Examining the Link Between Bait Questions and False Confessions

by

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Abstract

Among the many causes of false confessions is the use of false evidence during interrogations. Police in Canada are prohibited from lying to suspects about evidence they do not have, though they can ask about hypothetical evidence – a tactic known as bait questions. Limited research has explored the relationship between bait questions, false confessions, and wrongful convictions. Study 1 examined perceptions of bait questions via a survey (N = 213) and found the use of bait questions to be acceptable, but strong questions (i.e., DNA, fingerprints) were less acceptable versus weak questions (i.e., witnesses, CCTV). A positive relationship was found between perceptions of police legitimacy and acceptability ratings for bait questions. Study 2 examined the relationship between bait questions and false confessions and did not find a significant relationship. These studies represent the first exploration of public perceptions of bait questions and their potential association with false confessions.
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Table of Contents

Abstract ..................................................................................................................................... ii

Acknowledgements .................................................................................................................. iii

List of Figures .......................................................................................................................... vii

List of Appendices ................................................................................................................... viii

Examining the Link Between Bait Questions and False Confessions ................................. 1

What are False Confessions? ................................................................................................. 2

Types of False Confessions .................................................................................................. 3

Demographic and Personality Correlates with False Confessions ....................................... 5

Suggestibility and False Confessions .................................................................................... 5

Age and False Confessions .................................................................................................. 6

Sex and False Confessions .................................................................................................. 7

Causes of False Confessions ............................................................................................... 9

Innocence ............................................................................................................................... 9

Coercive Interviewing Practices ......................................................................................... 11

Hypothetical Evidence ......................................................................................................... 18

Admissibility of Confession Evidence ................................................................................ 22

Study 1: Lay Perceptions of Bait Questions ........................................................................ 24

Methods ............................................................................................................................... 24

Participants ............................................................................................................................ 25

Materials ................................................................................................................................ 25

Study Design and Procedure ............................................................................................... 26

Statistical Analysis ............................................................................................................... 27

Results .................................................................................................................................... 29

Demographic Information .................................................................................................... 29

Assumptions .......................................................................................................................... 32

Within-Subjects Effects ....................................................................................................... 34

Between Subjects Effects ..................................................................................................... 36

Exploratory Analysis ........................................................................................................... 36
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion</td>
<td>37</td>
</tr>
<tr>
<td>Study 2: Bait Questions and False Confessions</td>
<td>39</td>
</tr>
<tr>
<td>Methods</td>
<td>40</td>
</tr>
<tr>
<td>Participants</td>
<td>40</td>
</tr>
<tr>
<td>Materials</td>
<td>40</td>
</tr>
<tr>
<td>Design and Procedure</td>
<td>42</td>
</tr>
<tr>
<td>Deviations from the Pre-Registration</td>
<td>45</td>
</tr>
<tr>
<td>Statistical Analysis</td>
<td>46</td>
</tr>
<tr>
<td>Results</td>
<td>48</td>
</tr>
<tr>
<td>Descriptive Statistics</td>
<td>48</td>
</tr>
<tr>
<td>Assumptions</td>
<td>50</td>
</tr>
<tr>
<td>Inferential Statistics</td>
<td>50</td>
</tr>
<tr>
<td>Discussion</td>
<td>53</td>
</tr>
<tr>
<td>General Discussion</td>
<td>58</td>
</tr>
<tr>
<td>Consequences of False Confessions</td>
<td>60</td>
</tr>
<tr>
<td>References</td>
<td>65</td>
</tr>
</tbody>
</table>
List of Tables

Table 1: Summary of the Reid Technique .......................................................... 18
Table 2: Classification scheme for interpreting Bayes Factors (BF_{10}) ................. 28
Table 3: Participant Demographic Information .................................................... 30
Table 4: Means, Standard Deviations for Bait Question Acceptability Ratings .......... 32
Table 5: Repeated measures ANCOVA Within-Subjects Effects for Acceptability Scores .... 35
Table 6: Demographic Information ........................................................................ 49
Table 7: Contingency Table .................................................................................. 51
Table 8: Logistic Regression Model Summary ....................................................... 51
Table 9: Confessions by procedure ........................................................................ 55
List of Figures

Figure 1: Total Acceptability Score by Crime Type ................................................................. 35
Figure 2: Total Acceptability Score by Bait Question Strength ............................................. 36
List of Appendices

Appendix A: Recruitment Information (Study 1) .......................................................... 80
Appendix B: Informed Consent Form (Study 1) ............................................................ 81
Appendix C: Information on Bait Questions (Study 1) ................................................... 84
Appendix D: Interrogation Scenario & Demographic Questionnaire (Study 1) ................. 85
Appendix E: Police Legitimacy Scale (PLS) ................................................................. 87
Appendix F: Debriefing Form (Study 1) ................................................................. 89
Appendix G: SONA Recruitment Notice (Study 2) ...................................................... 91
Appendix H: Study Procedure and Script – Initial Method (Study 2) .............................. 92
Appendix I: Study Procedure and Script – Post-Amendment (Study 2) ......................... 95
Appendix J: Informed Consent Form (Study 2) .......................................................... 97
Appendix K: Informed Consent Form – Post-Amendment (Study 2) ............................ 100
Appendix L: Gudjonsson Suggestibility Scale (GSS; Study 2) .................................... 103
Appendix M: Debriefing Form (Study 2) ................................................................. 105
Appendix N: Logic Questions (Study 2) ................................................................. 108
Appendix O: Distractor Task (Study 2) ................................................................. 112
Appendix P: Post-Deception Questionnaires (Study 2) .......................................... 113
Examining the Link Between Bait Questions and False Confessions

On November 15, 1989, 15-year-old Angela Correa went out after school to take pictures for her photography class and never returned home. Two days later, the police discovered her body. A classmate of the victim, 16-year-old Jeffrey Deskovic, was late arriving at school the day following Correa’s disappearance, placing him at the top of the suspect list for police. Investigators noted that Deskovic seemed overly distraught by Correa’s death, visiting her wake three times (Santos, 2006). Between December 1989 and January 1990, police spoke with Deskovic eight times. At one point, Deskovic agreed to take a polygraph exam. After six hours, four polygraph sessions, and extensive questioning between sessions, Deskovic confessed to the rape and murder of Angela Correa. Prior to his confession, Deskovic was told that if his DNA did not match the rape kit, he would be cleared as a suspect. DNA testing was conducted before the trial and the results indicated that Deskovic was not the source of the DNA, but Deskovic was not cleared of the charges – he served 16 years in prison before being exonerated when the DNA from the rape kit was matched to the real murderer (Santos, 2006). When asked about his confession, Deskovic stated “Believing in the criminal justice system and being fearful for myself, I told them what they wanted to hear - I thought it was all going to be O.K. in the end” (Santos, 2006, para. 18).

Deskovic is far from alone in confessing to a crime he did not commit. False confessions, such as Deskovic's, make up 29% of exonerated cases (“DNA Exonerations in the United States”, n.d.). The goals of my proposed research are twofold: to examine public perceptions of the acceptability of bait questions (i.e., an interrogation technique implying the existence of evidence), and to examine how bait questions impact one’s propensity to falsely confess.
What are False Confessions?

A false confession is an admission of guilt for a crime that the confessor did not commit, often accompanied by a narrative during which the suspect provides an account of how and why the crime occurred (Leo, 2009a). False confessions differ from other types of confessions, such as retracted and disputed confessions. Retracted confessions refer to confessions made by accused individuals that are later withdrawn due to the confessor claiming that the information contained in the confession was false (Gudjonsson & MacKeith, 1988); disputed confessions refer to confessions that the defence counsel argues against including at trial, sometimes due to a legal technicality (e.g., the suspect was not read their rights), a belief that the confession was coerced, or because the suspect disputes that the confession was made (Citron & Johnson, 2006).

It is difficult to determine the exact prevalence of false confessions, as evidenced is required to prove the confession is false; nevertheless, researchers have attempted to provide an estimate of their frequency. For example, Gudjonsson and colleagues surveyed over 24,000 high school students in seven different European countries and found that 13.8% of the nearly 3,000 who had been interrogated by police claimed to have made false confessions (Gudjonsson et al., 2009), with similar studies finding prevalence rates of 7-12% with youth in other jurisdictions (e.g., Gudjonsson et al., 2006, 2007, 2012; Steingrimsdottir et al., 2007). Gross and colleagues (2005) examined exonerations between 1989 and 2004, noting that 15% defendants confessed to crimes they did not commit. West & Meterko (2016) analysed the first 325 DNA exonerees from the Innocence Project (a non-profit national litigation and public policy organization in the U.S.A. that works to exonerate wrongfully convicted individuals) and noted that 12% of the exonerees had falsely confessed. Together, researchers have suggested that the prevalence of false confessions is between 7 and 15% of all confessions.
**Types of False Confessions**

False confessions typically fall within four categories, based on the motivation for the confession (Kassin & Wrightsman, 1985; McCann, 1998). The first type of false confession is voluntary. Voluntary false confessions occur without law enforcement prompting, often in high profile cases. There are several reasons that voluntary false confessions may occur: the individual may have a psychological need for attention or self-punishment, feelings of guilt, delusions, the perception of tangible gain, or the desire to protect someone else (Kassin, 2008). Voluntary false confessions are rarely retracted but are often viewed by the police as being low in credibility; specifically, voluntary false confessions will often lack case specific information (i.e., the confession will lack details about the crime, such as the weapon used; Gudjonsson, 2003; Leo, 2009a).

The second type of false confessions are coerced-internalized (Kassin & Wrightsman, 1985), which occur when suspects come to believe they committed the crime through interrogator persuasion and suggestive interrogation tactics (Kassin, 2008). Often, vulnerable individuals (e.g., youth, those with mental illnesses) are most susceptible to coerced-internalized false confessions as these individuals tend to be highly suggestible (Ryan, 2006; Warren & Marsil, 2002). In an examination of proven false confessions, Drizin and Leo (2005) found that youth were significantly over-represented, with 27% of the false confessions occurring in individuals who were 18-24, and 35% were under the age of 17. Research stemming from false accusations of child abuse in the 1980s indicated that youth are more suggestible than adults. Specifically, young children have less understanding of legal terminology and legal concepts compared to adults, and that the use of leading and suggestive questioning, as well as lengthy and repeated questioning, leads to false reports and inaccurate details among youth (Scott-Hayward, 2007). As such, when placed in an interrogation situation, youth are especially
vulnerable to falsely confessing. Coerced-internalized false confessions appear to occur less frequently than other types of false confessions (i.e., coerced-compliant, voluntary, coerced-reactive false confessions) and occur primarily in high-profile murder cases as the product of unusually long and psychologically stressful interrogations (Leo, 2009b).

The most common type of false confession, and the type of false confession relevant to the current study, is coerced-compliant false confessions (Kassin, 1997; Kassin & Wrightsman, 1985). Suspects producing a coerced-compliant false confession often confess to escape stressful situations, avoid punishment, or gain a promised reward. In these cases, suspects perceive the short-term benefits of the confession as outweighing the long-term consequences (Kassin, 2008). A coerced-compliant false confession is the type of confession seen in the Jeffrey Deskovic case (Santos, 2006) – Deskovic was subjected to hours of interrogation and questioning before he confessed, and he was anxious to return home to his family. He was told by police that he would be released if his DNA did not match the sample from the crime. For Deskovic, the desire to end the interrogation likely outweighed the consequences of confessing as he was certain that he would be released.

Scholars have also proposed a fourth type of false confession: coerced-reactive false confessions. Coerced-reactive confessions occur when individuals confess to avoid or escape coercive actions that comes from sources outside the police (McCann, 1998). For example, a gang member who confesses to a crime they did not commit due to threats of harm or death by fellow gang members would be considered a coerced-reactive confession. Coerced-reactive confessions are distinct from voluntary and coerced-compliant false confessions because the motivation to confess is external to the interview, meaning it is not related to coercive
interviewing practices, nor is the confession truly voluntary, as the individual would be unlikely to confess without the influence of the external pressure (McCann, 1998).

**Demographic and Personality Correlates with False Confessions**

**Suggestibility and False Confessions**

One frequently examined moderator of false confessions is suggestibility. Suggestibility is defined as the extent to which an individual accepts messages communicated during formal questioning which then influences their subsequent behavioral response (Gudjonsson & Clark, 1986). Gudjonsson and Clark (1986) developed a model of suggestibility that is based on the idea that suggestibility depends on how individuals employ coping strategies during interrogations. Their model of suggestibility indicates that individuals who tend to critically analyze the situation they are in and employ a facilitative problem-solving approach (e.g., if unsure about the details of a situation, refusing to commit oneself to an answer) are said to have a resistant-coping strategy for dealing with interrogations. On the other hand, individuals with suggestible coping strategies for dealing with interrogations are those who are less likely to critically evaluate the situation by using cognitive avoidance which is an unrealistic appraisal of the situation that fails to recognize memory as fallible, which leads the individual to provide definite, committed answers, even when they are unsure about the details of the account (Gudjonsson & Clark, 1986).

Research by Gudjonsson indicated a positive relationship between suggestibility and false confessions (Gudjonsson, 1990). Specifically, Gudjonsson examined the psychological characteristics of individuals who retracted their confessions ($N = 100$), comparing them to other forensic referrals without retracted confessions ($N = 104$). Compared to the population of individuals who did not allegedly falsely confess, individuals who retracted their confession
scored significantly higher on the Gudjonsson Suggestibility Scale (GSS; $d = 0.42$). However, other research indicates that the relationship between one’s level of suggestibility and propensity to falsely confess may not be as clearly linked. For example, Forrest and colleagues (2006) had 56 undergraduate students complete the ALT key study where participants were instructed to type on a keyboard and were told not to press the ALT key, as pressing this key would cause the computer to crash. However, the program was designed so that it would automatically crash after a certain period, regardless of whether participants pressed the ALT key. Participants were then accused of pressing the ALT key. They found that only one aspect of suggestibility – the tendency to yield to misleading questions – was associated with the participants’ willingness to make a false confession ($d = 0.55$).

**Age and False Confessions**

Age has also been linked with various rates of false confessions. In part, the relationship between age and false confessions is due to youth and adolescents being more suggestible than adults (Redlich & Goodman, 2003). Redlich and Goodman (2003) had 98 youth, divided among three age groups (12–13-year-olds, 15-16-year-olds, and 18–26-year-olds), complete the ALT key task. Their results showed that people’s tendency to shift their responses to match the misleading questions, as scored by the GSS, was positively related with their likelihood to falsely confess to pressing the ALT key. Interestingly, the 15-16-year-old group was significantly more likely to falsely confess when presented with false evidence compared to the 15-16-year-olds who were not shown false evidence; however, the presence of false evidence did not similarly affect the 12-13-year-olds, who were highly compliant regardless of the experimental condition (81% for the no false evidence condition and 73% for the false evidence condition). These findings suggest that people may become less suggestible as they age, and the propensity for
falsely confessing is different in older adolescents than in young adults (i.e., when false evidence was presented, only 50% of young adults signed the confession compared to 88% of 15-16-year-olds). Other research suggested that older juveniles (i.e., 15–16-year-olds) respond similarly to adults with regards to false confessions. Specifically, Haney-Caron and colleagues (2018) asked 260 participants in correctional facilities (168 juveniles between the ages of 12-19 and 92 adults between the ages of 21-65) about their likelihood to falsely confess. Younger juveniles reported a significantly greater propensity to falsely confess compared to adults. However, their results showed that older juveniles did not differ significantly from adults in their self-reported likelihood to falsely confess.

**Sex and False Confessions**

Sex differences in false confessions has received relatively little scholarly attention, with mixed results. Klaver and colleagues (2010) had 219 undergraduate students complete the ALT key paradigm, altering the interrogation techniques (minimization, whereby the interviewer introduces moral excuses or offers to shift the blame onto someone else, thereby reducing the perceived severity of the crime versus maximization, whereby the interviewer exaggerates the seriousness of the crime or exaggerates the amount or strength of the evidence against the suspect) and the plausibility of the typing mistake (whether the forbidden key was the ALT key, which is proximally close to the keys that the participants were asked to press or the ESC key, which is further from the other keys). Overall, their results showed that, although not statistically significant, women falsely confessed more than men (46% versus 31%, respectively). In the high-plausibility condition, the false confession rate was significantly higher for women compared to men (65% versus 31%, respectively), though no effect sizes were noted to evaluate the strength of this finding. Klaver and colleagues suggested that the sex differences in making
false confessions may be a result of sex differences in coping strategies used in stressful situations (Klaver et al., 2010).

In a study of convicted adult offenders, it was noted that 11% of men claimed to have made a false confession compared to 31% of women (Gudjonsson & Sigurdsson, 1994). Of note, while the percentages differ dramatically, the sample of women offenders was too small to produce adequate statistical power to detect a meaningful difference ($n_{men} = 216$, $n_{women} = 9$). In contrast, in Redlich & Goodman (2003) used the ALT key study to examine age-related differences in false confessions (see Age and False Confessions section above for study details) and found that women in their study were slightly less likely to sign a false confession. Horselenberg and colleagues (2003) replicated the Kassin & Kiechel (1996) ALT key study. Researchers recruited 34 women undergraduate students to participate, and found that individual differences (i.e., in compliance, suggestibility, fantasy proneness, dissociation or tendency to experience cognitive failure) were not related to susceptibility to falsely confess (Horselenberg et al., 2003).

Calicchia & Santostefao (2004) examined interrogative suggestibility in adolescents using the GSS and found that women were more likely to yield to misleading questions. Finally, research by Mesiari (2008) examined the self-reported likelihood of falsely confessing in a sample of 139 boys and 44 girls in pre- and post-adjudication facilities. The results revealed that women were more likely to report that they would falsely confess compared to men, though the vast difference in women versus men participants should be noted.

Together, these findings suggest that sex may have an impact on rates of false confessions, though the strength of, and reasons for, this relationship remains unclear. While
most of the research suggests that women may be more likely to falsely confess compared to men, many of the current studies lack sufficient power to detect meaningful differences.

**Causes of False Confessions**

Researchers have also identified potential causes of false confessions at the systemic level, which include innocence and coercive interviewing practices.

**Innocence**

Ironically, a significant risk factor for coerced-compliant false confessions is innocence, due to the suspect’s belief that truth and justice will prevail (Kassin, 2014). Scherr and colleagues (2020b) highlighted the process through which innocent suspects experience cumulative disadvantages that can culminate in false confessions and wrongful convictions, beginning at the pre-custodial interview (i.e., prior to a suspect’s arrest). Individuals are afforded a set of legal rights prior to being questioned by police (the *Miranda* rights in the United States and the Charter of Rights and Freedoms in Canada). Innocent suspects are substantially more likely to waive their rights than guilty suspects, with more than 80% of innocent suspects waiving their rights compared to fewer than 40% of guilty suspects (Kassin, 2008; Kassin & Norwick, 2014; Volbert et al., 2019). These findings are in line with the rates observed during a 9-month field study of a major US police department, where the author analyzed 182 police interrogations (Leo, 1996). When asked why they had waived their rights, innocent suspects reported that they did so because they felt as though they had nothing to hide (Kassin & Norwick, 2014). During pre-custodial interviews (i.e., interviews that occur prior to being detained by police when the interviewee is free to leave), guilty individuals have the advantage over innocent individuals: guilty individuals are reluctant to discuss information about wrongdoing and are less likely to waive their rights and are quicker to mobilize cognitive
resources, such as self-regulatory efforts to cope with stress or anxiety (e.g., pausing before reacting, concealing emotions; Guyll et al., 2013; Madon et al., 2017; Scherr et al., 2020b).

Innocent suspects often freely disclose information and provide alibis to interrogators, without consideration of the potential consequences (Hartwig et al., 2006; Olson & Charman, 2012). That is, not all alibis provided by innocent suspects will prove to be convincing to investigators, putting them at risk of being pursued further by the police. Olson and Charman (2012) noted that innocent individuals are often willing to provide alibis, however, a substantial proportion of them (36%) were mistaken, meaning the alibis contained details that were incorrect. Inconsistencies in alibis often arise due to a lack of memory of the incident. Individuals are especially likely to lack memory of their whereabouts if they engaged in a typical or routine task, such attending a class every day (Brewer, 1988). Furthermore, gaps in these memories are often supplemented with script-consistent details. For example, if it is typical for the individual to attend classes every day, they may assume they attended class the day of the incident when they actually missed class that day for some reason. The issue when alibis contain an error is that any deviations from the original statement may be considered suspicious by the police and provide sufficient evidence for them to doubt the veracity of the suspect’s claims (Olson & Charman, 2012). Many of these alibis also relied on evidence that evaluators would deem weak, or unconvincing (e.g., statement from a close family member or friend without corroborating evidence). Any change to an alibi, whether growing stronger or weaker due to the presence of evidence can be detrimental to a suspect. A study by Culhane & Hosch (2012) of laypeople and police officers showed that groups had more favourable beliefs and behaviours toward alibi statements that were maintained compared to ones that were later changed.
Conviction rates were also higher when the alibi was changed, compared to maintained, though the effect size was small ($\eta^2 = .02$; Culhane & Hosch, 2012).

While speaking with police, innocent suspects are likely to waive their rights, including the right to counsel, and freely provide alibis without consideration for how it may be perceived. If police have difficulty corroborating the provided alibi, or if they picked up on errors in the suspect’s retelling of events, the innocent suspect may find themselves subject to coercive interviewing practices.

**Coercive Interviewing Practices**

Of relevance to the current study, coercive interviewing tactics can also produce false confessions. By design, interrogations are a guilt-presumptive social interaction that is led by an investigator with a strong prior belief about the suspect (Kassin, 2014). Often, interrogators enter an interrogation with the single-minded goal of obtaining a confession, which leaves them vulnerable to numerous cognitive and behavioural confirmation biases. Research has shown that beliefs about the suspect held by interrogators can impact the interrogator’s approach during the interrogation. For example, a study by Kassin and colleagues (2003) examined the influence of presumptions of guilt on undergraduate students acting as mock interrogators ($N = 78$); they noted that interrogators who had guilty expectations selected more guilt-presumptive questions, used more interrogation techniques, exerted more pressure to get a confession, and judged suspects to be more guilty compared to interviewers with expectations of the suspects’ innocence ($d = 0.26$). The bias toward believing in a suspect’s guilt was particularly pronounced when the interrogator was paired with a factually innocent suspect ($d = 0.34$; Kassin et al., 2003). Presumptions of guilt triggered aggressive interrogations making innocent suspects act defensive. Interrogators conferred guilt from the defensive reactions, confirming their initial
presumption. Innocent suspects have an increased risk of being exposed to coercive interviewing strategies when police have existing expectations of the suspect’s guilt compared to guilty suspects.

Researchers have identified three key interrogation risk factors that are likely to lead innocent suspects to falsely confess. First, interrogation length can increase the likelihood of obtaining a confession (Drizin & Leo, 2005). A survey of 631 investigators from 16 police departments in Canada and the United States was conducted, and they estimated that the average length of an interrogation was 1.60 hours, and their longest lasted an average of 4.21 hours (Kassin et al., 2007). However, cases involving proven false confessions seem to deviate substantially from these norms. For example, in a review of 125 proven false confessions, more than 1/3 of the interrogations lasted 6-12 hours and 39% lasted between 12 and 24 hours; the average interrogation length was 16.3 hours (Drizin & Leo, 2005).

A second interrogation risk factor for false confessions, relevant to the current study, is the use of psychologically coercive and manipulative interrogation tactics. The Reid Technique, one of the most widely taught and used interrogation models in North America (King & Snook, 2009), advocates for the use of several problematic practices (Inbau et al., 2013). The Reid Technique involves nine main steps as well as several suggestions to persuade a suspect to confess (see Table 1 for a summary of the model; Inbau et al., 2013). The first step involves the interrogator directly confronting the suspect with a belief in their guilt, accompanied by an emphasis on the benefits of telling the truth. The goal is for the suspect to believe that their guilt is known to be true by investigators. During this step, interrogators are instructed to evaluate the suspect’s verbal and nonverbal responses for indicators of deception. Research has indicated that deception cues are not reliable indicators of deception; specifically, a meta-analysis by Bond and
DePaulo (2006) examined more than 200 deception detection studies, finding an average lie-truth discrimination rate of 54%. The meta-analysis also noted that truthful messages were more often judged correctly compared to deceptive messages, meaning that in settings where virtually no lies are told there are substantially higher discrimination rates compared to settings where virtually all statements were lies (Bond & DePaulo, 2006). Kassin & Fong (1999) noted that no evidence supported the diagnostic value (i.e., extent to which the behavioural cues can accurately distinguish between deception and truth) of the behavioural cues that investigators are trained to observe. Specifically, observers (N = 40) were unable to reliably differentiate between true and false denials. Moreover, those that were trained in the deception cues were significantly less accurate, more confident, and more biased toward seeing deception compared to untrained observers (η² = 0.30; Kassin & Fong, 1999). A follow-up study showed clips of taped interviews of 14 suspects (12 were men, four were juvenile, and two were women) to experienced police detectives, asking them to note what verbal and non-verbal deception cues they use to judge guilt, whether they believed the suspect was guilty, and their confidence in their judgement (Mann et al., 2004). The researchers noted the same biased responses – police tended to have more confidence in their judgements, but were biased towards seeing guilt, making them less accurate in their judgements overall (Mann et al., 2004; Meissner & Kassin, 2002).

During the second step of the Reid Technique, the investigator introduces a theme by putting forward a supposition about the reason for the crime’s commission including moral excuses, minimizing the seriousness of the crime, or blaming another person or the circumstance; a set of practices known as minimization (Inbau et al., 2013). Minimization techniques, while deemed admissible by courts in the United States and Canada (Inbau et al., 2013) have been linked to increased incidents of false confessions (Horgan et al., 2012; Kassin & Kiechel, 1996;
Russano et al., 2005b). Russano and colleagues (2005b) developed a novel paradigm aimed at assessing the diagnosticity of common coercive interview practices, specifically examining how minimization techniques impact interview outcomes. Undergraduate students ($N = 330$) were asked to complete logic tasks alongside a confederate, who either asked for assistance from the participant (i.e., asked the participant to cheat) or did not ask the confederate for assistance. Participants in both conditions were accused of cheating, and interviewed using minimization, whereby the interrogator lessened the seriousness of the offence by making statements that expressed sympathy, concern, and offered moral excuses, or by offering participants a deal where participants were told that confessing to the crime would allow them to settle the matter quickly. The results showed that minimization techniques were perceived by participants in a similar manner to the explicit deal. Specifically, when minimization techniques or the explicit deal were used, the number of both true and false confessions increased, negatively impacting the diagnosticity of the interview (when no tactics were used, diagnosticity was 7.64 compared to 4.50 when minimization was used and 2.02 when minimization and a deal were used together; Russano et al., 2005b). On the other hand, Blair (2007) found no relationship between maximization, minimization, the perceived severity of the consequences, and the number of false confessions in a sample of 196 undergraduate students, though they used the Kassin and Kiechel (1996) ALT key study rather than the cheating paradigm. Moreover, Hill and colleagues conducted a cheating study, similar to Russano and colleagues (2005), where participants completed difficult tasks alongside a confederate. The experimenter left the room during the task, and the confederate found an answer key and offered to share the answer key with the participants. The experimenter accused the confederate and participant of cheating and interviewed them separately using either an accusatorial approach (e.g., involving maximization,
where the interviewer exaggerates the consequences of the action and the evidence against the participants) or a neutral questioning style. The researchers failed to find a main effect of interview style for true or false confessions, suggesting that accusatory question (e.g., the Reid Technique) does not necessarily increase the risk of false confessions, though their sample was only comprised of 64 undergraduate students (Hill et al., 2008).

Step three of the Reid technique involves discouraging denials of guilt by returning to the previously presented theme and interrupting suspects during their denial of the crime (Inbau et al., 2013). The manual notes that innocent suspects and guilty suspects will react differently to this tactic. Step four involves overcoming a suspect’s secondary line of defence: reasons they would not or could not have committed the crime, which includes alibis. Notably, Inbau and colleagues (2013) stated that the excuses are normally only offered by guilty suspects. During step five, the investigator is trained to display sincerity in what they say and increasing the physical closeness between them and the suspect. Step six involves recognising that the suspect may have a passive mood, as they weigh the benefits of telling the truth, which is supposedly reflected in changes in nonverbal behaviour. In step seven, the investigator uses an alternative question, or a suggestion of a choice to be made by the suspect concerning a component of the crime. For example, the officer may state “Was this the first time or has it happened many times before?” (Inbau et al., 2013). Both alternatives offered are the functional equivalent of an incriminating admission. The final two steps involve the interrogator getting verbal and then written confessions.

Notably, no instruction is provided to interrogators in the event of an innocent suspect being interrogated. Interrogations using the Reid technique are designed to elicit a confession, not to accurately distinguish between liars and truth-tellers. Vrij and colleagues (2006)
experimentally examined how liars and truth tellers behave when trying to convince an interviewer of their innocence. They noted that, contrary to the suggestions made in the Reid manual, truth tellers were more naïve and evasive when explaining the purpose of the interview. Truth-tellers were also less likely to name someone they were certain did not commit the crime and displayed more behaviours indicative of nervousness. Liars did appear to try harder to appear honest than truth tellers, and were more helpful and displayed less nervous behaviours compared to truth tellers ($\eta^2 = .16$; Vrij et al., 2006). Together, it is evident that each step of the Reid Technique serves to solidify an interviewer’s belief in suspect guilt. In turn, the Reid Technique leaves investigators vulnerable to the effects of tunnel vision and puts innocent suspects at risk for wrongful convictions.

The final interrogation risk factor that can cause innocent individuals to falsely confess is the presentation of false evidence. The Reid Technique endorses maximization, where the interrogator exaggerates the strength of evidence to obtain a confession (Inbau et al., 2013). In the United States, police are permitted to lie to suspects about the presence of incriminating evidence, even if that evidence does not actually exist. The practice of lying about the presence of evidence is not only condoned by the Reid Technique but encouraged. Ideally, presenting suspects with false evidence will pressure guilty suspects to confess, as it will appear as though police have more evidence against them, and their conviction will be inevitable; thus, confessing will be in their best interest. Research has indicated that the false evidence ploy increases the risk of false confessions. That is, the presence of false evidence increases confessions in innocent suspects two-fold ($N = 85$ undergraduate students; Kassin & Kiechel, 1996), even with financial consequences (i.e., losing 80% of their compensation for the study; Horselenberg et al., 2003; Swanner et al., 2010), compared to guilty suspects. However, some researchers found that false
evidence does not necessarily increase false confessions. Blair (2007) had 196 undergraduate students complete the ALT key task (adapted from Kassin & Kiechel, 1996). Blair’s results showed that there was no main effect for the use of false evidence in producing false confessions and false evidence did not increase perceptions of the severity of the consequences (Blair, 2007). Similarly, in an unpublished presentation, Russano et al. (2005b) used a cheating paradigm to examine the influence of presenting false evidence to guilty and innocent participants and they found that guilty suspects were more likely to confess than innocent suspects, and that there was no effect of presentation of false evidence on confession rates (Russano et al., 2005a). Despite the contradictory findings, a meta-analysis conducted by Meissner and colleagues noted that overall, accusatorial interviewing methods (e.g., The Reid Technique) elicit an increase in true confessions, as well as significantly increase the likelihood of false confessions, with a medium-to-large effect size ($g = 0.46-0.74$; Meissner et al., 2012).
Table 1

Summary of the Reid Technique

<table>
<thead>
<tr>
<th>Step of Reid Technique</th>
<th>Summary of Step</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confrontation</td>
<td>Confront with belief in guilt</td>
</tr>
<tr>
<td></td>
<td>Emphasize importance of telling truth</td>
</tr>
<tr>
<td></td>
<td>Evaluate verbal and nonverbal cues to deception</td>
</tr>
<tr>
<td>Theme Introduction</td>
<td>Introduce hypothetical explanation of crime</td>
</tr>
<tr>
<td></td>
<td>Minimization techniques</td>
</tr>
<tr>
<td>Discourage Denials</td>
<td>Interrupt during suspect denial</td>
</tr>
<tr>
<td>Overcome Excuses</td>
<td>Challenge reasons suspects have put forward for why they would not or could not commit the crime (including alibis)</td>
</tr>
<tr>
<td>Rapport</td>
<td>Interviewer displays sincerity, increases physical closeness</td>
</tr>
<tr>
<td>Change in Suspect</td>
<td>Suspect displays passive mood</td>
</tr>
<tr>
<td>Behaviour</td>
<td>Suspect weighs benefits of telling truth</td>
</tr>
<tr>
<td>Alternative Questions</td>
<td>Suspect asked question involving forced choice regarding crime</td>
</tr>
<tr>
<td></td>
<td>Response to this question is function equivalent of a confession</td>
</tr>
<tr>
<td>Verbal Confession</td>
<td>Suspect verbally confesses</td>
</tr>
<tr>
<td>Written Confession</td>
<td>Suspect writes and signs written confession</td>
</tr>
</tbody>
</table>

Hypothetical Evidence

In Canada, there are safeguards in place to prevent police-induced false confessions. For example, police are not permitted to lie to suspects about the presence of evidence. However, police in Canada can skirt these safeguards by using a variation of the false evidence ploy: hypothetical questions, which include bluff questions and bait questions; questioning practices that are also encouraged in the Reid Technique (Reid et al., 2020). Bluff questions involve interrogators pretending to have evidence to be tested or evaluated, without claiming that it necessarily implicates the suspect (Perillo & Kassin, 2011). For example, an officer may say
“Witnesses were present and will be interviewed”, when there are no witnesses to be interviewed. In theory, bluff questions should produce diagnostic outcomes, as they threaten the perpetrator with imminent detection by implying the presence of evidence that is in the process of being tested, thus increasing the incentive to cooperate and confess, but innocent suspects should not feel similarly threatened to confess; however, lab studies have shown that this was not the case. Perillo and Kassin (2011) used a computer crash paradigm to investigate the influence of bluff questions on false confessions on a sample of undergraduate students (N=79). They found that false confessions were significantly higher, and the interview diagnosticity decreased, with the use of bluff questions. When asked about why they confessed, participants noted that they were confident that they would be cleared of wrongdoing when the evidence was evaluated.

Bait questions, the focus of the current studies, are based on the same principle of deception detection that suggests liars and truth-tellers will respond differently to hypothetical evidence. Bait questions are those that ask suspects about the presence of hypothetical evidence. Unlike bluff questions, there is no promise of immediate testing or evaluation with bait questions. For example, an officer using a bait question may ask: “Would there be any reason witnesses would have spotted you at the crime scene?”. In theory, innocent suspects would maintain their story of not being involved with the crime, where guilty suspects may alter their stories to provide plausible explanations. The Reid Technique recommends the use of bait questions to encourage suspects to place themselves at the scene of the crime, or with the victim to catch them in a lie, as admitting these things makes it more difficult for them to later deny involvement in the crime (Inbau, 2013). Reid and associates highlight that the goal of utilizing bait questions will help encourage a deceptive suspect to change or consider changing a previous denial of access or opportunity to commit the crime, essentially incriminating themselves.
Without implying that there is evidence that will be tested imminently (and exonerate innocent suspects), bait questions should theoretically be a safer alternative to bluff questions and the false evidence ploy (Perillo & Kassin, 2011).

A study by Luke and colleagues (2017) suggested that bait questions may act as a source of misinformation. Participants, recruited through MTurk (N = 294), were tested on their memory after reading a 712-word mock police report describing a liquor store robbery. Participants completed a 12-minute filler task and watched a 12-minute film depicting a mock interrogation where the suspect from the police report is asked a bait question about each of the eleven critical pieces of evidence detailed in the report. Half of the bait questions incorrectly described the evidence from the police report; these are considered the misled items. Participants completed a 3-minute filler task and then responded to questions about critical pieces of evidence from the police report and rated their confidence in their responses. Their results indicated that the participants’ memory for evidence that they were misled about using bait questions was significantly less accurate than their memory for control evidence (79.6% versus 50.5%, d = 0.92). Furthermore, warning participants about the potential risk of these questions serving as misinformation was ineffective. Moreover, Crozier and colleagues (2020) showed that exposure to bait questions led to robust memory distortion. Specifically, mock jurors remembered there being more evidence presented implicating the suspect when bait questions were used, inflating their perceptions of guilt. The potential for bait questions to impact juror memory is unsurprising, considering research by Devine et al. (2009) who suggested that the effects of false memory on judgements and behaviour may generalize to decision making. If a person believes that there is more evidence against a suspect, they will be more likely to convict, regardless of whether that evidence exists.
Police often argue that bait questions can help determine whether suspects are telling the truth or lying (Luke et al., 2017; Perillo & Kassin, 2011). However, the deception detection literature has consistently shown that there are no reliable verbal or nonverbal indicators of deception (Bond & DePaulo, 2006; Levine, 2018). Bond and DePaulo conducted a meta-analysis of 206 papers on deception detection and found an average accuracy slightly greater than 50% (53.64%, 95%CI [53.31%, 53.59%]). Bond and DePaulo’s meta-analysis included judgements made by practitioners (e.g., judges, police officers) as well as laypeople, showing that the accuracy of experts and laypeople do not differ substantially. Moreover, the meta-analysis examined cues to deception (e.g., facial cues) and noted that facial behaviors do not provide an indication of a speaker’s veracity (Bond & DePaulo, 2006). While some studies have found significant positive associations between accuracy and deception detection cues (e.g., Hauch et al., 2014; Mann et al., 2004), reviews of multiple meta-analyses have shown that most deception cues yield mixed results or consistently show no difference between truth and lie-tellers (Levine, 2018). Individuals who support the use of hypothetical evidence (i.e., bait questions, bluff questions) argue the utility of bait and bluff questions is in drawing guilty suspects into changing their story to accommodate potential evidence (Inbau, 2013), thus acting as a cue of deception. Considering the lack of consensus regarding the efficacy of deception detection cues, even among meta-analyses, the cues that are commonly relied upon by laypeople and investigators are not consistently reliable indicators of deception in all contexts, though they may prove useful in specific situations. Moreover, research has shown that many interviewing practices endorsed by the Reid Technique (e.g., false evidence ploy, maximization) are linked with a greater number of false confessions. Since bait questions are also encouraged under the Reid technique, and
research has shown that evidence suggested by bait questions has been linked to memory
distortions, it is essential to examine bait questions in the context of false confessions.

**Admissibility of Confession Evidence**

In Canada, the admissibility of statements in court is largely guided by the common law
confessions rule, which aims to protect against the admission of involuntary confessions as
evidence in courts. According to this rule, there are four main factors to be considered when
making decisions regarding voluntariness, reliability, and thus the admissibility of the confession
as outlined in *R. v. Oickle* (2000). First, statements cannot be elicited under threat of punishment
or promises of leniency. Second, a suspect being questioned must possess an “operating mind”
(i.e., they must be aware of what they are saying and understand the associated consequences of
their statements). Third, statements should not be obtained in an “atmosphere of oppression”
(e.g., suspects should not be denied food, water, sleep, access to legal counsel). Finally, as
relevant to the current studies, interrogators should not engage in a high degree of “police
trickery” to elicit confessions. The Supreme Court of Canada ruled that some police trickery was
allowed, provided the tactics to do not rise to a level that would “shock the community” (*R. v.
Oickle*, 2000). As such, the public perception of interviewing tactics can have a substantial
impact on the admissibility of confession evidence, and thus the risk of wrongful convictions
from false confessions (Fallon et al., 2018).

Previous studies have examined the publics’ perceptions of commonly used interrogation
tactics. In general, individuals can identify both overt (e.g., threats of harm) and subtle (e.g.,
minimization of consequences) interrogation tactics. Much research on this topic has come from
the United States. For example, Costanzo and colleagues (2010) had 461 jury-eligible men and
women participate in a mock trial and indicate their agreement with statements related to
permissibility of tactics, as well as false confessions in general, on a 10-point scale. Participants expressed disagreement with statements regarding interrogators lying about the presence of evidence (75.7% believed interrogators should not falsely claim the suspect failed a polygraph and 68.7% believed interrogators should not lie about the presence of matching fingerprints or DNA evidence). Further, a survey of jurors in California ($N = 127$) indicated that most participants (85.3%) recognized violence and threats of violence as coercive or extremely coercive, and 78% rated the presentation of false evidence as coercive or extremely coercive (Blandón-Gitlin et al., 2011). In contrast, only 47.6% identified promises of leniency as coercive or extremely coercive (Blandón-Gitlin et al., 2011), despite research clearly linking minimization tactics with an increased risk of false confessions (Horgan et al., 2012; Kassin & Kiechel, 1996; Russano et al., 2005b). Leo and Liu (2009) asked jury-eligible students ($N = 264$) to rate interrogation tactics on their coerciveness and their likelihood of eliciting confessions from guilty and innocent persons. Participants rated most tactics as somewhat to highly coercive, and likely to induce a true confession, but not a false confession (Leo & Liu, 2009). These results were replicated with actual jurors (Blandón-Gitlin et al., 2011).

Fallon and Snook (2019) asked Canadian citizens ($N = 305$) to read transcripts that were either neutral, contained explicit threats, or minimization. The participants rated the transcripts in terms of coercion, effectiveness, and level of pressure exerted on the witness. Fallon and Snook found a main effect of transcript type on perceived level of coercion, such that participants in the threat condition rated the transcript as more coercive than the neutral ($d = 1.49$) and minimization conditions ($d = 0.67$). They also noted that individuals in the minimization condition found the interviews more coercive than the neutral condition ($d = 0.64$; Fallon & Snook, 2019).
Together, these studies suggest that while the public understands that police interrogation tactics may be coercive, they often fail to link these practices to the potential negative consequences (e.g., false confessions). Given the miscarriages of justice that can result from false confessions (i.e., wrongful convictions), it is imperative that researchers examine the efficacy of bait questions and whether they can produce false confessions. Moreover, it is essential to understand how the public views the use of bait questions as public perception is fundamental to determining the admissibility of confession evidence.

**Study 1: Lay Perceptions of Bait Questions**

The goal for Study 1 was to understand how bait questions are perceived by the public, and the extent to which they find these techniques (un)acceptable. Based on previous studies of the permissibility of interrogation techniques, it was expected that participants will view the use of bait questions as acceptable overall. It was also anticipated that levels of acceptability will vary based on the severity of the crime, such that the tactics will be viewed as more tolerable for serious crimes (i.e., murder) and less acceptable for minor crimes (i.e., theft). Moreover, it is predicted that participants will view strong bait questions (i.e., those referring to DNA, fingerprints) as less acceptable than weak bait questions (i.e., those referring to CCTV footage, witness statements).

**Methods**

The study hypotheses, design, and analysis plan were preregistered on the Open Science Framework ([https://osf.io/afx5s](https://osf.io/afx5s)) prior to data collection. The exploratory analyses reported below were not included in the initial OSF pre-registration.
Participants

An a priori power analysis determined that 180 participants were required to achieve an 80% likelihood of detecting a medium effect size ($d = 0.5$); data from 210 participants was sought to account for potential exclusions. The final number of recruited participants was 226 via Amazon Mechanical Turk (MTurk; $n = 107$, all participants to have completed at least 50 HITs with 90% or greater approval rate) and Prolific Academic ($n = 119$; see Appendix A: Recruitment Information (Study 1) for recruitment information). I also required that participants’ geographic location be Canada. Participants received $1.50 CAD (MTurk) or £1.50 (Prolific) for their participation in the study. One participant was excluded from the data analysis as they failed the attention check. One participant from Prolific Academic and 13 from MTurk withdrew prior to completing the survey in its entirety. As such, the final analysis included data from 212 participants ($n = 94$ from MTurk and $n = 118$ from Prolific Academic).

Materials

Police Legitimacy Scale (PLS).

The police legitimacy scale (PLS; Tankebe et al., 2016) is a 16-item scale that uses a 4-point Likert scale to assess participants’ perceptions of police legitimacy. Values on the PLS range from 1 (Strongly Disagree) to 4 (Strongly Agree), with higher scores indicating more positive evaluations of the police. The PLS is comprised of four factors: lawfulness, procedural fairness, distributive fairness, and police effectiveness. The lawfulness subscale is composed of three questions and reflects whether police officers are perceived as working within the established rules (e.g., “When the police deal with people, they always behave according to the law”). The second dimension is procedural fairness, operationalized as a 7-item scale examining the extent to which police authority is exercised in a way that is fair and respectful (e.g., “The
police treat citizens with respect”). Distributive fairness captures perceptions of variation in police fairness in outcomes (e.g., “The police enforce the law consistently when dealing with people”) and is comprised of three questions. The final subscale is police effectiveness, which consists of three survey items and reflects the ability of police to respond to safety and security concerns (e.g., crime levels in my neighbourhood have changed for the better in the last year).

In samples from the United States and Ghana, Cronbach’s alpha values indicated reasonable levels of internal consistency ($\alpha_{United\ States} = 0.62-0.87; \alpha_{Ghana} = 0.57-0.80$). The scale has also been validated in Canadian contexts (Ewanation et al., 2019). Their confirmatory factor analysis demonstrated strong, significant loadings of each item onto its respective factor. However, it is worth noted that, while statistically significant, the loading for police effectiveness was substantially lower than the other three factors. In the Canadian validation of the study, participants had an average PLS score of 44.23 out of a potential total of 64, suggesting Canadians held generally positive views of police.

**Study Design and Procedure**

Study 1 used a 2 (Crime Type: Murder, Theft) x 2 (Strength of Bait Questions: Weak, Strong) within-subjects design. Participants signed up to participate through MTurk or Prolific Academic, where they were directed to click a link to access a Qualtrics survey (see Appendix A for recruitment information). Participants were directed to a page with the informed consent form (see Appendix B: Informed Consent Form (Study 1) and were asked to click a box type and their initials into a textbox to indicate their consent and willingness to participate. Next, participants were asked to read a short description of bait questions (see Appendix C: Information on Bait Questions). Participants were then provided with a brief scenario whereby the police apprehended and were interviewing a suspect for either a theft or murder. Participants were
presented with both scenarios, which were presented in random order to prevent order-related effects. Four bait questions (two weak and two strong) were then presented in a randomized order, and participants were asked to rate how acceptable they found it is for the police to ask the subsequent question on a 7-point Likert scale (1 = Completely Unacceptable, 7 = Completely Acceptable; see Appendix D). The weak bait questions referred to witness statements and CCTV footage related to the crime, and the strong bait questions referred to fingerprint and DNA evidence. Participants were then asked to complete a demographic survey (see Appendix D). Finally, participants were asked to complete the Police Legitimacy Scale (PLS; Tankebe et al., 2016; see Appendix E); higher scores indicated more positive evaluations of police legitimacy. Participants were asked to complete the PLS as perceptions of legal authorities (such as the police) have been shown to be related to juror outcomes (Farrell et al., 2018). For example, jurors with positive views of the police are more likely to interpret testimony in a way that is favorable to the police (Casper et al., 1989). Thus, participants' perceptions of police legitimacy have the potential to impact how participants rate the acceptability of bait questions. Participants were then directed to the debriefing form and thanked for their participation (see Appendix F). Additionally, the Qualtrics survey included an option to opt out of the study on each page, such that it could be ensured that participants received compensation for their time, regardless of whether they chose to finish the study in its entirety.

**Statistical Analysis**

The results were analyzed using R statistical software and JASP version 0.17.1 (https://jasp-stats.org/). A repeated measures ANCOVA was conducted to determine if ratings of acceptability differed significantly by crime type (i.e., murder versus theft) and by strength of bait questions used (i.e., weak versus strong). Acceptability ratings were the dependent variable
and type of crime (i.e., murder versus theft) and strength of questions (i.e., weak versus strong) were the independent variables. The total police legitimacy score (PLS; Tenkebe et al., 2016), and participant age and sex were entered into the model as covariates as they were significantly correlated with acceptability scores (see Results section for correlation coefficients). Bayes factors were interpreted based on commonly used categories (see Table 2).

**Table 2**

*Classification scheme for interpreting Bayes Factors (BF₁₀)*

<table>
<thead>
<tr>
<th>Bayes Factor (BF₁₀)</th>
<th>Evidence Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 100</td>
<td>Extreme evidence for H₁</td>
</tr>
<tr>
<td>30-100</td>
<td>Very strong evidence for H₁</td>
</tr>
<tr>
<td>10-30</td>
<td>Strong evidence for H₁</td>
</tr>
<tr>
<td>3-10</td>
<td>Moderate evidence for H₁</td>
</tr>
<tr>
<td>1-3</td>
<td>Anecdotal evidence for H₁</td>
</tr>
<tr>
<td>1</td>
<td>No evidence</td>
</tr>
<tr>
<td>0.33 – 1</td>
<td>Anecdotal evidence for H₀</td>
</tr>
<tr>
<td>0.1 – 0.33</td>
<td>Moderate evidence for H₀</td>
</tr>
<tr>
<td>0.03 – 0.1</td>
<td>Strong evidence for H₀</td>
</tr>
<tr>
<td>0.01 – 0.03</td>
<td>Very strong evidence for H₀</td>
</tr>
<tr>
<td>&lt; 0.01</td>
<td>Extreme evidence for H₀</td>
</tr>
</tbody>
</table>

*Note.* Adjusted from Lee & Wagenmakers, 2013. H₁ represents alternative hypothesis, H₀ represents null hypothesis.

The intention of reporting Bayesian hypothesis testing in addition to traditional null hypothesis significance testing (NHST) and effect sizes in the current thesis was to offer multiple perspectives to view and interpret the collected data. According to Wagenmakers and colleagues (2018), Bayes factors can quantify evidence in favour of the null hypothesis to avoid severe bias against it and present the strength of our alternative hypothesis relative to the data collected. Bayes factors compare two statistical models, a model with the null hypothesis and a model with
the alternative hypothesis, to quantify the likelihood of support for one over the other (Wagenmakers et al., 2018). In this manner, Bayes factors can report the data has evidence in favour of the null hypothesis, which is valuable insight for future replication of research studies (i.e., does the current data provide evidence for absence in future data, or is there simply an absence of evidence in the current data; Wagenmakers et al., 2018). Further, the American Psychological Association’s Task Force on Statistical Inference recommended that researchers move away from dichotomous accept-reject decisions based on NHST and move toward the reporting of both effect sizes and confidence intervals when reporting and interpreting their results (Wilkinson, 1999). There is merit to introducing new methods to psychological science, distinctly for the impact it may have on future replications of research studies.

**Exploratory Analysis.**

Similar to the analysis described above, a repeated measures ANCOVA was conducted to examine the relationship between ratings of acceptability, crime type, and strength of bait questions used. In this exploratory model, individual PLS subscales were entered in place of the total PLS score to explore whether specific aspects of police legitimacy were more relevant to ratings of acceptability than other aspects of police legitimacy.

**Results**

**Demographic Information**

Table 3 presents participants’ demographic information (sex, age, ethnicity, province of residence, and education). As seen in Table 3, the majority of participants were Caucasian/White (64.9%), had completed at least a bachelor’s degree (64.2%), and resided in Ontario (50.0%). Most of the participants who reported their age were younger than 35 years old (44.8%), though
a substantial proportion (45.3%) did not provide their age. Participants were evenly split regarding sex.

**Table 3**  
*Participant Demographic Information*

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<thead>
<tr>
<th>Variable</th>
<th>n</th>
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<td>New Brunswick</td>
<td>2</td>
<td>0.9</td>
</tr>
<tr>
<td>Newfoundland &amp; Labrador</td>
<td>7</td>
<td>3.3</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>8</td>
<td>3.8</td>
</tr>
<tr>
<td>Ontario</td>
<td>106</td>
<td>50.0</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Quebec</td>
<td>14</td>
<td>6.6</td>
</tr>
<tr>
<td>Saskatchewan</td>
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<td>2.4</td>
</tr>
<tr>
<td>Missing</td>
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<td>1.9</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>18</td>
<td>8.6</td>
</tr>
<tr>
<td>25-34</td>
<td>43</td>
<td>20.2</td>
</tr>
<tr>
<td>35-44</td>
<td>34</td>
<td>16.0</td>
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<td>10</td>
<td>4.7</td>
</tr>
<tr>
<td>65+</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Missing</td>
<td>96</td>
<td>45.3</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>Avg. Police Legitimacy Scale Total Score</td>
<td>39.26</td>
<td>8.07</td>
</tr>
<tr>
<td>Avg. Lawfulness Sub Score</td>
<td>7.3</td>
<td>1.92</td>
</tr>
<tr>
<td>Avg. Procedural Fairness Sub Score</td>
<td>17.62</td>
<td>3.85</td>
</tr>
<tr>
<td>Avg. Distributive Fairness Sub Score</td>
<td>6.74</td>
<td>1.91</td>
</tr>
<tr>
<td>Avg. Police Effectiveness Sub Score</td>
<td>7.58</td>
<td>1.69</td>
</tr>
<tr>
<td>Total</td>
<td>212</td>
<td></td>
</tr>
</tbody>
</table>

**Descriptive Statistics**

Overall, the majority of participants found the use of bait questions to be acceptable, both in relation to serious crimes (i.e., murder) and less serious crimes (i.e., theft) and regardless of the strength of the bait questions. Between 63.2% and 70.3% found the use of bait questions acceptable in cases of murder, with the lowest percentage (63.2%) finding the use of strong bait questions (i.e., questions regarding DNA or fingerprint evidence) as acceptable, and the largest portion of participants finding the use of bait questions in relation to witness statements (70.3%) as acceptable. Similarly, the greatest proportion of participants found weak bait questions to be acceptable (70.3% for bait questions related to security footage) and then smallest proportion found strong bait questions to be acceptable (64.6% for DNA-related bait questions).

Participants’ views on police legitimacy were generally positive ($M = 39.26$, $SD = 8.07$). Considering the total possible score on the PLS was 64, the PLS total score suggests that many participants held both positive and negative views of the police. However, the average PLS score was lower in the current sample than what had been previously observed in Canadian samples ($M = 44.23$; Ewanation et al., 2019). The difference in legitimacy scores may reflect differences in demographics, as the participants of the current study were primarily younger (<35). Ewanation and colleagues (2019) had relatively equal distributions of young individuals (18-19) and older adults (50+), and older adults generally have more positive views of police legitimacy.
**Assumptions**

Pearson’s correlations were computed to determine if the bait questions could be collapsed into four groups based on the crime and strength of the bait question. There was a high correlation between similar questions (i.e., questions of the same strength for the same crime were highly correlated; see Table 4). All correlations were greater than $r = .85$. As such, scores were added together by crime type and bait question strength (i.e., strong bait questions in the murder scenario were summed to create one variable, weak questions in the murder scenario were combined to create one variable).

**Table 4**

*Means, Standard Deviations for Bait Question Acceptability Ratings*

<table>
<thead>
<tr>
<th>Crime Type</th>
<th>Strength</th>
<th>Hypothetical Evidence</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murder</td>
<td>Weak</td>
<td></td>
<td>10.28</td>
<td>3.75</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Witness Statements</td>
<td>5.14</td>
<td>1.94</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CCTV Footage</td>
<td>5.14</td>
<td>1.95</td>
</tr>
<tr>
<td></td>
<td>Strong</td>
<td></td>
<td>9.79</td>
<td>4.06</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DNA</td>
<td>4.91</td>
<td>2.11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fingerprints</td>
<td>4.85</td>
<td>2.05</td>
</tr>
<tr>
<td>Theft</td>
<td>Weak</td>
<td></td>
<td>10.24</td>
<td>3.59</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Witness Statements</td>
<td>5.14</td>
<td>1.85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CCTV Footage</td>
<td>5.10</td>
<td>1.89</td>
</tr>
<tr>
<td></td>
<td>Strong</td>
<td></td>
<td>9.95</td>
<td>3.96</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DNA</td>
<td>4.93</td>
<td>2.04</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fingerprints</td>
<td>5.05</td>
<td>1.97</td>
</tr>
</tbody>
</table>

The repeated measures ANCOVA reported below met the assumptions required to perform this analysis. Specifically, histograms of standardized residuals showed relatively normally distributed error, as did the normal p-p plots of standardized residuals. Mauchley’s test was used to assess sphericity. Mauchley’s test was not statistically significant ($p < .05$), indicating that this assumption was met. Outliers were identified as values that had residuals.
greater than two and a half standard deviations away from the mean. Eight potential outliers were identified. The model was run with and without the outliers and there were no significant differences in the conclusions. As such, the outliers were included in the final analysis. Repeated measures ANCOVAs also require the covariates to be a linear relationship between the covariate and the outcome variable. As such, a correlation was computed between the PLS total score and the acceptability ratings, showing a moderate positive correlation between the two variables ($r = 0.34, p < .001, 95\% \text{ CI} [0.28, 0.40]$). The subscales of the PLS were also examined to determine if specific aspects of police legitimacy (i.e., perceptions of procedural fairness, lawfulness, etc.) were related to acceptability ratings. The subscales for perceptions regarding police lawfulness ($r = 0.37, p < .001, 95\% \text{ CI} [0.312, 0.42]$), distributive fairness ($r = 0.32, p < .001, 95\% \text{ CI} [0.25, 0.38]$), and procedural fairness ($r = 0.32, p < .001, 95\% \text{ CI} [0.25, 0.38]$) were all significantly moderately correlated with ratings of acceptability. The subscale for perceptions of police effectiveness was only weakly correlated with acceptability ratings ($r = 0.10, p = .002, 95\% \text{ CI} [0.03, 0.17]$). Correlations were also computed for acceptability ratings and age ($r = 0.15, p < .001, 95\% \text{ CI} [0.07, 0.23]$) and sex ($r = -0.16, p < .001, 95\% \text{ CI} [-0.22, -0.09]$); as such, they were determined to be appropriate covariates.

A t-test was used to determine if the order of presentation of the scenarios impacted the acceptability ratings provided by participants. Results indicated that there was no significant impact of order on total acceptability responses between participants who saw the Theft scenario first ($n = 113, M = 40.34, SD = 13.98$) compared to those who saw the Murder scenario first ($n = 99, M = 40.00, SD = 15.15$), $t (196.9) = 0.17, p = 0.866$. Moreover, an ANOVA was used to determine whether the order of bait questions influenced total ratings of acceptability. We found no significant differences between the groups, indicating that the order of bait questions did not
influence acceptability ratings, $F(1, 196) = 0.38, p = 0.539, R^2 = 0.002$. The analysis was repeated with all participants and again excluding those who did not provide their age. The two models were similar in terms of fit (for the model excluding missing data, $R^2_{Adj} = 0.795$, compared to the model that included cases with missing age data, $R^2_{Adj} = 0.795$). As such, it was decided to use the data set that included all 212 participants.

**Within-Subjects Effects**

A repeated measures ANCOVA was conducted to determine whether ratings of acceptability differed substantially by crime type and bait question strength (see Table 5 for within-subjects’ effects). PLS total score, age, and sex were also entered into the model as covariates. There was no main effect of Crime Type on acceptability ratings, $F(1, 396) = 0.663$, $p = .416$, $\eta_p^2 = .000$, $BF_{10} = 8.7 \times 10^{-5}$. Specifically, participants rated the use of bait questions for a Murder investigation ($M_{murder} = 20.07, SD = 7.52$) relatively similar to a Theft investigation ($M_{theft} = 20.25, SD = 7.26$, $d = 0.04$; see Figure 1). The Bayes factor indicated extreme evidence for the null hypothesis, that crime type did not influence ratings of acceptability. There was a significant main effect of Bait Question Strength, $F(1, 396) = 6.21, p = .013$, $\eta_p^2 = .02$, $BF_{10} = .001$. Specifically, participants rated strong bait questions ($M_{strong} = 19.74, SD = 7.64$) as significantly less acceptable than weak bait questions ($M_{weak} = 20.50, SD = 7.16$, $d = 0.26$; see Figure 2). However, the related Bayes factor indicated very strong evidence for the null hypothesis. The interaction was not statistically significant, $F(1,609) = 0.67, p = 0.412$, $\eta_p^2 = 0.001$, $BF_{10} = 3.0 \times 10^{-4}$. The Bayes factor indicated extreme evidence for the null hypothesis.
Table 5
Repeated measures ANCOVA Within-Subjects Effects for Acceptability Scores

<table>
<thead>
<tr>
<th>Variable</th>
<th>Type II Sum of Squares</th>
<th>df_{numerator}</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
<th>η^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crime Type</td>
<td>2.05</td>
<td>1</td>
<td>2.05</td>
<td>0.66</td>
<td>.416</td>
<td>0.000</td>
</tr>
<tr>
<td>Question Strength</td>
<td>19.18</td>
<td>1</td>
<td>19.18</td>
<td>6.21</td>
<td>.013</td>
<td>0.020</td>
</tr>
<tr>
<td>Crime*Strength</td>
<td>2.30</td>
<td>1</td>
<td>2.30</td>
<td>0.75</td>
<td>&lt;.001</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Figure 1

Total Acceptability Score by Crime Type

Note. Bars represent median value, and error bars upper and lower quartiles.
**Figure 2**

Total Acceptability Score by Bait Question Strength

*Note.* Bars represent median value, and error bars upper and lower quartiles

**Between Subjects Effects**

The main effect of PLS total score was significant, $F(1, 129) = 17.01, p < .001, \eta^2_p = 0.12$, which indicated that participants’ PLS scores significantly influenced their acceptability ratings when considering the variability between different participants. In other words, higher PLS scores were associated with higher acceptability ratings, on average. The main effect of sex on acceptability scores was not significant, $F(1, 131) = 2.35, p = .128, \eta^2_p = 0.02$. Additionally, the main effect of age on acceptability was not significant, $F(1, 131) = 0.49, p = 0.484, \eta^2_p = 0.00037$.

**Exploratory Analysis**

The exploratory analysis, using the PLS sub-scores in place of the total PLS score covariate, indicated that the sub-score for police lawfulness significantly impacted ratings of acceptability, $F(1, 126) = 5.68, p = 0.012, \eta^2_p = 0.04, BF_{10} = 0.33$. The sub scores for procedural
fairness ($p = 0.70$), distributive fairness ($p = 0.29$), and police effectiveness ($p = 0.58$) were not significant.

**Discussion**

Given the critical role of public perception in determining the admissibility of confession evidence in Canada, it is vital to understand how bait questions are perceived by the public. The goal of Study 1 was to examine the acceptability of bait questions in the context of different crime types (i.e., murder and theft) and varying strength of bait questions (i.e., weak versus strong questions). Overall, descriptive analyses indicated that participants largely found the use of bait questions to be acceptable. This finding is consistent with previous literature examining perceptions of other interviewing tactics (e.g., minimization; Blandón-Gitlin et al., 2011; Fallon & Snook, 2019). The current study found significant differences in acceptability ratings of strong (cf. weak) bait questions, indicating that participants found strong bait questions (i.e., those referring to DNA or fingerprint evidence) significantly less acceptable compared to weak bait questions (i.e., those referring to witness statements or video evidence). However, the accompanying Bayes factor suggested very strong evidence for the null hypothesis, suggesting the effect of bait question strength may be a quirk of the data as opposed to reflective of a larger trend in the beliefs of the population. Moreover, there were no significant differences in how participants rated the acceptability of bait questions relative to the type of crime scenario that was presented. Contrary to what was hypothesized, participants saw the use of bait questions equally acceptable when used in the context of both serious (i.e., murder) and minor (i.e., theft) crimes.

The analysis also showed a clear and significant main effect of PLS total score and acceptability ratings, such that participants’ who had higher perceptions of police legitimacy
were also more likely to agree with the use of bait questions overall. The exploratory analysis examined the role of the PLS subscales in predicting acceptability scores in place of the total PLS score to determine whether certain aspects of police legitimacy were more relevant than others. When all factors were entered into the model, only the lawfulness subscale significantly impacted acceptability ratings. The lawfulness subscale captures the perceptions that police are adhering to the law and working within the established rules and guidelines. The positive relationship between perceptions of police lawfulness and acceptability ratings is understandable; that is, individuals who have stronger beliefs in the idea that police adhere to the rules of law are likely to interpret questioning practices used by the police as legitimate and in accordance with the rule of law. In contrast, the other subscales (i.e., procedural fairness, distributive fairness and police effectiveness) were correlated with acceptability ratings but did not significantly impact acceptability scores. The relationship between lawfulness and acceptability, but not the other domains of police legitimacy is not surprising, as the aforementioned subscales captured how police relate and interact with the community, as well as their effectiveness, which were unlikely to impact views on how acceptable questioning tactics were. However, Bayes factors indicated substantial evidence for the null hypothesis, suggesting the observed influence of the PLS score on acceptability ratings are likely an artifact of the data rather than a genuine effect.

Considering public perception plays an important role in the admissibility of confession statements (see R. v. Oickle, 2000), and the publics’ perceptions of police are dynamic and heavily influenced by both traditional and entertainment media (see Intravia et al., 2018; Ralph, 2022), it is important that further research be conducted to understand whether the publics’ acceptance of bait questions is warranted or whether jurors would benefit from additional education in cases where such questions are used to combat potential biases against the police.
Conversely, if bait questions can be linked with false confessions, inflated perceptions of police legitimacy could facilitate the inclusion of unreliable confession evidence.

There are some limitations regarding this study. First, while the sample was sufficiently large to detect the desired effect size ($d = 0.50$), the demographic characteristics showed clear trends in those who participated in the survey. Most participants were white, educated, and from Ontario. Moreover, a large proportion of the respondents failed to provide their age, though both MTurk and Prolific Academic require participants to be 18 years of age or older to work on the platforms. While individuals that reported their age on the survey were younger compared to the general Canadian population (<35), the substantial missing data prevents drawing meaningful conclusions with regards to age and perceptions of bait questions. Future research should seek to assess opinions from a wider and more diverse sample of the country to better understand perceptions of bait questions across Canada. Larger and more representative samples of the population could also allow for more nuanced comparisons by age group, province, ethnicity, etc.

**Study 2: Bait Questions and False Confessions**

If mock jurors struggle to differentiate between real and bait-suggested evidence, suspects may also make this mistake meaning they are more likely to falsely confess. If mock jurors perceive evidence suggested by bait questions as existing evidence against a suspect, suspects may also perceive bait questions in the same way as fabricated evidence. No research to date has examined the link between bait questions and false confessions. My goal is to address this important gap in knowledge and determine whether the use of bait questions can increase the risk of false confessions among innocent suspects. I hypothesise that using bait questions during
interviews will produce significantly more false confessions compared to interviews that do not contain bait questions.

**Methods**

The study hypotheses, design, and analysis plan were preregistered on the Open Science Framework ([https://osf.io/62kfv](https://osf.io/62kfv)) prior to data collection.

**Participants**

Due to difficulties with recruiting participants that were beyond my control, data were collected from 45 undergraduate students (22 in the Bait Questions group and 23 in the Control group). One participant was excluded from the analysis as it was determined that they cheated on the task; the excluded participants was in the Control group. The final sample included data from 44 participants, 22 in each group. Students were recruited through SONA at Carleton University (see Appendix G for recruitment notice) and received course credit in exchange for their involvement, as well as an opportunity to win one of three draws for $50.

**Materials**

**Gudjonsson Suggestibility Scale (GSS).**

Gudjonsson (1997) developed the Suggestibility Scale (GSS) to measure an individual’s tendency to yield to leading questions and change their responses because of negative feedback or criticism. The GSS is presented as a memory task, where a short paragraph containing 40 facts is read to the person being tested, with that person being asked to remember as much as they can about the story. Individuals are then asked to recall the facts of the story after a 50-minute delay. After the recall portion of the test, the participant is then asked to answer 20 questions about the story, 15 of which are designed to lead the subject toward inaccurately reporting what they believe they remembered about the story. The number of misleading questions that the individual
yields to is the ‘Yield 1 score’. The participant is then told firmly that they made several errors and is asked to go through the questions once more. The ‘shift score’ is the extent to which a person shifts from the original response, regardless of whether the answer was correct or incorrect, to a different response after pressure (Gudjonsson, 1997). Furthermore, the ‘Shift 2’ score is calculated as the number of misleading questions that the participant yielded to after being provided with the negative feedback. The total GSS score is calculated by summing the Yield 1 and Shift scores. The GSS manual specifies that the general population mean values for yield 1 was 4.5, was 5.5 for yield 2, 3 for shift, and 7.5 for the total score (Gudjonsson, 1997).

Gudjonsson (1991) evaluated the internal consistency of the GSS using a sample of 129 forensic men patients. The responses to the 20 questions following the negative feedback stage were factor analyzed. The results indicated high alpha coefficients for each of the factors ($\alpha_{\text{Yield 1}} = 0.87$, $\alpha_{\text{Yield 2}} = 0.90$, $\alpha_{\text{Shift}} = 0.79$). Evaluations of the GSS have shown that the measure has high inter-rater reliability (Clare et al., 1994). Specifically, Clare and colleagues assessed 101 subjects between the ages of 17 and 69 and administered the GSS. Copies of their responses were given to three different raters. Intraclass correlations for each of the measures was found to be very high for all GSS measures (.996 for Yield 1, .993 for Yield 2, .989 for Shift, and .993 for total suggestibility scores).

Researchers have also found reasonable internal consistency and test-retest reliability for the GSS (Merckelbach et al., 1998). In study one, researchers had 40 undergraduate students complete the GSS. Four weeks later, they brought the participants back in and had them complete the GSS again. They noted the internal consistency and stability of the scores were sufficient and that there was a modest, but significant test-retest stability (Cronbach’s alpha = 0.79, 0.78 and 0.82 for yield, shift and total suggestibility, respectively). In their second study,
Merckelbach and colleagues recruited 53 undergraduate students to complete the GSS and then view a series of slides. After a short delay, the participants were given several memory questions about the slide set, along with 10 leading questions. They noted that there was a small, but significant, correlation between GSS yield scores (i.e., the tendency for participants to yield to leading questions) and the extent to which participants acquiesced to leading questions regarding the slide set (Merckelbach et al., 1998). However, a study by Gignac & Powell (2008) found low levels of internal consistency with the shift factor (i.e., the tendency for individuals to shift their responses because of interviewer influence; $\omega^2 = .60$), though the yield scores were reliable.

**Design and Procedure**

The study used an adaptation the cheating paradigm developed by Russano et al. (2005b). Participants were randomly assigned to one of two interrogation conditions, namely Bait Questions Present ($n = 22$) vs. Bait Questions Absent ($n = 22$; see Appendix H, Appendix I for the study scripts and step-by-step procedure).

Participants were told that they were recruited for a study on individual versus team decision making (see Appendix G for the SONA recruitment notice) and were asked to solve a series of logic problems. Initially, a confederate posing as another participant was seated in the lab when the participant arrived. The pair was escorted into a testing room and informed consent was obtained (see Appendix J for a copy of the Informed Consent form). A false name was used on both the SONA recruitment notice and informed consent form in place of the actual supervisor to prevent participants from discovering the true nature of the study. The pair first read the vignette for the GSS (see Appendix L for a copy of the GSS) and then began the problem-solving phase, where the experimenter instructed them to work together on the designated “team problems” but that they must work alone on the problems designated as
“individual problems”; the experimenter left the room once delivering the instructions. The pair completed the logic problems (Appendix N), a filler task (Appendix O), and answered the GSS questions (see Appendix L). The experimenter reviewed the GSS answers and stated that the participants had made several errors and needed to review their answers again, regardless of how well the participants did on the questions. The experimenter returned, collected the GSS and then the experimenter informed the participant and confederate that there was a problem and that the experimenter needed to speak with both participants individually. The experimenter escorted the confederate out of the room and returned approximately five minutes later to speak with the participant.

Adapted from Kassin and Perillo (2017), the experimenter stated in a neutral tone that the participant and the confederate had the same incorrect answer on the target problem, and they accused the participant of sharing answers on the problem. The experimenter stated that the professor in charge of the study would be upset by the situation, and that they were not sure how the professor will handle the situation or who he would have to notify, but that the professor would consider what happened a case of cheating. The experimenter then stated that professor wanted to document what happened by having the participants sign a statement admitting to sharing answers on problems that were supposed to be solved individually (see Appendix for script). The experimenter stated that the issue needed to be resolved before anyone left the lab. Participants in all conditions were asked to provide an account of what happened and asked to sign a written confession.

Participants in the bait question condition were additionally asked the following questions, alluding to evidence against the participant that did not exist:
Would there be any reason the other participant would say that you gave them the answer to the problem?

Would there be any reason the camera footage of the experiment would show you two collaborating on the problem? (The participants were audio recorded for the interview, but were not video recorded during the logic task, as such, no camera footage exists)

If participants agreed to sign a statement following the first bait question, the experimenter would provide a statement for the participant to sign. If the participant denied the allegation or hesitated to sign, the experimenter proceeded to the second bait question. If the participant still refused to sign, the interrogation was terminated. The decision to sign or not to sign the confession was the primary dependent variable. The experimenter recorded at what point during the interview the confession occurred to determine if the specific bait question was related to when the confession occurs. One participant declined audio recording during the consent process. During this interview, the experimenter took notes to capture the responses the participant made to the cheating allegations.

Participants were fully debriefed following their confession/refusal to confess after the second bait question (see Appendix M for debriefing form). The experimenter further explained that there was no angry professor and no pending negative consequences. The experimenter explained the true nature of the study and the manipulations and directed participants to complete a Qualtrics survey, which included a probe for whether the participant knew the true purpose of the study, a rating of the amount of pressure they felt to sign the confession on a scale ranging from 0, indicating no pressure, and 10 indicating the most pressure they could imagine. Participants were also asked about their motivations for confessing (or refusing to confess; see Appendix P). Participants were assured that none of their responses would be linked to them
personally, in hopes that this would facilitate honest responses to the questions. The experimenter ensured that any questions that the participants had regarding the deception were answered. One week following the study visit, participants were contacted via email to ensure that they were not experiencing lasting psychological distress because of the deception. In the email sent, participants were provided with a list of mental health resources.

*Deviations from the Pre-Registration Plan*

Due to significant difficulties recruiting participants and volunteers to act as confederates, the study design was simplified after data were collected from 15 participants (Control Group = 8, Bait Questions Group = 7) using the original method. In the simplified version of the study, upon arrival to the lab, participants were told that they were part of the control group, and thus would be completing the logic questions alone (see Appendix I for amended study procedure and Appendix K for amended consent form). In total, 29 participants completed the study with the revised procedures (14 in the control group and 15 in the bait questions group). Participants were seated in the lab in plain view of a sealed envelope that read “Series 2 Answers”, that contained only blank pages. The process for completing the logic and GSS questions were identical to those described in the previous section.

After collecting the GSS questionnaire, the experimenter told the participants that there was a problem. In the simplified version of the study, participants were told that all of their on the question set were correct and that there was statistically no way for this to have happened without them cheating. The experimenter interviewed the participant as described above. In place of the first bait question listed above, participants in the bait condition group were asked the following:
Would there be any reason the seal on the envelope with the answer key would be broken?

The second bait question remained largely the same as the original, with some of the wording changed to match the new scenario (i.e., would there be any reason the camera footage would show you cheating on the question series; see Appendix I). As described above, participants were given an opportunity to sign the confession after each of the bait questions/prompts (if in the control group) were presented. If participants declined to confess following the two prompts, the interview was terminated, and the participants were debriefed (see Appendix M for debriefing form).

In response to the difficulties with recruitment, a monetary incentive was also offered. Upon completion of the study, participants were entered into a draw to win one of three $50 cash prizes. The exploratory analysis reported below was not included in the original OSF pre-registration. Furthermore, Fisher’s exact test was used in place of the predicted Chi-Square analysis due to the small cell sizes.

Fifteen of the 44 participants stated that they suspected that individual versus group decision making was not the true purpose of the study. However, feedback from participants following the conclusion of the study indicated that while participants suspected that the true purpose of the study was something else, they did not know that the true purpose was related to interviewing and false confessions. As such, it was determined that it would not be necessary to exclude those participants from the analysis.

**Statistical Analysis**

The results were analysed using R statistical software and JASP version 0.17.1 ([https://jasp-stats.org/](https://jasp-stats.org/)). Bayesian statistics were reported to quantify the probability of our
hypothesis given the data using a Bayes factor (conducted using R). Bayes factors were interpreted based on commonly used categories (see Table 2).

For the main statistical analysis, the independent variable was the use of bait questions during the participant interview (no bait questions versus bait questions). The dependent variable was the presence of a false confession (i.e., whether the participant signed a confession or not). Because both the independent and dependent variables are categorical, and the sample size of the cells was small, Fisher’s Exact test was used to determine if the presence of bait questions (IV) was related to false confessions (DV) among innocent suspects.

Confidence intervals and standardized effect sizes (Cohen’s $d$; Cohen, 1988) are reported to reflect the conclusions of the analysis. Additionally, we collected demographic information, including participant age, sex, and nationality (see Appendix P). Exploratory analyses were conducted to determine whether demographic variables may alter the relationship between bait questions and false confessions. For the exploratory analysis, a logistic regression was used to predict the likelihood of confession (i.e., the dependent variable), with bait questions as the primary predictor and sex, nationality, age, belief in the criminal justice system, and overall suggestibility scores (GSS; Gudjonsson, 1997) as covariates.

**Exploratory Analysis**

In addition to the statistical analysis, an exploratory thematic analysis was conducted to examine if trends existed in participants’ reasoning for confessing or not confessing. In the post-deception questionnaire, participants were provided with a text box and asked about why they chose to confess or not (see Appendix P: Post -Deception Questionnaires (Study 2). The responses were reviewed for salient themes for both those who confessed and those who did not.
Results

Descriptive Statistics

A total of 5 people confessed, with 1 being in the Bait Question condition and 4 in the Control condition. Table 6 displays participants’ demographic information (sex, age, ethnicity, previous academic integrity offences, total GSS scores, belief in truth and justice, pressure to confess). As seen in Table 6, the majority of participants identified as Canadian, were between the ages of 18-21, and did not have previous academic offences. There was a larger portion of men in the bait condition compared to the control condition. Participants in the Bait Questions condition scored slightly higher on the suggestibility scale (8.81 versus 7.95 in the Control condition), reported slightly more pressure to confess (3.95 on a 7-point Likert scale compared to 3.77) and reported slightly lower belief in truth and justice (5.27 versus 5.91). The participants in the Bait Questions condition were also younger relative to the Control condition. As participants were randomly assigned to conditions prior to arriving at the lab, the trends observed in the demographic characteristics (e.g., mostly younger men participants, higher suggestibility scores, lower belief in truth and justice) is likely an artifact of a small sample size. Compared to the general population means described by Gudjonsson (1997), the current sample had higher Yield 1 scores.
Table 6

Demographic Information

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control</th>
<th></th>
<th></th>
<th>Bait</th>
<th></th>
<th></th>
<th>Total</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
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</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>8</td>
<td>36.4</td>
<td>13</td>
<td>59.1</td>
<td>22</td>
<td>50</td>
<td></td>
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<tr>
<td>Woman</td>
<td>14</td>
<td>63.6</td>
<td>8</td>
<td>36.4</td>
<td>21</td>
<td>47.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>4.5</td>
<td>1</td>
<td>2.3</td>
<td></td>
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</tr>
<tr>
<td>Age</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-21</td>
<td>15</td>
<td>68.2</td>
<td>19</td>
<td>86.4</td>
<td>34</td>
<td>77.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22-25</td>
<td>4</td>
<td>18.2</td>
<td>1</td>
<td>4.5</td>
<td>5</td>
<td>11.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26-30</td>
<td>3</td>
<td>13.6</td>
<td>2</td>
<td>9.1</td>
<td>5</td>
<td>11.4</td>
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<td>Ethnicity</td>
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<tr>
<td>Black</td>
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<td>27.3</td>
<td>7</td>
<td>15.9</td>
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<td>Canadian</td>
<td>12</td>
<td>54.5</td>
<td>11</td>
<td>50.0</td>
<td>23</td>
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<td>Caucasian/White</td>
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<td>22.7</td>
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<td>11.5</td>
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<td>East Asian</td>
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<td>9.1</td>
<td>1</td>
<td>4.5</td>
<td>3</td>
<td>6.8</td>
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<td>South Asian</td>
<td>2</td>
<td>9.1</td>
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<td>18.2</td>
<td>6</td>
<td>13.6</td>
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<td></td>
<td></td>
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<tr>
<td>Previous Academic Integrity Offence</td>
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<td>-</td>
<td>1</td>
<td>4.5</td>
<td>1</td>
<td>2.3</td>
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<td></td>
<td></td>
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<tr>
<td>Confession</td>
<td>4</td>
<td>18.2</td>
<td>1</td>
<td>4.5</td>
<td>5</td>
<td>11.4</td>
<td></td>
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<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
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<th>SD</th>
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<tbody>
<tr>
<td>Avg. Gudjonsson Suggestibility Scale Score</td>
<td>7.95</td>
<td>5.10</td>
<td>8.81</td>
<td>4.30</td>
<td>8.39</td>
<td>4.68</td>
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<tr>
<td>Avg. Yield 1 Score</td>
<td>5.05</td>
<td>3.09</td>
<td>5.55</td>
<td>3.74</td>
<td>5.29</td>
<td>3.40</td>
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<tr>
<td>Avg. Shift Score</td>
<td>2.82</td>
<td>2.99</td>
<td>3.41</td>
<td>1.68</td>
<td>3.11</td>
<td>2.41</td>
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<tr>
<td>Avg. Yield 2 Score</td>
<td>5.23</td>
<td>3.44</td>
<td>5.68</td>
<td>3.84</td>
<td>5.45</td>
<td>3.60</td>
</tr>
<tr>
<td>Avg. Pressure to Confess</td>
<td>3.77</td>
<td>2.58</td>
<td>3.95</td>
<td>2.55</td>
<td>3.86</td>
<td>2.63</td>
</tr>
<tr>
<td>Avg. Belief in Truth and Justice</td>
<td>5.91</td>
<td>2.76</td>
<td>5.27</td>
<td>1.93</td>
<td>5.59</td>
<td>2.28</td>
</tr>
</tbody>
</table>
Assumptions

The Fisher’s Exact test and logistic regression analyses reported below met the assumptions required to perform these analyses. Fisher’s exact test requires a random sample, which was achieved through the random assignment of participants. Both the independent variable and dependent variable are required to be categorical, and the cells in the contingency table are mutually exclusive. For the logistic regression, the Variance Inflation Factor (VIF) was calculated for all the variables of interest to determine if multicollinearity was present. The VIF was high for both the ethnicity variable and the bait question condition variable, despite randomly assigning participants to conditions. As such, the ethnicity variable was removed from the analysis and the VIFs were calculated again. All VIF values were less than two, indicating no further action would be required. Cook’s distance was used to identify whether the dataset contained outliers, and none were identified.

Inferential Statistics

A Fisher’s Exact test was conducted to determine if the experimental condition was related to confession outcome (see Table 7 for the contingency table). The results indicated that experimental condition was not related to confession outcome, $p = 0.3449$, $Exp(B) = 0.22$, 95% CI [0.00, 2.50]. A Bayesian contingency table was conducted using a Poisson distribution the BayesFactor R package (Morey & Rouder, 2022). The resulting Bayes factor of 0.501 to 1 in favour of the null hypothesis indicates anecdotal evidence for the hypothesis that bait questions do not increase the risk of false confessions.
A logistic regression was used to analyze the relationship between experimental condition (Control versus Bait Question), suggestibility score (GSS Total), age, sex, ethnicity, belief in truth and justice, pressure to confess, and whether the participant confessed to cheating.

The final model used total GSS score, age, sex, belief in truth and justice, perceived pressure to confess, and condition (IVs) to predict whether the participant confessed (DV). Overall, the model was not significant, and there was insufficient evidence to reject the null hypothesis (see Table 8).
Table 8

Logistic Regression Model Summary

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimate</th>
<th>95% CI</th>
<th>z-score</th>
<th>p</th>
<th>Exp(B)</th>
<th>95% CI for Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition (Bait)</td>
<td>-1.86</td>
<td>-5.64,</td>
<td>-2.24</td>
<td>.216</td>
<td>0.16</td>
<td>3.52e^{-3}, 2.13</td>
</tr>
<tr>
<td>GSS Total Score</td>
<td>0.12</td>
<td>-0.16,</td>
<td>0.83</td>
<td>.404</td>
<td>1.13</td>
<td>0.85, 1.57</td>
</tr>
<tr>
<td>Age</td>
<td>0.32</td>
<td>0.015,</td>
<td>1.89</td>
<td>.059</td>
<td>1.39</td>
<td>1.01, 2.12</td>
</tr>
<tr>
<td>Sex (Woman)</td>
<td>-0.80</td>
<td>-3.34,</td>
<td>-0.70</td>
<td>.482</td>
<td>0.44</td>
<td>0.03, 4.21</td>
</tr>
<tr>
<td>Belief in Truth and Justice</td>
<td>0.09</td>
<td>-0.51,</td>
<td>0.32</td>
<td>.751</td>
<td>1.10</td>
<td>0.60, 2.06</td>
</tr>
<tr>
<td>Pressure to Confess</td>
<td>0.31</td>
<td>-0.16,</td>
<td>1.10</td>
<td>.273</td>
<td>1.37</td>
<td>0.85, 2.84</td>
</tr>
</tbody>
</table>

Motivations for Confessing

Examining participants’ motivations for their false confessions revealed a variety of factors influenced their decision whether to falsely confess. Notably, two participants expressed the belief that no harm could result from confessing, leading them to sign the confession. Additionally, another participant cited the researcher’s preconceived notion of their guilt as the
reason for their confession, aiming to extricate themselves from the situation (e.g., “Researcher was sure that I cheated and had already made up her mind”).

Conversely, participants frequently cited innocence as a motivation for not confessing (e.g., “I knew I didn’t cheat, so I wasn’t going to admit to something I didn’t do”). Other participants cited concern over the implied consequence of an academic integrity offence as their reason for maintaining their innocence (e.g., “I do not want to be penalized by academic integrity”). One participant cited the bait evidence as a reason for not confessing, stating that they knew that the evidence would prove them innocent.

**Discussion**

Although bait questions are permissible in Canada and elsewhere (e.g., The United States), little is known about their relationship to eliciting false confessions. The results did not show a statistically significant relationship between bait questions and false confessions. The Bayes factor indicated anecdotal evidence for the null hypothesis given the data (i.e., bait questions do not increase the risk of false confessions). The current study had a false confession rate (false confessions/no confession) of 0.13. A meta-analysis examining the false confession rates of laboratory experiments indicated an average confession rate of 0.36 for studies that used social (i.e., involving a confederate asking the participant to cheat) or individual cheating paradigms (i.e., individual is accused of cheating without the collaboration of another individual; Stewart et al., 2018). While the rate of false confessions observed in our study was lower than the average false confession rate found in a meta-analysis of false confession studies. The meta-analysis noted rates of false confessions as low as 0.03 and others as high as 0.97 (Stewart et al., 2018), and the sample size in our study was larger than all but two of the studies examined in the
meta-analysis. The difference in confession rates may be related to the small sample size of previous false confession research, as well as our small sample size.

Despite the null results, it must be stressed that further research should be conducted to increase confidence in the current findings. Specifically, there were substantial difficulties regarding recruitment of both volunteers and participants, which led to significant changes in the study procedure partway through data collection (after data were collected from 15 participants, 8 in the control group and 7 in the bait questions condition). Notably, the protocol used in the study by Perillo and Kassin (2011) was comparable to the initial procedure, and the alteration in scenario (specifically, the shift from participants’ scores matching a confederate’s scores as the rational for the interrogation to being informed that all of their answers were correct) may have compromised the study’s believability. Participants in the revised scenario may have become suspicious upon being told they answered all questions correctly, and thus saw no consequences to falsely confessing. Indeed, when comparing the distribution of confessions between the initial procedure and the revised procedure, more false confessions were observed after the change in the protocol (see Table 9). Given the small number of confessions in total, and the small number of participants who participated in the original procedure, it is impossible to determine if this difference is related to the change in procedure, the questioning practice, or if it is an idiosyncrasy in the data related to the small sample size.
Table 9

Confessions by procedure

<table>
<thead>
<tr>
<th>Condition</th>
<th>Confession</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Original Procedure</td>
<td>14 (93.3%)</td>
<td>1 (6.7%)</td>
</tr>
<tr>
<td>Revised Procedure</td>
<td>25 (86.2%)</td>
<td>4 (13.8%)</td>
</tr>
<tr>
<td>Total</td>
<td>39 (88.6%)</td>
<td>5 (11.4%)</td>
</tr>
</tbody>
</table>

Moreover, due to recruitment constraints, the study was designed to only examine false confessions; data from the participant who engaged in cheating were excluded. As such, I was unable to compare the diagnostic outcome of interviews that used bait questions compared to those that did not use bait questions. To facilitate meaningful comparisons between questioning tactics, future research should investigate the diagnosticity of bait questions (i.e., the ratio of true to false confessions elicited).

Moreover, due to recruitment challenges, the study’s small sample size limited my ability to detect statistically significant differences. Additionally, the small sample size likely contributed to the demographic differences between the Bait Questions and the Control groups, inhibiting my ability to draw conclusions: the Bait Questions condition had more younger participants who were men and scored higher on the suggestibility scale, had a lower belief in truth and justice, as well as greater perceived pressure to confess. With the Bait Questions group consisting of mostly men, and having lower beliefs in truth and justice, previous research would suggest that based on the aforementioned demographic characteristics, this group would be less likely to falsely confess. Conversely, the bait questions condition was associated with a higher perceived pressure to confess, as well as younger individuals, which are both factors linked with
higher rates of false confessions. Together, the demographic trends between the Control and Bait Questions conditions inhibits our ability to confidently draw conclusions about the effect of bait questions on false confessions. As the participants were randomly assigned to one of the two conditions prior to entering the lab, the trend in demographic characteristics reflects a limitation with the small sample size. Collecting data from a larger sample would likely result in more similar demographic profiles.

Participants in the current study had higher suggestibility scores to those found by Gudjonsson (1997). For example, across conditions, participants had a total suggestibility score of 8.39, compared to 7.5 in the general population (Gudjonsson, 1997). The difference in suggestibility could be attributed to the sample consisting of undergraduate students. Undergraduate students tend to be younger than the general population, as such, the difference in suggestibility scores could be related to the age of the participants. Due to the small sample size, it is also possible that through chance, our study recruited individuals who were more suggestible than the rest of the population.

Examining participant’ motivations for false confessions provided valuable insights into the complex dynamics at play during interrogation scenarios. For example, participants stated that they falsely confessed as they did not believe any harm could result from confessing, or that they felt pressured to confess because the interviewer had already determined they were guilty. The participants’ statements echo findings from previous research, which has shown that innocence and a presumption of guilt – commonly present in coercive interviews (Kassin, 2003; Vrij et al., 2006) – can put individuals at risk for false confessions. Proponents of the false evidence ploy (e.g., Inbau et al., 2013) might interpret the null outcomes of this study as reinforcement for the use of hypothetical evidence. Nonetheless, it's important to highlight that
innocence has been identified as a potential contributing factor to false confessions, as demonstrated in studies by Kassin (2014) and Scherr et al. (2020b). When combined with research exploring different forms of the false evidence tactic, such as bluff questions as shown by Kassin and Perillo (2011), which revealed a decrease in the effectiveness of interviews when hypothetical evidence was introduced, the results should be interpreted with caution, considering the previously mentioned limitations.

Similar to other laboratory studies, the extent to which the findings of this study can be generalized is inherently limited. However, compelling insights arise from both anecdotal evidence drawn from wrongful conviction cases, and from research focused on the false evidence ploy. These sources collectively reveal a subset of innocent individuals who, despite knowing their innocence, chose to confess. Innocent false confessors strategically deploy the fabricated evidence from the false evidence ploy as a means of extricating themselves from the immediate situation, often with an expectation of eventual exoneration (Perillo & Kassin, 2011; Santos, 2006).

While the present study implied there may be consequences to confessing (i.e., losing SONA credit, academic integrity offence), these consequences lack the same severity as confessing to an actual crime. Moreover, an essential component to precipitating a compliant false confession is a desire to leave the situation. In actual interrogation scenarios, individuals may be detained, in which case they believe confessing is the only opportunity to end the interrogation (Kassin, 2008; Santos, 2006). It would be unlikely for participants in the study to feel similarly confined or pressured to confess, as there would be no reason they could not stop participating and leave the research laboratory. Future research should expand upon the procedure to mimic the conditions of an interrogation more closely. For example, future research
could use interviewers with recognizable authority. Earlier studies have indicated that individuals are more inclined to obey directives from authoritative figures (Milgram, 1963; Tyler, 2004) or those dressed in uniforms that suggest authority (e.g., military uniforms, police uniforms; Bushman, 1988). Given that police officers are universally recognized symbols of authority, enhancing the perceived authority of the interviewer could more accurately simulate the conditions of an interrogation.

Furthermore, future studies could explore additional, or more severe, consequences for the alleged cheating. Although the present study imposed a severe consequence within the university context – the threat of an academic integrity offence and the immediate loss of a SONA credit – these repercussions are minor compared to the potential loss of freedom in an interrogation. Future research might explore the inclusion of a social consequence, such as instructing participants to confess to their classmates. Research has demonstrated that individuals convicted of crimes often encounter significant social stigma, persisting even after exoneration (Clow & Leach, 2013; more on the social stigma of confessing below). Given the compelling impact of social conformity on behavior as demonstrated by Asch (1956) and Larsen (1996) in low-stakes situations, leveraging the potential for social consequences might offer a more authentic representation of the interrogation experience.

General Discussion

Guided by previous research examining coercive interrogation practices (i.e., the false evidence ploy) and emerging research linking bait questions to memory distortions (see Crozier et al., 2020), the present research was designed to further our understanding of bait questions. Study 1 sought to understand how the public perceives bait questions. Participants found the use of bait questions as generally acceptable, regardless of whether they were used in the questioning
of a suspect accused of murder versus theft. Participants found the use of strong bait questions (i.e., those referring to DNA or fingerprint evidence) as significantly less acceptable than weak bait questions (i.e., those referring to witnesses or video footage), though this difference was not large enough to be meaningfully captured by our acceptability scale. Study 2 explored the link between bait questions and false confessions in an experimental setting. The results did not show a significant relationship between bait questions and false confessions, with Bayesian analyses indicating only anecdotal evidence for the null hypothesis.

Results from the first study suggest that the public views bait questions as acceptable in the context of investigative interviews. As such, the inclusion of bait questions is unlikely to threaten the admissibility of confession evidence per the guidelines in R v. Oickle. On the other hand, the study found a clear link between perceptions of police legitimacy (particularly perceptions of lawfulness) and acceptability ratings. Considering the dynamic nature of public perceptions of police, and how heavily these beliefs are influenced by media (see Intravia et al., 2018; Ralph, 2022), public perceptions regarding bait questions may shift in the future. Because the public’s views on bait questions may change and the emerging literature suggesting bait questions may be linked to memory distortions, it is essential that empirical research be undertaken to understand the safety and efficacy of bait questions to prevent miscarriages of justice (e.g., wrongful convictions).

Despite the relatively low consequences to confessing in study 2, those exposed to bait questions rated the perceived pressure to confess as higher than those not exposed to bait questions. Moreover, only one participant falsely confessed in the bait condition group. Together, these findings suggest that further research should be conducted to examine the effectiveness of bait questions in eliciting true confessions while minimizing false confessions.
While the number of false confessions is small, arguably, one false confession is still too many, as false confessions can be damning to the confessor, and have lasting psychological, social and financial consequences.

**Consequences of False Confessions**

It has been widely established that the average person believes that they would never confess to a crime they did not commit, and they have difficulty grasping the circumstances that lead to false confessions despite acknowledging that false confessions do occur (Henkel et al., 2008; Kassin, 2008; White, 2003). While media coverage has increased the awareness of false confessions (Henkel et al., 2008), a survey of college students and jury-eligible community members indicated that most participants believed that confessions are a strong indicator of guilt. Together, with the public’s belief that they themselves would be unlikely to falsely confess, and the bias towards believing confessions are indicative of guilt, those who falsely confess face substantial difficulties in overcoming beliefs in their guilt.

**Wrongful Convictions**

Since 1993, Innocence Canada has aided in the exoneration of 24 innocent people, each serving an average of nine years in prison prior to being exonerated. According to the Innocence Project, approximately 1/3 of exonerated cases involved false confessions caused by tactics used by investigators combined with factors related to the suspect’s vulnerability.

There is no information with regards to the prevalence of wrongful convictions in Canada. However, US scholars have conservatively estimated that between 1 and 5% of incarcerated individuals are serving time for crimes they did not commit (Vick et al., 2021). In the UK, there were 1,336 successful appeals between June 2019 and March 2020 ("Revealed: The total number of wrongful convictions made in the UK", 2020). Given the similarities in
interviewing practices between Canada, the United States, and the UK (i.e., Use of the Reid Technique versus PEACE model, recording interviews), it is reasonable to assume the prevalence of wrongful convictions in Canada is comparable. As of 2017-2018, Canada has 38,750 people incarcerated (Canada, 2020), meaning that potentially between 388 and 1,938 people are losing years of their lives due to wrongful convictions. Researchers suggest that the number of successful exonerations is just the tip of the iceberg, and false confessions are likely more prevalent than previously suggested (Drizin & Leo, 2005; Kassin, 2008). Wrongful convictions, particularly those involving false confessions, are not easily discovered and rarely publicized. Actual innocence is incredibly difficult to verify and much of our knowledge with regards to wrongful convictions is limited to the subset who were able to prove their innocence. Wrongful convictions are also difficult to track, as they are not likely to be acknowledged by police of prosecutors and rarely capture the media’s attention (Drizin & Leo, 2005).

Beginning at sentencing, those who have made false confessions face substantial barriers to clearing their names. Trial judges tend to hand down harsher sentences toward those who maintain their innocence and fail to express remorse for their actions (Leo, 2008). In addition, false confessions handicap the defendants’ efforts for post-conviction relief, as it is uncommon for criminal justice officials to take claims of false confessions and wrongful convictions seriously (Bedau & Radelet, 1987; Leo, 2008). There are no systematic reviews of the substantive basis of convictions (i.e., what evidence is actually crucial to guilty decisions) and new evidence is typically interpreted in such a way that is most favorable to the prosecution, making it unlikely that any mistakes will be corrected (Gudjonsson, 2003; Leo, 2008; Leo & Davis, 2010; Medwed, 2012; Scherr et al., 2020a). Although DNA has been instrumental in the exoneration of innocent individuals, courts and criminal justice officials tend to assume the
validity of convictions based on confession evidence. Returning to the Deskovic case, despite being aware at the time of the initial conviction that the DNA on the victim’s body did not match Deskovic and despite an overwhelming lack of physical evidence implicating him in the crime, police and prosecutors for the case continued to believe in Deskovic’s guilt, fight against his appeal and defend their actions, even after his successful exoneration (Deskovic, 2022; Santos, 2006).

After exoneration and release into the community, there is a lingering social stigma surrounding exonerees. A study by Clow and Leach (2013) asked Canadian undergraduate students to consider three groups of people: individuals who were wrongfully convicted of a crime, individuals who were convicted of a crime they did commit and people in general. Participants were then asked to complete a series of questionnaires evaluating the participants’ perceptions of the groups, as well as the levels of prejudice and discrimination they display towards each group. Researchers found that perceptions of guilty offenders and wrongfully convicted offenders differed only in that wrongfully convicted offenders were judged as more sincere and less violent than exonerees. For comparison, the group comprised of people in general was perceived as more friendly, respectful, and warm compared to both offender and exoneree groups.

Thompson and colleagues (2012) noted similar perceptions of exonerees in the United States. Undergraduate students were provided with a scenario in which some students were told the man in the scenario was an exoneree, a parolee, or a transfer student. Using the same scenario, when participants believed the man was an exoneree, they judged him to be less competitive, confident, warm, good-natured, and intelligent compared to when they thought he
was a transfer student. Compared to the parolee, exonerees were perceived as being warmer and more good-natured, but less confident and competitive.

Together, even though exonerees have been absolved of guilt in a court of law, in the eyes of the public they still carry the stigma of their original conviction. The amount of stigma exonerees face is also dependent on the specific features of their case. Social psychology research has indicated that not all stigmas are viewed equally; stigmas that are viewed as being controllable (i.e., drug addiction versus cancer) are associated with anger, judgements not to help, and no pity (Weiner et al., 1988). As such, individuals with the same stigma, such as those who are wrongfully convicted are likely to be treated differently depending on how responsible others view the exoneree to be in the conviction. Clow and Leach (2015) examined whether different types of exonerees faced different levels of stigmatization. Undergraduate students read a newspaper article about a wrongful conviction based on eyewitness identification or a false confession. Participants who believed the exoneree had falsely confessed perceived the exoneree more negatively compared to other exonerees. They rated the exoneree who falsely confessed as more likely to be perceived as actually guilty, less competent, and less warm compared to exonerees that were convicted because of a jailhouse snitch or mistaken eyewitness (Clow & Leach, 2015).

The overwhelming belief by the public, as well as many in law enforcement is that innocent people do not confess. As such, individuals who have been wrongfully convicted because of a false confession face substantially greater challenges in reintegrating into the community following their exoneration. In sum, even after exoneration, those who have falsely confessed to a crime still carry the burden and stigma of the false confession with them, with many in both law enforcement and the public continuing to believe in their guilt. It is evident that
all possible steps should be taken to prevent false confessions, due to the immense personal toll they have on affected individuals, as well as their cost to the criminal justice system and to public safety as the true perpetrator will still be free to commit additional crimes.

Despite the limitations of the current research, these studies signify a meaningful step forward in understanding bait questions, how they are perceived by the public, and whether they pose a risk for false confessions. The current research will hopefully inspire future researchers to continue examining bait questions, to gain a better understanding of bait questions and their potential impact on the criminal justice system in Canada and elsewhere.
References


[https://doi.org/10.1177/0146167288143004](https://doi.org/10.1177/0146167288143004)


[https://doi.org/10.1007/BF01067031](https://doi.org/10.1007/BF01067031)

[https://doi.org/10.1300/J158v06n01_01](https://doi.org/10.1300/J158v06n01_01)


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R. v. Oickle, 2 SCR 3 (Supreme Court of Canada 2000). https://canlii.ca/t/525h


Appendix A: Recruitment Information (Study 1)

**Study Title:** Perceptions of Police Interviewing

**Study Description:** The goal of this study is to better understand how people perceive the use of a police interviewing tactic - bait questions. You will be asked to read a brief description of the interviewing tactic and then you will be asked to rate how acceptable you find the tactic to be. You will then be asked to complete a brief demographic form. You may opt out of the study at any time while completing the survey by clicking a button on the bottom of the Qualtrics survey (available on each page of the survey) and you will still be compensated. On the final page of the Qualtrics survey (with the debriefing form), you will be provided with a code to enter into your Prolific/ MTurk profile in order to receive compensation. Following the final submission of your survey, you will be unable to withdraw as your data will be anonymized. The data will be used as part of a research study.

If you have any questions, please contact Jessica Lundy (JessicaLundy@cmail.carleton.ca) or Kirk Luther (KirkLuther@cunet.carleton.ca). This study has been cleared by the Carleton University Research Ethics Board B Clearance #119552.

**Eligibility Requirements:** Canadians, 18 years of age or older, proficient in English, and completed at least 50 HITs with 90% or greater approval rate.

**Duration:** 10 minutes, online via Qualtrics.

**Compensation:** $1.50
Appendix B: Informed Consent Form (Study 1)

<table>
<thead>
<tr>
<th>Study Title</th>
<th>Perceptions of Police Interviewing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name and Contact Information of Researchers:</td>
<td>Jessica Lundy, Carleton University, Department of Psychology</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:jessicalundy@cmail.carleton.ca">jessicalundy@cmail.carleton.ca</a></td>
</tr>
<tr>
<td>Supervisor and Contact Information:</td>
<td>Kirk Luther, Carleton University, Department of Psychology</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:KirkLuther@cunet.carleton.ca">KirkLuther@cunet.carleton.ca</a></td>
</tr>
</tbody>
</table>

Carleton University Project Clearance
Clearance #: 119552
Study Clearance Date: May 24, 2023

Invitation
You are invited to take part in a research project because you are 18 years of age or older and proficient in English. The information in this form is intended to help you understand what we are asking of you so that you can decide whether you agree to participate in this study. Your participation in this study is voluntary, and a decision not to participate will not be used against you in any way. As you read this form, and decide whether to participate, please ask all the questions you might have, take whatever time you need, and consult with others as you wish.

What is the purpose of the study?
The purpose of this study is to understand how a police interviewing technique – bait questions, is perceived by jury-eligible individuals.

What will I be asked to do?
If you agree to take part in the study, we will ask you to read a paragraph explaining what bait questions are and how they are used in police interviews. You will then be asked to read an interrogation scenario and rate how acceptable you find the interrogation tactic. Finally, you will answer a brief demographic survey. It will take approximately 10 minutes to complete all questionnaires.

Possible Benefits
You may not receive any direct benefit from your participation in this study. However, your participation may allow researchers to better understand how the general public perceives bait questions in the context of interrogations.

Compensation/Incentives
You will receive $2.80 for your participation (equivalent to $16.80/hour).
Withdrawing from the study
You have the right to withdraw from this study at any time without consequences. If you decide
to withdraw before the end of the survey, you can do so by clicking the button on the bottom of
each page of the Qualtrics survey that states “I wish to Withdraw from the Study”. This will
immediately redirect you to the debriefing form and end the survey. If you withdraw your
consent during the course of the study, all information collected from before your withdrawal
will be discarded and you will still receive compensation.

After completing the study, you will be unable to withdraw your responses as the data will be
anonymized and researchers will be unable to link individual responses to participants.

Confidentiality
We will treat your personal information as confidential, although absolute privacy cannot be
guaranteed. No information that discloses your identity will be released or published without
your specific consent. Research records may be accessed by the Carleton University Research
Ethics Board to ensure continuing ethics compliance. The data may be used for research
publications, conference presentations, and/or teaching material. However, all answers will be
numerically coded in such a way that you cannot be identified.

You will be assigned a code so that your identity will not be directly associated with the data you
have provided. All data, including coded information, will be kept in a password-protected file
on a secure computer.

Aggregate data (such as means, standard deviations for responses) will be publicly available on
OSF (Open Science Framework; https://osf.io/). Please note that no individual participant
responses will be made available, the data will not be able to be linked to you.

Data Retention
After the study is completed, your de-identified data will be retained for future research use.
Data will be kept on Carleton-supported OneDrive according to Carleton University guidelines
for 10 years following the study or until the research is complete.

Ethics review
This project was reviewed and cleared by the Carleton University Research Ethics Board B. If
you have any ethical concerns with the study, please contact Carleton University Research Ethics
Board (by phone at 613-520-2600 ext. 4085 for CUREB B or by email at ethics@carleton.ca).

Statement of consent – check box and type initials

I voluntarily agree to participate in this study. ☐Yes ☐No
Please type in your initials to indicate that you understand the above information and wish to proceed with participation the study: ____
Appendix C : Information on Bait Questions (Study 1)

In Canada, the police are not permitted to lie about the presence of evidence in suspect interviews. For example, the police cannot say to a suspect, “We found your DNA at the crime scene” if their DNA was, in fact, not found at the crime scene.

However, Canadian police are permitted to use something called ‘bait questions’. Bait questions are questions that refer to hypothetical evidence that does not exist. For example, the police may say, “What if I told you we found your DNA at the crime scene?” (when, in fact, no DNA was found).
Appendix D: Interrogation Scenario & Demographic Questionnaire (Study 1)

Imagine that the police are investigating a case of [murder/theft]. The police have apprehended a suspect. This suspect will be interrogated by the police.

Please rate how ACCEPTABLE you believe it is for the police to use the following bait question during the interrogation.

“During an interrogation, how acceptable is it for the police to use the following question: [insert question from list below]

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
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<th>4</th>
<th>5</th>
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<tr>
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<td></td>
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</table>

Question List:

Weak Bait Questions
1. Would there be any reason a witness would place you at the crime scene at the time of the crime?
2. Would there be any reason you would be on the security footage at the crime scene around the time of the crime?

Strong Bait Questions
1. Would there be any reason your DNA would be present on the [victim’s body (murder)/at the crime scene (theft)]?
2. Would there be any reason your fingerprints would be on [a weapon used during the crime/at the crime scene]?

Demographics Survey
1. What is your sex? [Open-ended]
2. What is your age? [open-ended]
3. Please indicate your ethnicity
   - o Caucasian
   - o Asian
   - o African American
   - o Middle Eastern
   - o East Indian
   - o Latin American
   - o Other: ___________________
4. In which province/territory do you currently live?
   - o Alberta
   - o British Columbia
   - o Manitoba
   - o New Brunswick
   - o Newfoundland and Labrador
   - o Northwest Territories
   - o Nunavut
   - o Ontario
   - o Prince Edward Island
   - o Québec
   - o Saskatchewan
   - o Yukon
5. What is your highest level of education completed?

- o High School
- o College
- o Bachelor Degree
- o Master’s Degree
- o PhD
- o Other: ______________
Appendix E: Police Legitimacy Scale (PLS)
Tankebe et al., 2016 – Study 1

Questions are to be presented in a random order to participants.

1. When the police deal with people, they always behave according to the law.
   1 – Strongly Disagree  2-Disagree  3-Agree  4 – Strongly Agree

2. If I were to talk to police officers in my community, I would find their values to be very similar to my own.
   1 – Strongly Disagree  2-Disagree  3-Agree  4 – Strongly Agree

3. The police act in ways that are consistent with my own moral values.
   1 – Strongly Disagree  2-Disagree  3-Agree  4 – Strongly Agree

4. The police treat citizens with respect.
   1 – Strongly Disagree  2-Disagree  3-Agree  4 – Strongly Agree

5. The police take time to listen to people.
   1 – Strongly Disagree  2-Disagree  3-Agree  4 – Strongly Agree

6. The police treat people fairly.
   1 – Strongly Disagree  2-Disagree  3-Agree  4 – Strongly Agree

7. The police respect citizens’ rights.
   1 – Strongly Disagree  2-Disagree  3-Agree  4 – Strongly Agree

8. The police are courteous to citizens they come into contact with.
   1 – Strongly Disagree  2-Disagree  3-Agree  4 – Strongly Agree

9. The police treat everyone with dignity.
   1 – Strongly Disagree  2-Disagree  3-Agree  4 – Strongly Agree

10. The police make decisions based on the facts.
    1 – Strongly Disagree  2-Disagree  3-Agree  4 – Strongly Agree

11. The police provide the same quality of service to all citizens.
    1 – Strongly Disagree  2-Disagree  3-Agree  4 – Strongly Agree

12. The police enforce the law consistently when dealing with people.
    1 – Strongly Disagree  2-Disagree  3-Agree  4 – Strongly Agree

13. The police make sure citizens receive the outcomes they deserve under the law.
    1 – Strongly Disagree  2-Disagree  3-Agree  4 – Strongly Agree

14. Crime levels in my neighbourhood have changed for the better in the last year.
    1 – Strongly Disagree  2-Disagree  3-Agree  4 – Strongly Agree
15. There are not many instances of crime in my neighbourhood.
   1 – Strongly Disagree  2-Disagree  3-Agree  4 – Strongly Agree

16. I feel safe walking in my neighbourhood at night.
   1 – Strongly Disagree  2-Disagree  3-Agree  4 – Strongly Agree
Appendix F: Debriefing Form (Study 1)

Name and Contact Information of Researchers:
Jessica Lundy, Carleton University, Department of Psychology
   Email: JessicaLundy@cmail.carleton.ca
Supervisor and Contact Information:
Kirk Luther, Carleton University, Department of Psychology
   Email: KirkLuther@cunet.carleton.ca

Project Title
   Perceptions of Police Interviewing

Carleton University Project Clearance
   Clearance #: 119552         Date of Clearance: May 24, 2023

We would like to thank you for participating in this research. Your time and effort are greatly appreciated. This debriefing information is designed to help you understand our study and why we are interested in examining your understanding of bait questions.

What are we trying to learn in this research?
The main goal of this research was to examine how a specific style of questions – bait questions is perceived in the context of a variety of crimes. In investigative interviews, police officers often use questioning tactics, such as the false evidence ploy (where they present false evidence to suspects) in order to determine if suspects are being deceitful and/or to obtain a confession. In Canada, police officers are not allowed to lie about the presence of evidence (i.e., false evidence ploy). However, they are permitted to use a variation of the false evidence ploy – bait questions. Bait questions are hypothetical questions that imply the existence of evidence that does not exist. The goal of this research is to determine how acceptable this interviewing technique is to the community, and whether its acceptability differs by the type of crime presented.

The results of the study will further contribute to our theoretical understanding of bait questions in investigative interviews and has the potential to improve investigative interviewing practices, policies, and training worldwide.

Upon completion of the study, summaries of the data, such as averages and standard deviations as well as a pre-print will be available at the following location: https://osf.io/jk87c/. Please note that the data that will be posted will not include individual participant responses and will not be able to be linked directly to you.

What if I have questions later?
If you have any remaining concerns, questions, or comments about the experiment, please feel free to contact Jessica Lundy (Principal Investigator), at: jessicalundy@cmail.carleton.ca, Dr. Kirk Luther (Faculty Sponsor), at: KirkLuther@cunet.carleton.ca
If you have any ethical concerns with the study, please contact the Carleton University Research Ethics Board-B (by phone at 613-520-2600 ext. 4085 or via email at ethics@carleton.ca).

Thank you for participating in this research!
Appendix G: SONA Recruitment Notice (Study 2)

*Note: A fictional investigator name is provided on the SONA recruitment notices, as well as informed consent form to ensure the true purpose of the study is not discovered

**Study Title:** Individual versus Group Decision-Making

**Description:** If you agree to participate in the study, after reading the informed consent form, you will be asked to complete logic puzzles a demographic questionnaire and participate in a discussion regarding the task.

**Eligibility Requirements:** 18 years of age or older and able to understand English

**Risks:** It is possible that the contents of this study may cause emotional distress or psychological discomfort. If you decide to participate and then feel uncomfortable during the study, you can withdraw at any time without penalty and researchers will direct you to relevant resources.

**Duration and Locale:** 60 minutes at A429, Loeb Building

**Compensation:** 1.0 SONA credit towards your PSYC 1001, PSYC 1002, PSYC 2001, or PSYC 2002 participation grade as compensation for your participation. Participants will also be entered into a draw for $50.

**Researchers:** Jessica Lundy (Principal Investigator); (David Kremer - Supervisor)*
Email: jessicalundy@carleton.ca

This study has been cleared by the Carleton University Research Ethics Board B Clearance # 118949

If you have any ethical concerns with the study, please contact the Carleton University Research Ethics Board-B (by phone at 613-520-2600 ext. 4085 or via email at ethics@carleton.ca).
Appendix H: Study Procedure and Script – Initial Method (Study 2)

I. Participant arrival at the lab.

When the participant arrives at the lab, the confederate is seated, waiting, in the chair closest to the lab. When the participant arrives, the experimenter explains the general nature of the study (interest in individual versus group decision making). The participant and confederate will be asked if they have heard anything about this study from peers. The experimenter will hand the participant and the confederate an informed consent form to read and sign. Once the forms are signed and collected, the experimenter hands the participant and the confederate the demographic questionnaire to complete. She then leaves for two minutes. The experimenter then returns to collect the questionnaires. At this point, the experimenter leads the confederate and participant into the lab.

II. In the lab

A. Task instructions (to be read “in order to standardize the procedure across sessions”)

The purpose of this study is to test the effect of group problem-solving on social intelligence. You all will be given a series of questions to complete. You will rotate between completing each series of questions individually or as a team. Therefore, the first series is to be completed individually. Then, for the second series, you will work as a team to answer the questions. For the third series, you will work alone.

It is important that you work alone on the individual problems and as a team for the group problems in order for our results to be usable. You will be given seven minutes for each series. First, I need you to read this story and remember as much as you can, because I will ask you about it later.

B. The task

First, the participant and confederate are asked to read the GSS vignette (see Appendix G). After they finish reading it, the experimenter takes the vignette away and hands clipboards and a question series to both the confederate and the participant and leaves the room. The experimenter returns in seven minutes to collect the Series 1 (group questions), and then hands the confederate and the participant a team series to complete together. The experimenter leaves the room and returns in three minutes to collect the questions. The experimenter then hands the confederate and the participant each the individual question series (Series 2) and leaves the room. The experimenter returns in seven minutes and picks up the series and hands the confederate and the participant the distractor task (Series 3). The experimenter returns after 7 minutes and asks the participant to answer the related questions for the GSS (see Appendix G). After 5 minutes, the experimenter will take a look at the participant (and confederate’s) answers and state the following:

"You have made a number of errors. It is therefore necessary to go through the questions once more, and this time try to be more accurate"
Two minutes later, the experimenter returns to the room, states that there appears to be a problem and asks the confederate (who will be sitting closest to the door) to follow her. The experimenter will return five minutes later and will ask the participant to come with her to another room. If the participant agreed to audio-video recording, the recording would begin at this point in the task. If participants decline the audio-video recording, the experimenter will take notes during the interview.

The experimenter then leads the participant into the interrogation room and explains:

*It appears that the two of you collaborated on the last individual question series. I was just reviewing your answers, and, statistically, there is no way the two of you could have gotten so many of the same answers without working together to answer them. This is pretty serious because it can really mess up our results. . . and are you aware of what the Carleton Honor Code is? I don’t want to get you two in trouble, but I need to know if that happened so I can let my professor know. Did you two cheat on the individual problems?*

Assuming the participant initially denies cheating, the experimenter will state in a neutral tone, “That can’t be,” and then take the participant’s demographic questionnaire and handwrite on the back:

“I admit that I shared information with the other participant on an individual problem series. Session was terminated without credit.”

The E will then date the paper and give it to the participant along with a pen. The experimenter will (depending on the condition) say:

*(No bait question): I need to get this resolved before we leave here so I can tell my professor what happened. I would like you to please read this confession and sign it.*

*(Bait): I need to get this resolved before we leave here so I can tell my professor what happened. I would like you to please read this confession and sign it. **Would there be any reason the other participant would say that you discussed answers to the individual problems?***

If the participant refuses to sign in the bait condition, E will state:

*Would there be any reason the camera footage of the experiment would show you two collaborating on the problem?*

If the participant refuses to sign following the second bait question, the session will be terminated. The participant will then be fully debriefed and probed for suspicion of the true nature of the study. During the debriefing, the experimenter will fully explain the experiment in terms of the purpose of the study, the need for deception, and that there is no angry professor or academic consequences pending. The experimenter assures the participant that helping the other student was a prosocial behavior and very admirable but emphasizes the need for laboratory integrity. The participant will then be asked to fill out an online form where they will be asked
about whether they were aware of the true purpose of their study, their motivation for confessing (or not), previous academic integrity offences, etc. (see Appendix H for post-deception questionnaires).

Afterwards, the participant is asked to tell others about the question tasks if questioned about the experiment, but not to mention the deception or true purpose of the study. The participant is then thanked and dismissed.
Appendix I: Study Procedure and Script – Post-Amendment (Study 2)

I. Participant arrival at the lab.

When the participant arrives, the experimenter explains the general nature of the study (interest in individual versus group decision making). The participant will be asked if they have heard anything about this study from peers. The experimenter will hand the participant an informed consent form to read and sign. Once the forms are signed and collected, the experimenter leads the participant into the lab. Participant will be seated and a sealed envelope with “Series 2 Answers” will be visible on the desk next to the participant. In reality, the envelope will be filled with blank pages.

II. In the lab

A. Task instructions (to be read “in order to standardize the procedure across sessions”)

The purpose of this study is to test the effect of group problem-solving on social intelligence. You will be given a series of questions to complete. You are part of the control group, therefore you will be completing each series of questions. It is important that you work alone on the individual problems and do not use outside aids in order for our results to be usable. You will be given seven minutes for each series. First, I need you to read this story and remember as much as you can, because I will ask you about it later.

B. The task

First, the participant is asked to read the GSS vignette (see Appendix G). After they finish reading it, the experimenter takes the vignette away and hands clipboards and a question series to the participant and leaves the room. The experimenter returns in seven minutes to collect the Series 1, and then hands the participant another question series. The experimenter leaves the room and returns in three minutes to collect the questions. The experimenter then hands the participant series 2 and leaves the room. The experimenter returns in seven minutes and picks up the series and hands the participant the distractor task (Series 3). The experimenter returns after 7 minutes and asks the participant to answer the related questions for the GSS (see Appendix G). After 5 minutes, the experimenter will take a look at the participant’s answers and state the following:

“ You have made a number of errors. It is therefore necessary to go through the questions once more, and this time try to be more accurate”

Two minutes later, the experimenter returns to the room, states that there appears to be a problem. If the participant agreed to audio recording, the recording would begin at this point in the task. If participants decline the audio recording, the experimenter will take notes during the interview.

The experimenter then leads the participant into the interrogation room and explains:

It appears you cheated on the last question series. I was just reviewing your answers, and, statistically, there is no way you could have gotten so many of the answers correct without looking at the answer key – these are designed to be extremely challenging. This is pretty serious because it can really mess up our results... and are you aware of what the Carleton Academic
Integrity Policy is? I don’t want to get you two in trouble, but I need to know if that happened so I can let my professor know. Did you cheat on the last set of problems?

Assuming the participant initially denies cheating, the experimenter will state in a neutral tone, “That can’t be,” and then take the participant’s questionnaire and handwrite on the back:

“I admit that I cheated on the problem series. Session was terminated without credit.”

The experimenter will then date the paper and give it to the participant along with a pen. The experimenter will (depending on the condition) say:

(No bait question): I need to get this resolved before we leave here so I can tell my professor what happened. I would like you to please read this confession and sign it.

If the participant refuses to sign the confession, the experimenter will state in a neutral tone: There is statistically no way for you to have gotten so many of the answers correct. I would like you to sign the confession.

If the participant refuses to sign the confession after the second prompt, the session will be terminated without any additional efforts taken to get participants to sign the confession.

(Bait): I need to get this resolved before we leave here so I can tell my professor what happened. I would like you to please read this confession and sign it. Would there be any reason the seal on the envelope with the answers would be broken?

If the participant refuses to sign in the bait condition, the experimenter will state:

Would there be any reason the camera footage of the experiment would show you two collaborating on the problem?

If the participant refuses to sign following the second bait question, the session will be terminated. No other efforts will be taken to have the participants sign the confession.

Regardless of the condition, after the second prompt to confess, the participant will then be fully debriefed and probed for suspicion of the true nature of the study. During the debriefing, the experimenter will fully explain the experiment in terms of the purpose of the study, the need for deception, and that there is no angry professor or academic consequences pending. The participant will then be asked to fill out an study-related questionnaire on Qualtrics while in the lab where they will be asked about whether they were aware of the true purpose of their study, their motivation for confessing (or not), previous academic integrity offences, demographic questions, etc. (see Appendix H for post-deception questionnaires).

Afterwards, the participant is asked to tell others about the question tasks if questioned about the experiment, but not to mention the deception or true purpose of the study. The participant is then thanked and dismissed.
Appendix J: Informed Consent Form (Study 2)

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<th>Study Title</th>
<th>Individual versus Group Decision-Making</th>
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<td>Jessica Lundy, Carleton University, Department of Psychology</td>
</tr>
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<td>Email: <a href="mailto:jessicalundy@cmail.carleton.ca">jessicalundy@cmail.carleton.ca</a></td>
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<td>Supervisor and Contact Information:</td>
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<td>David Kremer *, Carleton University, Department of Psychology</td>
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<tr>
<td>Carleton University Project Clearance</td>
<td>Clearance #: 118949</td>
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</table>

Invitation
You are invited to take part in a research project because you are 18 years of age or older and proficient in English. The information in this form is intended to help you understand what we are asking of you so that you can decide whether you agree to participate in this study. Your participation in this study is voluntary, and a decision not to participate will not be used against you in any way. As you read this form, and decide whether to participate, please ask all the questions you might have, take whatever time you need, and consult with others as you wish.

What is the purpose of the study?
The purpose of this study is to understand how decisions are made by individuals versus teams.

What will I be asked to do?
If you agree to take part in the study, we will ask you to complete a demographic questionnaire, a series of logic puzzles (individually, and with another participant) and then you will participate in a discussion with the researcher about your performance in the task. Your interview with the researcher at the end of study will be audio-video recorded. If you choose not to be audio-video recorded, the researcher will take notes in place of the audio recording. It will take approximately 60 minutes to complete the demographic questionnaire, the logic puzzles, and the discussion with the researcher.

Risks and Inconveniences
It is possible that the contents of this study may cause emotional distress or psychological discomfort. If you decide to participate and then feel uncomfortable during the study, you can withdraw at any time without penalty and researchers will direct you to relevant resources. There will be no consequences if you decide not to participate or withdraw from the study at any point.

Possible Benefits
You may not receive any direct benefit from your participation in this study. However, your participation may allow researchers to better understand jury decision making.

Compensation/Incentives
You will receive 1.0 SONA credit towards your PSYC 1001, PSYC 1002, PSYC 2001, or PSYC 2002 participation grade as compensation for your participation.

No waiver of your rights
By signing this form, you are not waiving any rights or releasing the researchers from any liability.

Withdrawing from the study
You have the right to withdraw from this study at any time without consequences. If you decide to withdraw before the end of the study, you can do so by informing research staff at any point during the study visit. If you withdraw your consent during the course of the study, all information collected from you before your withdrawal will be discarded and you will still receive your 1.0 SONA credit.

After the study, you may request that your data be removed from the study and deleted by notice given to the Principal Investigator (named above) within two weeks of your participation in the study, as data will be anonymized after two weeks and will not be able to be linked to you by name.

Confidentiality
We will treat your personal information as confidential, although absolute privacy cannot be guaranteed. No information that discloses your identity will be released or published without your specific consent. Research records may be accessed by the Carleton University Research Ethics Board to ensure continuing ethics compliance. The data may be used for research publications, conference presentations, and/or teaching material. However, all answers will be numerically coded in such a way that you cannot be identified. Because you will be granted course credit for taking part in the study, identifying information will be retained using a code until the course credit is granted.

As a part of the study, you will be audio recorded using a digital audio recorder. These recordings will be transferred to a password-protected laptop within twelve hours of your participation and then deleted from the audio recorder. You will be assigned a code so that your identity will not be directly associated with the data you have provided. All data, including coded information, will be kept in a password-protected file on a secure computer.
**Data Retention**
After the study is completed, your de-identified data will be retained for future research use. Data will be kept on Carleton-supported OneDrive according to Carleton University guidelines for 10 years following the study or until the research is complete. Audio-video recordings will be labelled using a numeric coding scheme, which will be used to link your questionnaire responses to your recording.

**Ethics review**
This project was reviewed and cleared by the Carleton University Research Ethics Board B. If you have any ethical concerns with the study, please contact Carleton University Research Ethics Board (by phone at 613-520-2600 ext. 4085 for CUREB B or by email at ethics@carleton.ca).

**Statement of consent – print and sign name**

I voluntarily agree to participate in this study. ___Yes ___No

I agree to be audio recorded ___Yes ___No

_________________________________________   ______________________________________
Initials of participant                        Date

**Research team member who interacted with the participant**
I have explained the study to the participant and answered any and all of their questions. The participant appeared to understand and agree. I provided a copy of the consent form to the participant for their reference.

_________________________________________   ______________________________________
Signature of researcher                        Date
### Appendix K: Informed Consent Form – Post-Amendment (Study 2)

<table>
<thead>
<tr>
<th>Study Title</th>
<th>Individual versus Group Decision-Making</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name and Contact Information of Researchers:</td>
<td>Jessica Lundy, Carleton University, Department of Psychology</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:jessicalundy@cmail.carleton.ca">jessicalundy@cmail.carleton.ca</a></td>
</tr>
<tr>
<td></td>
<td>Supervisor and Contact Information:</td>
</tr>
<tr>
<td></td>
<td>David Kremer *, Carleton University, Department of Psychology</td>
</tr>
<tr>
<td>Carleton University Project Clearance</td>
<td>Clearance #: 118949</td>
</tr>
<tr>
<td></td>
<td>Study Clearance Date: February 24, 2023</td>
</tr>
</tbody>
</table>

**Invitation**

You are invited to take part in a research project because you are 18 years of age or older and proficient in English. The information in this form is intended to help you understand what we are asking of you so that you can decide whether you agree to participate in this study. Your participation in this study is voluntary, and a decision not to participate will not be used against you in any way. As you read this form, and decide whether to participate, please ask all the questions you might have, take whatever time you need, and consult with others as you wish.

**What is the purpose of the study?**

The purpose of this study is to understand how decisions are made by individuals versus teams.

**What will I be asked to do?**

If you agree to take part in the study, we will ask you to complete a demographic questionnaire, a series of logic puzzles (individually, or with another participant) and then you will participate in a discussion with the researcher about your performance in the task. Your interview with the researcher at the end of study will be audio-video recorded. If you choose not to be audio-video recorded, the researcher will take notes in place of the audio recording. It will take approximately 60 minutes to complete the demographic questionnaire, the logic puzzles, and the discussion with the researcher.

**Risks and Inconveniences**

It is possible that the contents of this study may cause emotional distress or psychological discomfort. If you decide to participate and then feel uncomfortable during the study, you can withdraw at any time without penalty and researchers will direct you to relevant resources. There will be no consequences if you decide not to participate or withdraw from the study at any point.

**Possible Benefits**
You may not receive any direct benefit from your participation in this study. However, your participation may allow researchers to better understand jury decision making.

**Compensation/Incentives**
You will receive 1.0 SONA credit towards your PSYC 1001, PSYC 1002, PSYC 2001, or PSYC 2002 participation grade as compensation for your participation. You will also be entered into a draw to win $50 (there will be three prize draws of $50).

**No waiver of your rights**
By signing this form, you are not waiving any rights or releasing the researchers from any liability.

**Withdrawing from the study**
You have the right to withdraw from this study at any time without consequences. If you decide to withdraw before the end of the study, you can do so by informing research staff at any point during the study visit. If you withdraw your consent during the course of the study, all information collected from you before your withdrawal will be discarded and you will still receive your 1.0 SONA credit.

After the study, you may request that your data be removed from the study and deleted by notice given to the Principal Investigator (named above) within two weeks of your participation in the study, as data will be anonymized after two weeks and will not be able to be linked to you by name.

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We will treat your personal information as confidential, although absolute privacy cannot be guaranteed. No information that discloses your identity will be released or published without your specific consent. Research records may be accessed by the Carleton University Research Ethics Board to ensure continuing ethics compliance. The data may be used for research publications, conference presentations, and/or teaching material. However, all answers will be numerically coded in such a way that you cannot be identified. Because you will be granted course credit for taking part in the study, identifying information will be retained using a code until the course credit is granted.

As a part of the study, you will be audio recorded using a digital audio recorder. These recordings will be transferred to a password-protected laptop within twelve hours of your participation and then deleted from the audio recorder. You will be assigned a code so that your identity will not be directly associated with the data you have provided. All data, including coded information, will be kept in a password-protected file on a secure computer.
**Data Retention**

After the study is completed, your de-identified data will be retained for future research use. Data will be kept on Carleton-supported OneDrive according to Carleton University guidelines for 10 years following the study or until the research is complete. Audio-video recordings will be labelled using a numeric coding scheme, which will be used to link your questionnaire responses to your recording.

**Ethics review**

This project was reviewed and cleared by the Carleton University Research Ethics Board B. If you have any ethical concerns with the study, please contact Carleton University Research Ethics Board (by phone at 613-520-2600 ext. 4085 for CUREB B or by email at ethics@carleton.ca).

**Statement of consent – print and sign name**

I voluntarily agree to participate in this study. ___Yes ___No

I agree to be audio recorded ___Yes ___No

________________________
Initials of participant

________________________
Date

**Research team member who interacted with the participant**

I have explained the study to the participant and answered any and all of their questions. The participant appeared to understand and agree. I provided a copy of the consent form to the participant for their reference.

________________________
Signature of researcher

________________________
Date
Appendix L: Gudjonsson Suggestibility Scale (GSS; Study 2)

Vignette

Please read the following short story carefully. You will be asked questions about this story later in the study.

Anna and John were a happily married couple in their thirties. They had three children, two boys and a girl. They lived in a small bungalow which had a swimming pool in the garden. John worked in a bank and Anna worked in a bookshop with her sister Maria. One Tuesday morning in July the couple were leaving the house to go to work when they saw a small boy going down a steep slope on a bike and calling for help. Anna and John ran after the boy and John caught hold of the bicycle and brought it to a halt. The boy appeared very frightened but unhurt and said that the breaks on his bicycle had broken. Anna and John recognized the boy, whose name was William. He was the youngest son of their neighbours who worked for a well-known travel agency in a nearby town. Sometimes in the winter months the two couples had gone skiing together but the children of both families had preferred to stay with their grandparents who lived in the country.

*Note:* Due to time constraints, we used a shortened time interval when administering the GSS. Smeets et al. (2009) tested the effect of a shortened retention interval for administering the GSS and concluded that shortened procedures can be employed without a trade-off in reliability of the measure.
## GSS2 Scoring Sheet

<table>
<thead>
<tr>
<th>Question</th>
<th>Yielded to 1 (#)</th>
<th>Answers to Yield 1</th>
<th>Yielded to 2 (#)</th>
<th>Shift (S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Were the couple called Anna and John?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the couple have a dog or cat?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the boy’s bicycle get damaged when it fell on the ground?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was the husband a bank director?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the couple live in a small house?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the boy on the bicycle pass a stop sign or traffic lights?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was the boy frightened of the big van coming up the hill?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the boy have some minor bruises as a result of the accident?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was the boy’s name William?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the boy drop the books he had been carrying while riding the bicycle?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was Anna worried that the boy might be injured?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did John grab the boy’s arm or shoulder?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the couple recognize the boy?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the boy frequently ride the bicycle to school?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was the boy taken home by Anna or John?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was the boy allowed to stay away from school on the day of the accident?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the couple’s children sometimes stay with their grandparents?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was the boy frightened of riding the bicycle again?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was the weather wet or dry when the accident happened?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the couple have a skiing cottage in the mountains?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SCORES

<table>
<thead>
<tr>
<th></th>
<th>NON-STANDARD RESPONSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield 1</td>
<td>(max .15)</td>
</tr>
<tr>
<td>Yield 2</td>
<td>(max. 15)</td>
</tr>
<tr>
<td>Shift</td>
<td>(max. 20)</td>
</tr>
<tr>
<td>Total Suggestibility*</td>
<td>(max. 35)</td>
</tr>
</tbody>
</table>

*The total of Yield 1 + Shift.
Appendix M: Debriefing Form (Study 2)

Name and Contact Information of Researchers:
Jessica Lundy, Carleton University, Department of Psychology
   Email: JessicaLundy@cmail.carleton.ca

Supervisor and Contact Information:
Kirk Luther, Carleton University, Department of Psychology
   Email: KirkLuther@cunet.carleton.ca

Project Title
   Examining the Link Between Bait Questions and False Confessions

Carleton University Project Clearance
   Clearance #: 118949          Date of Clearance: February 24, 2023

We would like to thank you for participating in this research. Your time and effort are greatly appreciated. This debriefing information is designed to help you understand the true nature of this research and why it was important to not to disclose everything at the beginning of the study.

What are we trying to learn in this research?
The main goal of this research was to examine whether a specific style of questions influenced the rate of false confessions. False confessions, whereby an innocent individual confesses to a crime they did not commit, are one of the leading causes of wrongful convictions. For example, over 30% of the documented exonerees in the United States and Canada were wrongfully convicted based on false confessions. There is an overwhelming belief by the public, as well as many legal professionals, that innocent people would not confess to a crime they did not commit. As such, individuals who have been wrongfully convicted because of a false confession face substantially greater challenges in reintegrating into the community following their exoneration. That is, even after exoneration, those who have falsely confessed to a crime still carry the burden and stigma of the false confession with them; many in both law enforcement and the public continue to believe in their guilt. Overall, false confessions have significant negative social impacts – the immense personal toll on affected individuals, the cost to the criminal justice system, and the risk to public safety as the true perpetrator remains at large. There is evidence to suggest that bait questions may not act as intended, with bait questions serving as misinformation, impacting a suspect’s memory and causing mock jurors to recall being presented with more information indicating a suspect’s guilt than was actually presented. If bait questions are perceived as indicating the presence of evidence, the use of bait questions may increase the risk of false confessions in suspects.

We were particularly interested in whether bait questions – questions about hypothetical evidence that does not necessarily exist – led to higher rates of false confessions than other methods of questioning.

*As part of your participation, we had you complete logic puzzles alongside another participant. You were then accused of cheating by collaborating with the other participant on the logic
puzzles. The other participant was a confederate, an assistant to the researcher who takes on the role of a participant but whose actions are practiced before the beginning of the experiment. You were randomly assigned to one of two conditions for this study and were interviewed using the corresponding question type. You were either interviewed using bait questions (i.e., implying evidence of guilt) or without bait questions. The rates of false confessions for each of these groups will be compared to determine if bait questions increase the risk of false confessions. To make the results more accurately represent real-life interviews, we concealed the true nature of the study to ensure that your decision to confess (or not confess) was related to the study manipulation and not external factors.

(*after amendment the below paragraph was used in place of this paragraph)

As part of your participation, we had you complete logic puzzles. You were then accused of cheating by reviewing the answer key that was left in the room, when the envelope was filled with blank pages. You were randomly assigned to one of two conditions for this study and were interviewed using the corresponding question type. You were either interviewed using bait questions (i.e., implying evidence of guilt) or without bait questions. The rates of false confessions for each of these groups will be compared to determine if bait questions increase the risk of false confessions. To make the results more accurately represent real-life interviews, we concealed the true nature of the study to ensure that your decision to confess (or not confess) was related to the study manipulation and not external factors.

**What are our hypotheses and predictions?**
We predict that the use of bait questions during interviews will increase the number of false confessions.

**Where can I learn more?**


Is there anything I can do if I found this experiment to be emotionally upsetting? Yes. If you feel any distress or anxiety after participating in this study, please feel free to contact the Carleton University Health and Counseling Services at: 613-520-6674, or the Distress Centre of Ottawa and Region at 613-238-3311 ([http://www.dcottawa.on.ca](http://www.dcottawa.on.ca)). You can also visit the Government of Canada Mental Health Support page: [https://www.canada.ca/en/public-health/services/mental-health-services/mental-health-get-help.html](https://www.canada.ca/en/public-health/services/mental-health-services/mental-health-get-help.html)
What if I have questions later?
If you have any remaining concerns, questions, or comments about the experiment, please feel free to contact Jessica Lundy (Principal Investigator), at: jessicalundy@cmail.carleton.ca, Dr. Kirk Luther (Faculty Sponsor), at: KirkLuther@cunet.carleton.ca

If you have any ethical concerns with the study, please contact the Carleton University Research Ethics Board-B (by phone at 613-520-2600 ext. 4085 or via email at ethics@carleton.ca).

Thank you for participating in this research!
Appendix N: Logic Questions (Study 2)
(Adapted from ETS GRE Practice Questions, 2022)

Group Questions – Series 1

1. Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

Although it does contain some pioneering ideas, one would hardly characterize the work as __________.
A. orthodox
B. eccentric
C. original
D. trifling
E. conventional
F. innovative

2. Select the two answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole and produce completed sentences that are alike in meaning.

It was her view that the country's problems had been ________ by foreign technocrats, so that to ask for such assistance again would be counterproductive.
A. ameliorated
B. ascertained
C. diagnosed
D. exacerbated
E. overlooked
F. worsened

3. For each blank select one entry from the corresponding column of choices. Fill all blanks in the way that best completes the text.

In parts of the Arctic, the land grades into the landfast ice so ________ that you can walk off the coast and not know you are over the hidden sea.
A. permanently
B. imperceptibly
C. irregularly
D. precariously
E. relentlessly

Compare Quantity A and Quantity B, using additional information centered above the two quantities if such information is given, and select one of the following four answer choices:
A. Quantity A is greater.
B. Quantity B is greater.
C. The two quantities are equal.
D. The relationship cannot be determined from the information given.

A symbol that appears more than once in a question has the same meaning throughout the question.

1. **Quantity A:** The least prime number greater than 24
   **Quantity B:** The greatest prime number less than 28

   A. Quantity A is greater.  
   B. Quantity B is greater.  
   C. The two quantities are equal.  
   D. The relationship cannot be determined from the information given.

2. \( y = 2x^2 + 7x - 3 \)
   **Quantity A:** \( x \)
   **Quantity B:** \( y \)

   A. Quantity A is greater.  
   B. Quantity B is greater.  
   C. The two quantities are equal.  
   D. The relationship cannot be determined from the information given.

3. **Quantity A:** \( x^2 + 1 \)
   **Quantity B:** \( 2x - 1 \)

   A. Quantity A is greater.  
   B. Quantity B is greater.  
   C. The two quantities are equal.  
   D. The relationship cannot be determined from the information given.

**Individual Questions – Series 2**
**Questions 1 to 3 are based on this passage.**

Reviving the practice of using elements of popular music in classical composition, an approach that had been in hibernation in the United States during the 1960s, composer Philip Glass (born 1937) embraced the ethos of popular music in his compositions. Glass based two symphonies on music by rock musicians David Bowie and Brian Eno, but the symphonies' sound is distinctively his. Popular elements do not appear out of place in Glass's classical music, which from its early days has shared certain harmonies and rhythms with rock music. Yet this use of popular elements has not made Glass a composer of popular music. His music is not a version of popular music.
packaged to attract classical listeners; it is high art for listeners steeped in rock rather than the classics.

1. Select only one answer choice.

   The passage addresses which of the following issues related to Glass's use of popular elements in his classical compositions?

   A. How it is regarded by listeners who prefer rock to the classics
   B. How it has affected the commercial success of Glass's music
   C. Whether it has contributed to a revival of interest among other composers in using popular elements in their compositions
   D. Whether it has had a detrimental effect on Glass's reputation as a composer of classical music
   E. Whether it has caused certain of Glass's works to be derivative in quality

2. Consider each of the three choices separately and select all that apply.

   The passage suggests that Glass's work displays which of the following qualities?

   A. A return to the use of popular music in classical compositions
   B. An attempt to elevate rock music to an artistic status more closely approximating that of classical music
   C. A long-standing tendency to incorporate elements from two apparently disparate musical styles

3. Circle the sentence that distinguishes two ways of integrating rock and classical music.

   Compare Quantity A and Quantity B, using additional information centered above the two quantities if such information is given, and select one of the following four answer choices:

   A. Quantity A is greater.
   B. Quantity B is greater.
   C. The two quantities are equal.
   D. The relationship cannot be determined from the information given.

   A symbol that appears more than once in a question has the same meaning throughout the question.
4. 

Figure 1

\[ PQ = PR \]

Quantity A: \( PS \)
Quantity B: \( SR \)

A. Quantity A is greater.
B. Quantity B is greater.
C. The two quantities are equal.
D. The relationship cannot be determined from the information given.

5. \( \text{Quantity A: } 2^{30} - 2^{29}/2 \)
   \( \text{Quantity B: } 2^{28} \)

A. Quantity A is greater.
B. Quantity B is greater.
C. The two quantities are equal.
D. The relationship cannot be determined from the information given.

6. \( w > 1 \)

\( \text{Quantity A: } 7w - 4 \)
\( \text{Quantity B: } 2w + 5 \)

A. Quantity A is greater.
B. Quantity B is greater.
C. The two quantities are equal.
D. The relationship cannot be determined from the information given.
Appendix O: Distractor Task (Study 2)

1. What are five animals with the letter “u” in their name?
2. What are six items you could find in a toolbox?
3. Solve this equation: 6 + (8 x 4) = ________ +11
4. Solve this equation: 54 – (6 x 3) = 23 + __________
5. What are twelve things you would expect to see at the beach?
6. What is the 20th letter of the alphabet?
7. Name six genres of music.
8. Name six genres of movies.
9. Name 15 countries.
10. Name 4 of the 7 wonders of the world.
Appendix P: Post-Deception Questionnaires (Study 2)

*Note, these will be completed online via Qualtrics after the debriefing

Demographic Survey

1. What is your sex? [open-ended]
2. What is your age? [open-ended]
3. What is your nationality? [open-ended]

Risk Factor Questions

1. Please rate your agreement with the following statement: I believe that truth and justice will prevail in the criminal justice system.

<table>
<thead>
<tr>
<th>Completely Disagree</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Completely Agree</th>
</tr>
</thead>
</table>

2. Do you have a previous academic integrity offence?
   a. Yes
   b. No

3. How pressured did you feel to sign the confession?

<table>
<thead>
<tr>
<th>No pressure at all</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Most pressure I could imagine</th>
</tr>
</thead>
</table>

Other Questions

1. During the study, did you suspect that true purpose of the study was not individual versus team decision-making?
   A) Yes
   B) No

2. What is the motivation behind your decision to confess or not to confess? [Open-Ended]