102) = 51.53, p < 0.001, \text{partial } \eta^2 = 0.34$; and negative: F
297 $(1, 102) = 57.91, p < 0.001, \text{partial } \eta^2 = 0.36$. Interviewers in the friendly condition were rated
298 significantly more friendly: $F(1, 102) = 110.70, p < 0.001, \text{partial } \eta^2 = 0.52$; understanding: $F(1, 102)$
299 $= 26.08, p < 0.001, \text{partial } \eta^2 = 0.20$; respectful: $F(1, 102) = 29.71, p < 0.001, \text{partial } \eta^2 = 0.23$;
300 positive: $F(1, 102) = 34.38, p < 0.001, \text{partial } \eta^2 = 0.25$; and warm: $F(1, 102) = 55.50, p < 0.001,$
301 $\text{partial } \eta^2 = 0.35$.

302 5.2 Main study: Manipulation check to examine the effect of interviewer manner on interviewer
303 behaviour ratings

304 One-way multivariate analysis of variance was conducted, which found significant differences in
305 ratings between the stern and friendly interviewer conditions for four of the 18 interviewer
306 behaviours (see Table 2). Interviewers in the stern condition were rated significantly more severe: $F(1, 118) = 10.30, p = 0.002, \text{partial } \eta^2 = 0.08$; and stern: $F(1, 118) = 11.45, p = 0.001, \text{partial } \eta^2 =$
307 0.10 . Interviewers in the friendly condition were rated significantly more friendly: $F(1, 118) = 28.19,$
308 $p < 0.001, \text{partial } \eta^2 = 0.20$; and understanding: $F(1, 118) = 13.39, p < 0.001, \text{partial } \eta^2 = 0.11$.

310 5.3 Effect of interviewer manner and questioning technique on false confessions

311 The number of false confessions obtained per experimental condition is shown in Table 3.

312 None of the participants falsely confessed during the questioning stage of the interview. Each false
313 confession was obtained when the confederate asked the participant to sign the statement.

314 Logistic regression was performed to examine the effects of a stern interviewer manner and coercive
315 questioning techniques on the likelihood of participants making a false confession. As the variable
316 "questioning technique" contained more than two levels, the nonleading question condition was
317 selected as a baseline group against which the other groups were compared. The model containing
318 the predictors was statistically significant, $\chi^2(4, N = 120) = 10.47, p = 0.033$, indicating that it
319 differentiated participants who signed the false confession from nonconfessors. The model
320 accounted for between 8.4% and 11.8% of the variance in behaviour when asked to sign a false
321 confession and correctly classified 71.7% of cases. One predictor (repetitive questioning) made a
322 statistically significant contribution to the model (see Table 4). Each unit increase in repetitive
323 questioning was associated with a decrease in the odds of making a false confession by a factor of
324 0.171 (95% CI [0.05, -0.62]).

325 5.4 Effect of interviewer manner and questioning technique on perceived pressure to confess

326 To examine whether interviewer manner and questioning technique influenced perceptions of
327 pressure to confess, a 2 (stern vs. friendly) \times 4 (minimisation vs. repetitive questioning vs. leading
328 questions vs. nonleading questions) between-groups analysis of variance was conducted. Neither
329 interviewer manner nor questioning technique influenced the ratings of pressure to confess: $F(1,$
330 $112) = 1.18, p = 0.279$; and $F(3, 112) = 0.57, p = 0.634$, respectively. The interaction between
331 interviewer manner and questioning technique was not significant: $F(3, 112) = 1.01, p = 0.391$. Mean
332 ratings for perceived pressure to confess per experimental condition are shown in Table 5. Further
333 analysis using an independent samples t test revealed that false confessors rated perceived pressure
334 to confess significantly higher than did nonconfessors: $t(118) = 2.64, p = 0.009, \eta^2 = 0.06$.

335 5.5 False confessions obtained per interviewer

336 Table 6 shows the number of false confessions obtained per interviewer. Due to the low number of
337 false confessions elicited by Interviewer 2, statistical analysis was not possible.

338 6 DISCUSSION

339 The present study represents a first attempt to examine the combined effects of questioning
340 techniques and inter-viewer manner on false confessions. Almost a third of the participants signed a
341 false confession, and the majority of those confessed immediately when presented with their
342 statement. In the current study, participants appeared to confess despite a lack of incriminating
343 evidence, in the absence of extreme pressure, and despite being unaware of any consequences of

344 confessing. It was hypothesised that coercive questioning and a stern interviewer manner would
345 elicit more false confessions and higher ratings of perceived pressure to confess than would
346 noncoercive questioning and a friendly interviewer manner. However, contrary to predictions, in the
347 current study, the nonleading question condition appeared to elicit the greatest number of false
348 confessions.

349 The nonleading question condition was characterised by a lack of coercive tactics and included the
350 use of open-ended questions designed to discover “the truth.” Nevertheless, noncoercive
351 questioning techniques can be psycho-logically manipulative. Indeed, if participants in this
352 questioning condition felt at ease, this may have heightened a perception of trust between
353 interviewee and interviewer, thereby possibly increasing vulnerability to complying with the request
354 to sign the false confession. Whereas coercive tactics including minimisation may encourage
355 innocent suspects to confess (e.g., Blair, 2005; Klaver et al., 2008; Russano et al., 2005), the present
356 results therefore suggest that, under certain conditions, false confessions may occur in the absence
357 of intimidating and coercive tactics. Fur-ther research is therefore advised to examine systematically
358 the extent to which, and in which contexts, noncoercive questioning techniques may result in the
359 elicitation of false confessions.

360 Results indicate further that repetitive questioning elicited significantly fewer false confessions in
361 comparison with nonleading questions. The inference of guilt conveyed by repeatedly asking
362 participants if they had taken a voucher may have provoked defiance, thereby encouraging
363 continued denial of theft. Alternatively, if participants felt aggrieved rather than intimidated by the
364 frequent challenging of their responses, an adversarial interaction may have unwittingly occurred
365 (Russano, Narchet, & Kleinman, 2014), thereby possibly reducing the likelihood of responses being
366 altered and false confessions being obtained.

367 Despite the coercive nature of repetitive questioning (e.g., Alison, Kebbell, & Leung, 2008), which is
368 attrib-uted to verified false confession cases (St-Yves & Deslauriers-Varin, 2009), the current findings
369 suggest that repetitive questioning may have an antagonistic effect. From this perspective, it
370 appears that repetitive questioning may increase resistance to altering responses, thereby reducing
371 the risk of false confessions. The current finding was unexpected, and further research examining
372 repetitive questioning as a predictor of false confessions appears warranted.

373 Minimisation was not a significant predictor of false confessions in the present study. However,
374 providing sup-port to previous findings (e.g., Klaver et al., 2008; Narchet et al., 2011; Russano et al.,
375 2005), the use of minimisation appeared to elicit false confessions. Participants in this condition,
376 who were most likely unaware of this subtle form of persuasion, may have believed that the
377 interviewer had their best interests at heart when making comments such as “Don't worry.” This
378 proposition is supported by the finding that mean ratings of pressure to confess were lower in the
379 minimisation condition than in the repetitive questioning and leading question conditions, which
380 suggests that participants were unaware of the use of coercion.

381 Although leading questions were not a significant predictor of false confessions, the use of this tactic
382 accounted for almost a quarter of the total false confessions obtained. Due to the brief time lapse
383 between the false accusation and the interview, memory for the event should have been relatively
384 accurate and therefore should have helped guard against the risk of yielding to leading questions (cf.
385 Loftus, 2005). However, the coercive nature of leading questions may have created uncertainty
386 about the situation (G. H. Gudjonsson & Clark, 1986), resulting in participants appearing to accept
387 the suggestion that they were responsible for the missing voucher. The present findings suggest that
388 even if questioning occurs almost immediately after an alleged incident, leading questions may

389 create doubt about an event, increase susceptibility to accepting suggestions, and contribute to false
390 confessions being made.

391 The finding that there was no significant main effect of interviewer manner on false confessions may
392 have been due to the experimental manipulations. In contrast to the findings of the pilot study, in
393 the main study, significant differences in interviewer behaviour ratings between the stern and
394 friendly conditions were obtained for four behaviours only. In the pilot study, participants rated the
395 interviewers' behaviour after watching video recordings of a simulated interview. In comparison, in
396 the main study, participants completed the behaviour rating scale after the confederate interviewed
397 them about an alleged theft. In the main study, the potentially stressful nature of the situation may
398 therefore have contributed, for example, to the more negative perceptions of the friendly
399 interviewer when rating behaviours such as "firm," "warm," and "authoritative," thereby explaining
400 the lack of effect of interviewer manner on false confessions. Additionally, several of the behaviours
401 listed in the behaviour rating form describe similar demeanours (e.g., assertive, confident, and
402 authoritative). Reducing the number of behaviours being measured in future studies may
403 consequently facilitate the interpretation of findings.

404 Nevertheless, it is noteworthy that in the current study a stern interviewer manner elicited fewer
405 false confessions than did a friendly interviewer manner. It has been proposed that exposure to a
406 stern interviewer manner may result in the application of inappropriate pressure (e.g., Baxter, 2004)
407 and increase the psychological distance between an interviewee and interviewer (e.g., Bain &
408 Baxter, 2000), thereby heightening the risk of obtaining a false confession (e.g., Baxter & Boon,
409 2000). However, the present findings suggest that exposure to an interviewer perceived as hostile
410 and rude may increase resistance to making a false confession. Thus, in the present study, the stern
411 manner, which appears to have elicited feelings of annoyance and disrespect, appears to have
412 reduced the likelihood of cooperation when asked to sign a false confession (cf. Holmberg &
413 Christianson, 2002).

414 Data analysis found no significant effect of interviewer manner and questioning technique on
415 pressure to confess. Although this finding was unexpected, it is noteworthy that mean ratings for
416 pressure to confess were higher in the stern, coercive questioning conditions in contrast to the
417 friendly coercive questioning conditions. Also, of note is the finding that participants in the friendly
418 nonleading question condition rated pressure to confess higher than did participants in most of the
419 other questioning conditions (see Table 5). It is possible that, in the friendly nonleading question
420 condition, an informal and understanding interviewer manner combined with a lack of coercive
421 questioning created a more subtle, or covert, form of psychological manipulation resulting in
422 participants experiencing pressure to cooperate with the request to sign the false confession.
423 Meriting further investigation, this finding suggests that interactions between interviewer manner
424 and questioning technique should not be discounted when considering perception of pressure to
425 confess.

426 When interpreting the present results, several factors should be borne in mind, which may limit the
427 extent to which the findings generalise to other contexts and populations. First, in comparison with
428 police suspects, participants could terminate the interview at any point, and they did not run the risk
429 of encountering any longer term negative consequences due to falsely confessing. Second, the
430 confederates were aware of the aims of the research, which may have influenced their behaviour in
431 ways other than intended. Third, although each confederate received the same training and adopted
432 a uniform approach to interviewing, the percentage of false confessions obtained per interviewer
433 (relative to the number of interviews conducted) varied considerably. The influence of interpersonal
434 dynamics, which were not controlled for, might therefore explain the variation in the number of

435 false confessions obtained to a degree. Factors such as the relationship between the interviewer and
436 interviewees' age and gender may have mediated the interpersonal relationship and influenced the
437 outcome of the interview. For example, although the participants' experience was subjective, a 19-
438 year-old female false confessor said she felt intimidated being interviewed by an older man. In
439 contrast, a 40-year-old male nonconfessor said he was "Not at all concerned or intimidated" while
440 being interviewed by a much younger man. Last, as the sample size was small and would have
441 limited the statistical power, future research using a larger sample is required.

442 In conclusion, the present findings suggest that false confessions may arise following exposure to
443 both noncoercive psychologically manipulative techniques and coercive interview techniques. The
444 use of friendly interviewer manners during the interrogation of suspects, found to be associated
445 with the elicitation of false confessions in the current study, may have implications for the design of
446 investigative interviews. With this in mind, the present findings may be particularly relevant in the
447 United Kingdom where the PEACE model of interviewing recommends the use of nonleading, open-
448 ended questions (Soukara et al., 2009; Walsh & Bull, 2012) and rapport building (Meissner et al.,
449 2014) to facilitate the information-gathering approach.

450 Furthermore, in addition to considering the role of questioning techniques and interviewer manners
451 in eliciting false confessions, possible interactions between different interview techniques as well as
452 the age and gender of interviewers and interviewees may contribute to outcomes and warrants
453 further examination. Overall, it is important that findings of current and previous research are
454 reflected in training procedures, and that research efforts are continued to identify risk factors for
455 false confessions. Implementing procedures, which help reduce the likelihood of suspects'
456 statements subsequently being found to be erroneous, not only will offer protection for suspects
457 and interviewing officers but will also help target police resources appropriately.

458

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