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What You Say Matters: The Influence Of Alibi Content On Memory And Forensically Relevant Judgments

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WHAT YOU SAY MATTERS:
THE INFLUENCE OF ALIBI CONTENT ON MEMORY AND FORENSICALLY
RELEVANT JUDGMENTS

by

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A thesis

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Master of Arts

In the program of

Psychology

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Master of Arts, July 2012

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Discussion of alibi believability has typically focused on the influence of the strength of the corroborating evidence. Little is known about the influence of the content of alibi narratives on legal judgments. The current studies explored the role of moral desirability of alibi activities on judgments about an alibi, the strength of the evidence against a suspect, and the probability of the suspect's guilt as well as on recall performance. The role of Right-Wing Authoritarianism (RWA) and the alibi context were also evaluated. Alibi content did not affect judgments about alibis or evidence, but did influence perceptions of probability of suspect guilt. Morally undesirable and desirable alibis were both more memorable than neutral alibis. RWA was related to participants' decisions regarding the alibi, the physical evidence, and the suspect's likelihood of guilt. Finally, statements described as alibis were viewed with greater skepticism than statements described as narratives.

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The discovery that many wrongfully convicted individuals offered alibis that were not believed has led psychologists to develop a psychology of alibis centred on the question of what makes a 'good' or effective alibi. Investigation has generally focused on how the quality of corroborating evidence influences evaluators' judgments about the credibility of the alibi and determinations of the guilt of the alibi provider. The current research reflects on a different aspect of alibi evaluation by examining whether the content of the alibi narrative itself influences evaluators' willingness to believe it. While many characteristics of alibi content may be relevant, the present research has focused on one facet: the moral desirability of the activities described in the alibi. There is theoretical and empirical support for two competing hypotheses. Compared to neutral statements, alibis that describe morally undesirable alibis may be perceived as less believable due to evaluators forming a negative implicit personality theory about the provider. Conversely, they may be evaluated as more believable due to an assumption that the provider is primarily motivated by honesty to disclose his or her activities. The two current studies aim to clarify the influence of moral desirability of alibi content on forensically relevant judgments, while also considering its effect on recall as well as the role of Right-Wing Authoritarianism. However, before delving into these issues it is important to consider legal and psychological science conceptualizations of alibis as well as the literature on alibi generation and believability judgments.

In Latin, the word alibi means “elsewhere” (Duhaime, n.d.). The term is also used in the legal setting to refer broadly to a statement that an individual was not present during a crime, though no universally accepted definition currently exists (Burke, Turtle, & Olson, 2007). In Canada, various Supreme Court justices have discussed the issue of alibis in their decisions. In *R v Haynes*, Justice Townshend wrote “[a]n alibi means proof of the absence of the accused at the time the crime is supposed to be committed, satisfactory proof that he is in some place else at the time.” When proffered, alibis can be a key piece of evidence in criminal investigations and trials. An alibi that is accurate and supported by strong evidence provides a sufficient – though not necessary – condition to determine that the suspect or defendant is not guilty of a particular crime; if the jury determines that an alibi is correct, it “must return a verdict of not guilty” (*R v Hibbert*). Legally speaking, the alibi comprises two parts: the narrative itself and evidence pointing to its veracity, if available. Both must be present for an alibi defense to be successful.

An alibi generally falls into one of three categories: true, fabricated, or mistaken (Burke, Turtle, & Olson, 2007). A true alibi is an accurate account of an innocent person’s whereabouts at the time the crime was committed. The other two types of alibis are factually incorrect, but for different reasons. A fabricated alibi is an intentionally false statement about the alibi provider’s whereabouts at the time of the crime. With this type of alibi, the provider is concerned with keeping his or her true

activities unknown. The alibi provider may be guilty, but it is possible that he or she has another reason to conceal the truth. Finally, a mistaken alibi is one where a memory error has occurred. At the time a mistaken alibi is given, the provider genuinely believes in its veracity, but the alibi is not objectively true. In *R v Hibbert*, the Justices summarize Canadian law with respect to alibis, stating that a disbelieved alibi alone is not sufficient to infer the guilt of the accused. Only evidence of deliberate deception with respect to the alibi may be used as an indication of guilt. Legally, an alibi that is incorrect but offered honestly is without evidentiary value.

When an alibi is given, the players in the legal system must determine whether the alibi is accurate and the provider is honest. Unfortunately, not all true alibis are believed. Approximately 25% of the first 157 cases of individuals exonerated due to the efforts of the Innocence Project – a group in the United States that uses DNA evidence to exonerate innocent individuals – included a “weak alibi” or “no alibi” as a contributing cause of the false conviction (Burke, Turtle, & Olson, 2007). Naturally, it is not possible to determine the objective accuracy of these alibis with any degree of certainty (i.e. it is not possible to distinguish between true and mistaken alibis with the information available), but given that the providers were innocent, it seems likely that few, if any, of the alibis were fabricated. There are many reasons why an alibi might be considered ‘weak,’ but it appears to refer to a lack of strong corroborating evidence (Burke & Turtle, 2003). Currently, no clear legal definition of a ‘weak alibi’ exists (Burke

& Turtle, 2003), though Olson and Wells (2004) have provided psychology researchers with a taxonomy of alibi strength to inform their investigations.

Ironically, in many of the Innocence Project's cases, an eyewitness who incorrectly identified the suspect was believed, while a presumably true alibi was not (Burke, Turtle, & Olson, 2007). An eyewitness account is among the most compelling types of evidence that can be introduced at trial (Overbeck, 2005). Eyewitness confidence has been cited as the primary reason that identification testimony is so persuasive. When asked directly, both research participants and members of the legal community indicate that they believe that confidence is useful to predict eyewitness accuracy (Benton, Ross, Bradshaw, Thomas, & Bradshaw, 2006; Kassin & Barndollar, 1992; Smith, Kassin, & Ellsworth, 1989; Schmechel, O'Toole, Easterly, & Loftus, 2006; Yarmey & Jones, 1983, but see Read & Desmarais, 2009). Laboratory research in which eyewitness confidence is manipulated directly is consistent with the results of survey research, indicating that eyewitness confidence influences jurors' judgments regarding eyewitness accuracy (e.g. Cutler, Dexter & Penrod, 1990; Leippe, Eisenstadt, Rausch, & Seib, 2004; Semmler, Brewer, & Douglass, 2012). Reliance on confidence as an index of accuracy is problematic, however, as confidence is malleable and can be inflated between the initial identification and testimony at trial (Leippe, 1980) and research has generally shown that confidence is a poor predictor of accuracy (e.g. meta-analysis by Sporer, Penrod, Read, & Cutler, 1995; but see Lindsay, Read, & Sharma, 1998 for an

opposing view). Misconceptions about how memory works as well as a lack of obvious reasons for an eyewitness to lie may also contribute to jurors' faith in stranger identifications. However, the literature on eyewitness identifications show them to be fraught with error (for example, Brigham, Maass, Snyder, & Spaulding, 1982; Devenport, Penrod, & Cutler, 1997; Krafka & Penrod, 1985; Palmer, Brewer, & Weber, 2010). Nevertheless, jurors tend to rely heavily on eyewitness testimony (Overbeck, 2005) and the persuasiveness of an eyewitness identification, even an incorrect one, can rarely be successfully countered by even a strong alibi (Sanders, 1984).

True Stories: Rejected Alibis of Innocent Suspects

On July 29, 1985, Steven Avery spent the day shopping with his wife and five children in Manitowoc County, Wisconsin. That same day, Penny Ann Beerntsen was jogging along the shore of Lake Michigan near Two Rivers, WI, when a male assailant grabbed her from behind, dragged her into a wooded area, sexually assaulted her, then choked her until she lost consciousness. Avery quickly became the prime suspect in the case because of his past convictions and an allegation that he had attempted to abduct the wife of a police officer six months before Beerntsen's assault. Beerntsen identified Avery in a photo lineup and subsequent live lineup, though both are now considered to have involved extremely biased procedures. Avery was tried in December of 1985. His defense included sixteen alibi witnesses, including a clerk from a store in Green Bay, WI, 45 miles away from the scene of the crime, who testified that Avery and his family

had purchased a gallon of paint from her just over one hour after the time of the crime. Despite his strong alibi, Avery was convicted of sexual assault, false imprisonment, and attempted murder on the basis of the victim's identification. On September 11, 2003, after spending 17.5 years in prison, Steven Avery was exonerated of these crimes based on a re-analysis of DNA evidence that also revealed the identity of the true perpetrator, Gregory Allen. Despite initially being a suspect and having been prosecuted for an almost identical crime two years previously, Allen was not thoroughly investigated by police in this case and his photo was never shown to Beerntsen. Unfortunately, Allen committed several sex crimes after 1985 that might have been prevented had Avery not been convicted in his place (Findley, 2011; Innocence Project, n.d.; Northwestern Law, n.d.).

Of course, examples of miscarriages of justice and disbelieved true alibis are not found only in the United States. David Milgaard was passing through Saskatoon on the day Gail Miller was murdered, January 31, 1969. He and two friends, Nichol John and Ron Wilson were travelling from Regina to Alberta and were in Saskatoon to meet another friend, Albert Cadrain. Suspicion fell on Milgaard after Cadrain contacted the Saskatoon police and reported that he had seen blood on Milgaard's shirt on the day of the murder. Milgaard presented an alibi to police that was not corroborated by any of his friends. That morning, Milgaard, John, and Wilson were searching for Cadrain's residence, though uncertainty remains as to exactly what they were doing and where

they were, as their accounts have changed over time. After extensive interviews with police, John and Wilson also implicated Milgaard. Later, Cadrain admitted to lying to police to get the \$2000 reward for information about Miller's death and both John and Wilson recanted their testimony. Here, the police believed the wrong people; Milgaard's true alibi was rejected by police on the basis of deceptive statements from others. Ironically, the police interviewed the true perpetrator, serial rapist Larry Fisher, four days after Miller's murder. It appears that Cadrain's statement and an investigating officer's opinion that Milgaard's statement was "too vague" (McCallum, 2000, pp. 234) were sufficient to draw attention away from Fisher. By the time of his exoneration due to DNA evidence, David Milgaard had spent more than twenty years in prison (Association in Defence of the Wrongly Convicted, n.d.; CBC News Online, 2008; Star Phoenix Saskatoon, 2008).

These cases, and many others, provide a compelling illustration of some of the factors that contribute to wrongful convictions: eyewitness misidentifications, inadequate investigations, false testimony from witnesses, and an alibi that was likely true, but was not believed. Evidence from false conviction cases show that disbelief of genuine alibis is a legitimate concern in the legal system, so the question must be asked: why were these alibis not believed?

In her Master's thesis, Elizabeth Olson (2002) proposed a model for investigating alibis empirically, which was described in detail by Burke, Turtle, and Olson (2007) and

used for the first time by Olson and Wells (2004). Olson divided alibi exploration into two domains, each with two phases. The Generation Domain is concerned with how individuals who are asked to provide alibis for themselves remember and report a narrative for their whereabouts at the relevant time (Story Phase) and go about producing evidence to support their claims (Validation Phase). In the Believability Domain, the alibi and the supporting evidence are scrutinized and evaluated by the individuals who come into contact with it, including police officers, lawyers, journalists, and members of the public (Evaluation Phase). If the case goes to trial, a decision about the guilt of the accused (Ultimate Evaluation Phase) is made in the context of all of the available evidence. Within this model, it is possible to reject an alibi and subsequently determine that the accused is innocent of the crime in the Ultimate Evaluation Phase – the alibi provider could be mistaken or could be lying to protect someone else – but it is not possible to believe the alibi is accurate and also determine that the accused is guilty (Burke, Turtle, & Olson, 2007; Olson, 2002).

Alibi Generation and Autobiographical Memory

The utility of alibis as a means of determining the guilt or innocence of a suspect is only defensible so far as innocent people can produce alibis that are accurate and corroborated by strong evidence; otherwise, alibis are not diagnostically useful in separating guilty and innocent suspects (Olson & Charman, 2011). Providers may well report alibis that are factually incorrect for various reasons (Burke, Turtle, & Olson,

2007), but they may also be unable to remember their activities during the time of the crime or may be unable to provide enough corroborating evidence to produce a convincing alibi (Olson & Charman, 2011). In their first experimental session, Olson and Charman (2011) asked participants to report two alibi narratives from 3 days earlier and two from 6-14 weeks earlier along with the evidence they expected to be able to produce to corroborate them. Participants were then given 48 hours to corroborate their alibis before the second experimental session. The majority of the participants (88% at the initial interview and 92% after investigation) provided alibis, but over one third (36%) of the alibis required either a change to the narrative itself or to the corroborating evidence after investigation. In more than three quarters (78%) of the changes, the alibi became weaker, based on a modified version of Olson and Wells' (2004) taxonomy, due to a change of narrative or loss of evidence. Both are circumstances that are likely highly suspicious to alibi evaluators, despite the fact that without clear evidence of deceptive intent, alibi change should not be used as evidence of guilt. The high rate of alibi change demonstrated that it may not be justifiable to assume that innocent suspects should be able to produce accurate alibis. Participants had memory difficulty in the Story Phase generating accurate alibi reports and determining the evidence they could produce to support them, though they did not hesitate to provide alibis. Problems also occurred in the Validation Phase when participants discovered that strong corroborating evidence was more difficult to collect than they had anticipated.

Olson and Charman's (2011) study demonstrates how the examination of alibis is intimately connected to the study of memory. Fundamentally, an alibi is a memory report, so memory processes are an essential component of the study of alibis. Of particular interest is autobiographical memory, the memory for events experienced by or related to the self (Matlin, 2005). Memory is a complex, dynamic set of conscious and unconscious processes. Long-term memory, the accumulation of information from a lifetime of experiences (Matlin, 2005), is typically conceived as comprising encoding, retention, and retrieval. Each of these components has an important role within alibi generation, as alibi providers must encode the relevant events into memory, retain them over time, and reconstruct them upon request. A substantial body of research exists discussing the effect of memory processes on eyewitness testimony (e.g. Lindsay, 2007), a domain that has led to positive changes in the administration of eyewitness identification procedures. Many of the findings from the eyewitness literature are also relevant to issues surrounding alibi providers and alibi witnesses (Burke & Marion, 2012), as discussed in the following sections.

Encoding

During the encoding phase, information is acquired through the sensory organs and enters memory (Buckner, 2000). Attention is a primary consideration during the encoding phase, as information that is not attended to will generally not enter the explicit memory system. Baddeley and Hitch's (1974) memory model requires

information to be processed in working memory before entering long-term memory.

Their model of working memory is divided into three main components (McLeod, 2008). The Visuo-Spatial Sketchpad processes visual information, the Phonological Loop processes auditory and written information, and the Central Executive manages the short-term memory system and deals with complex cognitive tasks. In working memory, the inputs received from the senses are processed and strengthened before reaching long-term memory. Failure to process the information in short-term memory will typically prevent it from reaching long-term storage.

The physical capacity of the sensory organs and limited attentional resources affect what available information is encoded. For example, two witnesses observing the same crime from the same vantage point will differ in their sensory perceptions if one is visually impaired. As well, attention depends on an event's "novelty, sensory characteristics, [...] personal relevance or salience, emotional meaning and valence, and features of the witness, such as his or her motivation to remember the event" (Read & Connolly, 2007 p. 122). The characteristics of the particular crime influence attention. At the time of most serious or violent crimes (e.g. aggravated assault), the perpetrator, the victim, and any eyewitnesses are likely aware that a significant event is unfolding. In cases of fraud and some types of theft, victims and witnesses may only become aware that a crime has occurred well after the fact, and have no reason to pay particular attention during the crime itself. For most individuals, crimes are novel events and they

have personal relevance and salience. This is particularly true for victims, but crimes are also salient and personally relevant to witnesses. However, the fear experienced by victims and witnesses during a crime may result in a level of physiological arousal that is detrimental to encoding.

Alibi providers are typically not as fortunate as eyewitnesses in terms of encoding. With most honestly reported alibis, there is no reason at the time to believe that recalling the particular event will become important (Burke, Turtle, & Olson, 2007). The details of events like going to work or school, cooking and eating, watching television, and water cooler conversations may not be encoded particularly well, due to their generally low salience, novelty, and emotional content. But these are the type of events that make up a typical day for most people. Given that an honest alibi provider was likely engaged in relatively mundane activities, he or she may have a difficult time recalling them at all, let alone in sufficient detail to satisfy investigators. Often, alibi providers with poor memories for the relevant times will report what they typically do at that time during the week rather than what they were actually doing (e.g. Charman, Cahill, Leins, & Carol, 2010). Even if an accurate alibi is provided, witness testimony that corroborates it may be difficult to obtain because alibi witnesses' memories are just as vulnerable to poor encoding as alibi providers' for the reasons outlined above (Burke, Turtle, & Olson, 2007).

Retention

After an event is encoded, it must be stored in long-term memory, but not every piece of information that is encoded is retrievable. In the 1800s, the German philosopher Hermann Ebbinghaus described what is now referred to as the Ebbinghaus Forgetting Curve (Ebbinghaus, 1885/1964). It is characterized by a rapid decline in recall of learned information, followed by a gradual loss for an extended period of time (Wixted & Ebbesen, 1991). The Forgetting Curve has been discussed in the context of eyewitness memory and general facial recognition (see meta-analysis by Deffenbacher, Bornstein, McGorty, & Penrod, 2008). Eyewitness identifications often take place days, weeks, months, or years after a crime occurred. Typically, the shorter the delay between witnessing an event and completing an eyewitness identification task, the higher accuracy will be (e.g. Deffenbacher, et al., 2008; Lindsay, Read, & Sharma, 1998). In an experiment by Turtle and Yuille (1994), participants recalled 43% fewer details about a videotaped event after a three-week delay than they had immediately after they had viewed the tape. Simple forgetting can be due to a lack of retrieval cues or interference from memories for events that occurred before or after the event in question. For instance, retrieval of the events of a particular work day could be hampered by memories for other days at work.

However, not all encoded memories are later forgotten. Increased rehearsal and elaboration typically result in improved memory performance (Read & Connolly, 2007).

Of course, some kinds of memories are more likely to be rehearsed than others. For example, emotionally charged events are more likely to be rehearsed and discussed than more neutral events (Read & Connelly, 2007). As well, decay is more pronounced for schema-irrelevant crime details than for either schema-consistent or schema-inconsistent details (Tuckey & Brewer, 2003).

Beyond simple forgetting, memories for events can become distorted in response to post-event information. The seminal experiment of memory distortions in the legal context was conducted by Loftus and Palmer (1974). They showed participants videos depicting car accidents. Estimates of the cars' speed were significantly higher when participants were asked how fast the cars were going when they *smashed* into each other than when the question used the verb *hit* instead. Further, after a one week delay, participants in the *smashed* condition were more likely to erroneously report the presence of broken glass in the film than those in the *hit* condition. The change of one word in one question was sufficient to increase the rate of memory distortions in that group for a detail that is consistent with schemas of a car accident. Subsequent research has suggested that individuals are more vulnerable to memory distortions as a result of post-event misinformation when the original memory has begun to fade with the passage of time (Loftus, Miller, & Burns, 1978), a finding that is particularly relevant in the forensic context, where witnesses and suspects (i.e. alibi providers) may be asked to recall events that occurred years in the past.

Schmolck, Buffalo, and Squire (2000) used the O.J. Simpson murder trial to investigate memory distortion. O.J. Simpson, a famous American football player and actor, was accused of murdering his wife, Nicole Brown Simpson and her friend Ronald Goldman. The case has been described as “the most publicized murder case in history” (Price & Lovitt, 1997). Simpson’s lawyers were able to systematically discredit much of the prosecution’s evidence – most notably when, at the urging of the prosecution, Simpson attempted and failed to put on a bloody leather glove that was allegedly worn by the culprit. Simpson was ultimately acquitted of all charges.

Three days after the end of the trial, Schmolck and colleagues (2000) asked college students to report how they first learned about the verdict in free-form narratives as well as responses to specific questions. They were tested again either 15 or 32 months later and their responses were compared to their initial memory reports for accuracy. In the 15-month group, 50% of the participants’ responses were considered to be highly accurate (i.e. consistent with their previous statement), compared to 29% in the 32-month group. As well, when participants in the different groups were extremely inaccurate, it was for different reasons. In the 15-month group, 21.4% of the low accuracy scores were due to “don’t remember” responses, while 10.7% were due to major memory distortions. This pattern is reversed in the 32-month group, where low accuracy was more likely to be the result of major distortions (40%) than “don’t remember” (5.7%) responses. This study is particularly applicable to memory

malleability in forensic contexts because the memory distortions were not caused or otherwise systematically manipulated by the researchers, nor were the events to be recalled created or orchestrated by them; most studies of memory malleability show that participants can be led to or tricked into distorting their memories for events, but here distortions arose due to natural memory processes. Not only do memories become less accurate over time due to forgetting, they also are vulnerable to distortion, particularly with longer delays between encoding and retrieval.

Retrieval

Assuming that the memory for the relevant time period was encoded and has survived relatively intact over time without significant distortions, it then must be retrieved from long-term memory. Adequate cues are necessary for the explicit retrieval of memories. These retrieval cues may not be easily accessible (Burt, Kemp, & Conway, 2004). Even if an innocent suspect has encoded and retained the memory for the events that would provide an alibi, there is no guarantee that he or she will be able to retrieve that memory during police questioning.

The activation of schemas has the potential to further complicate the retrieval process. Individuals frequently have event schemas – or scripts – for common activities, such as a first date, grocery shopping, or a trip to a movie theatre (e.g. Bower, Black, & Turner, 1979; Schank & Abelson, 1977). As discussed previously, it is precisely these types of activities that are most likely to be featured in an alibi statement.

Event schemas have been shown to affect what details of a criminal event are attended to and encoded by witnesses (Tuckey & Brewer, 2003) and what details are retrieved (e.g. Brewer & Nakamura, 1984; Taylor & Crocker, 1981). Greenberg, Westcott, and Bailey (1998) showed participants a slide show depicting a typical robbery in a 7-11 store, based on common details about robberies described by participants in a pilot study. In one version, three central script events (i.e. events that were mentioned by 75% or more of the participants in the pilot study, such as the robber taking the money from the cashier) were omitted and in another, three peripheral events (i.e. consistent with a robbery schema, but infrequently mentioned, for example the robber placing the money in his pocket) were removed. Participants were asked if they recalled seeing these six critical events depicted in the slides. Higher false positives were found for central details than peripheral details, particularly with a longer retention interval. Thus, participants used event schemas to fill in their memories for the robbery and reported witnessing events that they did not.

Although these studies are specifically focused on eyewitness memory, their implications are relevant to the alibi context as well. Alibi providers will likely have scripts for the commonplace events that are most likely to feature in an alibi. As the specific event may have been poorly encoded and retained, alibi providers may be increasingly reliant on scripts to fill in the gaps in their memories, which may lead them to be more likely to make errors.

An additional stream of relevant research has examined the actual and perceived relationship between motivation and recall. According to previous research, motivation to remember at time of encoding has a positive effect on recall, whether motivation is induced by tangible reward (e.g. Festinger, Marlowe, Croft, Dugosh, & Arabia, 2009; Lustig & Witryol, 1977) or reward and study instructions (e.g. Roebbers & Fernandez, 2002). Motivation at encoding is associated with attention (Tompsonsky & Tinsley, 1996), which leads to improved encoding. However, motivation at retrieval has not shown a facilitative effect on recall, even though evaluators believe that it does (Loftus & Wickens, 1970; Naveh-Benjamin, Craik, Gavrilescu, & Anderson, 2000; Olson & Charman, 2011).

For example, Kassam, Gilbert, Swencionis, and Watson (2009) provided their participants with a set of six yearbook-style photos and gave them two minutes to memorize the five facts associated with each photo. When an incentive to recall the facts associated with the photo of Beryl White was presented before the photos were viewed, recall for those facts was enhanced compared to a control group who was not offered an incentive. Presenting the incentive after participants viewed the photos did not lead to better recall than the participants in the control group. However, participants exposed to the procedures of the experiment predicted that motivation to remember would be equally effective at enhancing memory compared to the control group, regardless of when it was presented. An alibi provider is likely to be extremely motivated to recall his

or her whereabouts during an interview with police. Unfortunately for him or her, not only does motivation at retrieval fail to facilitate recall, evaluators will become suspicious when the recall enhancement they expect to happen does not.

Taken together, these results suggest that it may be exceedingly difficult for innocent alibi providers to produce an accurate, detailed alibi that is supported by alibi witnesses. Mundane events, which are commonly part of alibis, are less likely to be encoded, retained, or retrieved, by alibi providers or alibi witnesses. These memories are also vulnerable to distortion from post-event misinformation as well as from leading questions and the activation of event schemas, particularly with a longer delay. As well, motivation at recall does not facilitate memory performance, despite what police officers and jurors may believe.

Alibi Believability

After an alibi is generated, it enters the Believability Domain, where it is evaluated and a final determination is made as to the guilt of the provider (Olson, 2002). Olson and Wells (2004) provided the first systematic evaluation of alibi believability and produced a taxonomy of alibi strength in terms of the quality of the corroborating evidence, the proof that supports the story. Two types of evidence can be produced to corroborate an alibi: physical evidence and testimony from a witness. The former includes evidence like video surveillance footage, credit card receipts, or speeding tickets, while the latter includes statements from friends, relatives, acquaintances, or

strangers. The important consideration for both types of evidence is that they must show that the alibi provider was at a particular location other than the crime at the relevant time. Both location and time must be accounted for if an alibi is to be successful (Burke, Turtle, & Olson, 2007; Olson & Wells, 2004).

In their investigation, Olson and Wells (2004) used ease of fabrication as the basis for their manipulations of physical and person evidence. For example, a surveillance video with a date/time stamp that clearly shows the alibi provider being present somewhere away from the crime scene would be more difficult to fabricate than a credit card receipt. With the technology available today, creating a false credit card receipt would not present a considerable challenge. Additionally, the possibility exists that another individual used the alibi provider's credit card and forged his or her signature. The bank surveillance video would be relatively more difficult to fabricate or tamper with.

With respect to person evidence, conventional wisdom suggests that a family member or close friend – someone who has an interest in the outcome of a trial or investigation – would be more easily convinced to corroborate a false alibi than a stranger, though this assumption has recently been questioned (Marion, 2010). To this end, Olson and Wells (2004) created alibis that varied based on the strength of the physical evidence (none, easy to fabricate, and difficult to fabricate) and person evidence (none, motivated familiar other, non-motivated familiar other, non-motivated

stranger) that was available and asked participants to indicate how believable they found the alibis to be.

The strength of both types of evidence contributed to determinations of alibi believability. Interestingly, the strength of person and physical evidence had an interactive effect with respect to believability. The strength of the person evidence influenced believability judgments only when there was no physical evidence to support the alibi. In this condition, the corroboration of a non-motivated familiar other or a non-motivated stranger led believability ratings to be significantly higher than when there was no person evidence. The non-motivated stranger produced higher believability ratings than the non-motivated familiar other, though the difference was not significant. Finally, when the corroboration came from a motivated familiar other, believability judgments were not significantly different from conditions with no person evidence when there was no physical evidence.

As well, the strength of the physical evidence was found to influence believability judgments at all levels of person evidence except for the non-motivated stranger, where the strength of the physical evidence was irrelevant. Within the other three levels of person evidence, alibis were most believable with physical evidence that was difficult to fabricate and least believable when there was no physical evidence to corroborate the alibi.

Overall, Olson and Wells (2004) concluded that in most cases physical evidence

provides more potent corroboration than person evidence. Indeed, person evidence in this study only affected alibi believability when there was no physical evidence available. Physical evidence that was considered by the researchers as relatively easy to fabricate was enough to render witness testimony moot. Even further, there was a non-significant tendency for alibis that included a non-motivated stranger to produce higher believability scores than alibis that included a non-motivated familiar other when there was no physical evidence. Participants neglected the possibility that a stranger is much more likely to be incorrect with respect to identifying the alibi provider than someone who is familiar with him or her.

Person Evidence

Other studies on the effect of person evidence have lent credence to Olson and Wells' (2004) assertion that motivated witnesses do not contribute to the credibility of an alibi. Lindsay, Lim, Marando, and Cully (1986) showed participants a videotaped armed robbery trial in which the victim identified the defendant as the perpetrator. Guilty votes were significantly lower when the alibi was corroborated by a stranger than when no defense witness was offered. An alibi corroborated by the accused's brother-in-law did not reduce the rate of guilty votes compared to the conditions in which the victim's testimony was unopposed. Similarly, Culhane and Hosch (2004) found that an alibi that was corroborated by a neighbour (i.e. an acquaintance) led to fewer guilty verdicts than if he offered no alibi at all. When the alibi was corroborated

by his girlfriend, the rate of guilty verdicts was the same as in the no-alibi condition.

Overall, when an alibi witness is perceived to have a vested interest in the outcome of a case, his or her testimony does not add credibility to the suspect/defendant's alibi (Culhane, 2005).

Hosch, Culhane, Jolly, Chavez, and Shaw (2011) compared alibi credibility assessments when corroboration came from different types of motivated familiar others. When the alibi corroborator had a biological relationship with the provider, the corroborator was determined to be less credible than in cases where there was a social or marital relationship between the two. Corroborators with only social bonds to the alibi provider were judged to be the most credible witnesses. Additionally, within each type of relationship, credibility ratings increased as the perceived strength of the relationship decreased.

It seems that the nature of the relationship between the alibi provider and alibi witness, both in terms of the type and strength, affects how person evidence is perceived. Alibis that are corroborated by witnesses who are perceived as having a close relationship with the alibi provider are typically found to be no more credible than control alibis that lack witness corroboration (Hosch, Culhane, & Hawley, 2005; Lindsay, Lim, Marando, & Cully, 1986; Olson & Wells, 2004). Unfortunately, it is precisely this type of person with whom most individuals spend most of their time (Burke, Turtle, & Olson, 2007; Olson & Wells, 2012). Only 6% of Olson and Charman's

(2011) student alibi providers were able to provide corroboration from a non-motivated familiar other or a stranger.

Physical Evidence

According to Olson and Wells (2004), the crux of alibi believability is the quality of the physical evidence available to support it; only when no physical evidence is available do evaluators turn to person evidence to assess an alibi. However, physical evidence to support an alibi may be difficult to obtain. Burke and Turtle (2003) found that up to 86% of court cases in the United States and Canada used an alibi as part of the defense, but only 14% of those were corroborated by physical evidence. When Olson and Charman (2011) asked students to produce alibis, 21% of them produced at least moderate physical evidence and only 9% had strong physical evidence in support of their alibi narratives.

In terms of both physical and person evidence, the majority of alibis are likely to be considered weak by evaluators (Burke & Marion, 2012; Burke, Turtle, & Olson, 2007; Olson & Charman, 2011). Physical evidence is frequently not available and when an alibi witness is presented, that person will likely be perceived to be motivated to lie and, therefore, will not be considered credible. Even the strongest alibi presented by Olson and Wells (2004) was only rated 7.4 out of ten for believability. This particular alibi involved the suspect withdrawing money from an ATM machine at a grocery store and was corroborated by video from the ATM and an identification from a store employee

who did not know the suspect. The authors suggested that one possible interpretation of this result is that evaluators may be inherently skeptical of alibis, but acknowledged that participants may have avoided the extreme end of the scale for other reasons. This skepticism could manifest in confirmation bias; when participants are told that a suspect has provided an alibi they may be more likely to look for and attend to reasons the alibi could be false instead of reasons the alibi could be true. As well, they found that when strong physical evidence was available, it was the sole determinant of alibi believability judgments. As a result, the ATM footage was the important evidence and the clerk's identification was essentially irrelevant. Perhaps participants questioned the lack of other physical evidence like ATM or grocery receipts to corroborate the alibi. If the suspect was withdrawing money, presumably he intended to buy something, so participants may have expected him to provide proof of some sort of purchase. Finally, participants may not have believed there is any such thing as an unmotivated alibi witness. The lack of *obvious* motivation does not mean that an alibi witness did not lie (e.g. Marion, 2010). The suspect may have bribed the witness or the two may have an as-yet unknown relationship of some kind. Hosch et al.'s (2011) participants indicated believing that an average of 6.39% of people would lie to corroborate a stranger's alibi. The participants indicated that they, themselves, would only lie for a stranger in an average of 2.74% of cases. This may also explain why physical evidence had such a strong influence on participants' judgments; physical evidence like ATM footage and

credit card receipts do not, in and of themselves, have motivation. Individuals evaluating physical evidence can make errors, but, as the old adage states, video doesn't lie. Whatever the reason, even alibis that were corroborated by evidence that was objectively relatively strong were still considered somewhat weak.

Weak alibis do not generally constitute convincing evidence for innocence (Dahl, Brimacombe, & Lindsay, 2009; Lindsay, Lim, Marando, & Cully, 1986), but even objectively strong alibis in experimental studies and actual criminal cases are not as persuasive as would be expected. As well, certain demographic characteristics of the alibi provider will make it easier or more difficult for that person to generate a believable alibi (Burke, Turtle, & Olson, 2007). An employed, married suspect could potentially provide work timecards, security video, keycard access records, as well as statements from co-workers, clients, or a spouse to corroborate an alibi. In contrast, someone who is unemployed or self-employed and living alone would be much less likely to be able to obtain this type of evidence. On the other hand, having a regular routine, which is more likely in the former case, might lead an individual to more readily rely on a script. This reliance on information from a script may result in the alibi being inaccurate. With this in mind, it is not surprising to find so many documented cases where alibis failed to protect innocent suspects or defendants.

Alibi Change

Under Canadian law, a mistaken alibi is without evidentiary value and should be

ignored by evaluators. However, research suggests that thought suppression is a difficult and often unsuccessful task (e.g. Wegner, Schneider, Carter, & White, 1987) and instructions to ignore inadmissible evidence do not protect against the influence of that evidence on verdict choice (Stebly, Hosch, Culhane, & McWethy, 2006 meta-analysis).

Alibi evidence is another type of information that evaluators may be asked to disregard. The discovery of errors in alibi generation necessitates a change to the alibi. The prevalence of alibi change varies across studies, ranging from 30% (Olson & Wells, 2003) to over 50% (Strange, Dysart, & Loftus, 2010) of alibis provided requiring changes. Police officers often use inconsistencies in statements to make judgments about a suspect's guilt (Culhane, 2005), though a recent meta-analysis showed that truth-tellers were actually more likely than liars to make corrections to their initial statements (DePaulo, Lindsay, Malone, Muhlenbruck, Charlton, & Cooper, 2003). To date, only two studies have examined whether changes to an alibi influence believability judgments. Culhane and Hosch (2012) found that changes to an alibi are viewed with skepticism. Consistency in alibi statements was more advantageous to suspects than a change that led to the alibi being objectively stronger in terms of corroborating witness evidence. In contrast, Reynolds (2010) did not find an effect on verdict choice for alibi change. Surprisingly, her investigation showed that the alibi was rated as more truthful when alibi change occurred as a result of police confronting the suspect with evidence that countered his alibi than when the alibi did not change. In the face of this limited,

contradictory, and counterintuitive evidence, conclusions with regard to the impact of alibi change on believability judgments are premature.

Evaluator Role

By the time a verdict is reached at the end of a trial, any alibi proffered by the defendant will have been scrutinized and evaluated by a host of people within the legal system, including police investigators, prosecutors, defense attorneys, judges, and jurors. Recently, the role of the evaluator has been investigated for its possible influence on alibi believability judgments. Sommers and Douglass (2007) found that the same alibi statement was judged to be more credible in the context of a police investigation than in criminal trial or no-context control conditions. Corroboration of the alibi increased credibility ratings in the investigation context, but not in the trial context. Neither context nor corroboration influenced ratings of the likelihood of suspect guilt. The researchers theorized that the fact that the case had gone to trial would imply that the police investigators and prosecutors had determined that the alibi was not sufficiently strong to demonstrate the innocence of the accused. However, this assumption would not be made in the context of a police investigation, where information-gathering was ongoing.

However, Sommers and Douglass (2007) offer as a competing hypothesis that participants in the juror role adopted more stringent criteria when evaluating the evidence in the case. This is logical, as jurors' decision to convict or acquit a defendant

may be perceived as more critical than a police officer's decision to investigate or exculpate a suspect, because police error can still be remedied by a jury decision. Still, the question of the influence of context on judgments is an interesting one and worthy of future consideration.

Alibi Content

According to Olson and Wells (2004), the strength and believability of an alibi statement is determined by the strength of the corroborating evidence. While they concede that characteristics of the alibi provider, for example race and socio-economic status or past convictions (Allison & Brimacombe, 2010), would likely also influence believability judgments, they argue that the corroborating evidence is the primary determinant of alibi credibility. Research on evaluator role and the alibi-generation effect – the tendency for people to evaluate an alibi as more believable after having generated their own alibi (Olson & Wells, 2012) – are more accurately regarded as research about the alibi *evaluator*, rather than about the alibi itself. Olson and Wells (2004) note that the “surface attributes” (p. 159) or content (e.g. setting, activities) will vary from one alibi to another, but that these differences are essentially irrelevant in terms of alibi credibility. No doubt, the quantity and quality of corroborating evidence plays a significant role in alibi believability, but why would so-called “surface attributes” necessarily be irrelevant? Olson and Wells (2004) provide no evidence or theoretical position to support this view. Previous research on schemas, expectations,

and implicit personality theory suggests that this may not be the case. As noted earlier, schemas have been found to influence memory at all stages (Bower, Black, & Turner, 1979; Brewer & Nakamura, 1984; Greenberg, Westcott, & Bailey, 1998; Schank & Abelson, 1977; Taylor & Crocker, 1981; Tuckey & Brewer, 2003). For example, the degree to which an alibi narrative is consistent with the evaluator's relevant event-schemas could conceivably affect credibility judgments. Only one study to date has examined the role of the narrative qualities of alibis in believability judgments. Allison, Michael, Mathews, and Overman (2011) asked one group of participants to report where they had been for dinner three nights before their interview. The alibis were transcribed and provided to another group of participants to be evaluated. Verbal hedges in the alibi were positively correlated with ratings of hesitancy. A greater number of pauses and verbal hedges was associated with lower ratings of the strength of evidence supporting the alibi. Interestingly, the number of spatial details included in the narrative was negatively correlated with ratings of alibi and corroborator credibility. This suggests that narrative features of an alibi can influence evaluator judgments.

As very little research has considered the role of alibi content specifically, questions remain. Are particular types of alibis weaker or stronger than others? Does the content of an alibi affect believability judgments irrespective of the strength of the corroborating evidence or do different alibi types require different levels of evidence to be judged as equally credible? The present research aims to begin to fill in this gap in

the literature and explore the role of alibi content on judgments about alibis as well as perceptions of suspect guilt.

Moral Desirability of Alibi Content

One dimension of alibi content that could prove fruitful is the moral attractiveness of the alibi provider. This is the primary area of inquiry of the current investigation. The Oxford English Dictionary defines the adjective 'moral' as "of or relating to human character or behaviour considered as good or bad; of or relating to the distinction between right and wrong, or good and evil, in relation to the actions, desires, or character of responsible human beings; ethical." Various moral theorists (e.g. Kant, Mill, Aristotle) have discussed how to determine whether actions are moral or not as well as what topics should be included or excluded in moral discourse, but no consensus exists in either debate. For the purposes of the current work, the morality of actions is determined by popular consensus; behaviours are considered morally desirable or undesirable when the majority of people believe that they are.

When evaluators are faced with an alibi that includes behaviours that are morally questionable there are three possible outcomes. First, the evaluator may form an implicit personality theory that the alibi provider is of questionable moral character and be more likely to assume s/he is guilty. Second, the evaluator may infer honesty motivation on the part of the alibi provider and be more likely to believe s/he is innocent. Third, it is possible that the valence of the alibi narrative has no effect on

believability and perceptions of guilt.

Humans are inherently motivated to determine the causes of others' behaviour to make sense of their social worlds and facilitate interactions with others (Brehm, Kassin, Fein, & Burke, 2008; Heider, 1958). Behaviour can provide insight into the beliefs, attitudes, personality characteristics, motivations, and values of others, but this is not always the case. Behaviour can be elicited by these internal factors, but it can also be heavily influenced by situational factors. A driver who runs a red light at an intersection may be a selfish, careless individual (personal attribution), or may be attempting to take a very sick pet to the veterinarian as quickly as possible (situational attribution). Conversely, a driver who obeys the rules of the road may do so because s/he is a conscientious, respectful individual (personal attribution) or because s/he has a parent as a passenger (situational attribution).

Research has examined when and how personal or situational attributions are made to explain the behaviour of others. Correspondent Inference Theory (Jones & Davis, 1965) proposes that choice, expectedness, and consequences influence the tendency to use behaviour to make inferences about the actor's personality characteristics. Behaviour is considered to be particularly revealing when it is chosen by the actor, is unexpected or unusual, and has a single, clear outcome. This was demonstrated by Jones and Harris (1967), who provided participants with a pro-Castro, anti-Castro, or ambivalent essay about Cuba and asked them to infer the author's true

attitude. The positions taken in the essay were described as being chosen by the author or being assigned by a professor. When the position is chosen by the author, it is logical to infer that the content of the essay reflects the author's beliefs. According to Kelley's (1972) discounting principle, when the position taken in the essay is assigned, it is not possible to attribute any particular position to the author. In this case, the logical choice is to reserve judgment regarding the author's feelings about Castro. The participants believed that the chosen essays were more consistent with the author's beliefs than the coerced essays, though coerced essays were still used to make attributions about the author's attitude toward Castro. Choice was more influential when the essay was anti-Castro than pro-Castro; the difference in attributions for the choice and no choice conditions was larger when participants expressed an unexpected opinion (i.e. pro-Castro) than when they expressed the expected opinion (i.e. anti-Castro). Additionally, when an author is ostensibly assigned a position, but produces an ambivalent essay, he is assumed to possess attitudes inconsistent with whatever position was assigned. Similar results for choice were reported by Steiner and Field (1960) on the topic of segregation.

Research has also shown that personal attributions are emphasized when evaluating the behaviour of others and the role of situational forces is minimized. This tendency is termed the Fundamental Attribution Error (FAE). Even when Jones and Harris' (1967) participants were aware that the position in the essay was assigned, they

used the essay's content to make inferences regarding the opinion of the author. It has been suggested that the perceived costs of an incorrect attribution influence the attributions that observers make such that there is a bias towards the error with the lower cost (Andrews, 2001; Haselton & Buss, 2000). In the case of moral desirability and alibis, negative behaviour (i.e. behaviour that violates social norms or causes harm) would be unexpected. If the behaviour is also seen as having been chosen by the actor, an evaluator should be more likely to make a personal attribution and infer that the alibi provider is of dubious moral character. As well, the perceived cost of trusting someone who may be unscrupulous is higher than the cost of unfairly judging an individual who was influenced by situational forces; the evaluator is more likely to be victimized in the future by an individual who chose bad behaviour freely than someone who was forced into the same behaviour. Thus, the behaviour described in morally undesirable alibis is more likely to lead to negative personal attributions than neutral activities, which occur more commonly.

As well, research on the influence of physical and social attractiveness on forensically relevant judgments informs work related to moral attractiveness. Physically attractive defendants are treated more leniently than unattractive defendants in terms of verdict and sentence length (e.g. Bull & Rumsey, 1988; Downs & Lyons, 1991; Efran, 1974; Leventhal & Krate, 1977; Solomon & Schopler, 1978; Stewart, 1980). There is also evidence that particular face types are considered to be congruent with particular types

of crimes (Dumas & Teste, 2006; Porter, ten Brinke, & Gustaw, 2010). Substantial agreement exists between participants who are asked to choose the rapist or murderer out of a set of faces (e.g. Yarmey, 1993), but the specific facial features leading to these judgments has yet to be thoroughly investigated. Current literature suggests that compared to people with mature faces, baby-faced individuals are more likely to be found guilty of negligence and less likely to be found guilty of intentional malfeasance (Berry & Zebrowitz-McArthur, 1988; Zebrowitz & McDonald, 1991). Additionally, defendants with crime-congruent faces are more likely to be convicted than defendants with crime-incongruent faces (Macrae & Shepherd, 1989; Shoemaker, South, & Lowe, 1973). This effect occurs despite the general inability of individuals to evaluate the trustworthiness of faces.

Porter, England, Juodis, and ten Brinke (2008) showed participants faces of individuals from America's Most Wanted and of past Nobel Peace Prize recipients. After they had viewed all the faces, they were informed of the two types and asked to identify which faces belonged to criminals and which to Nobel laureates. Accuracy was generally low, though it was higher for the Peace Prize recipients ($M = 62.7\%$) than for the criminals ($M = 48.8\%$). Porter, et al. (2008) determined that participants used their perceptions of kindness to classify the faces into the two groups. This bias towards looking for kindness explains why accuracy was higher for the Peace Prize recipients than the criminals. The Nobel laureates' faces were judged to be significantly kinder

and less aggressive than the criminals'. It appears that there was some objective difference in facial characteristics that participants attended to, though the nature of the difference remains unknown. The common thread uniting these results is that participants made attributions about another person's character based on his or her physical attributes and that these implicit personality theories affected their judgments.

Dion, Berescheid, and Walster (1972) proposed the existence of the "What is Beautiful is Good" stereotype and found that participants attributed more socially desirable characteristics to physically attractive people than people of average attractiveness who were, in turn, judged to have more socially desirable characteristics than unattractive people. Landy and Aronson (1969) found a similar effect for the social attractiveness (i.e. character) of the defendant; sentence length was shorter when the defendant was described as friendly and sympathetic than when he was described as a social outcast with previous convictions for breaking and entering and drug charges. However, sentence length was not significantly different between the socially attractive defendant and a defendant who was described in neutral terms. In this case, including negative information about the defendant led participants to be harsher when determining sentence length, but including positive information did not result in leniency. However, this study conflates sociability and morality, while evidence exists to suggest that individuals treat personality traits related to morality and to sociability differently (e.g. Brambilla, Rusconi, Sacchi, & Cherubini, 2011; Leach, Ellemers, &

Barreto, 2007). Still, these results support the notion that the events described in an alibi statement may lead evaluators to create an implicit personality theory about the alibi provider and judge the alibi and guilt of the individual in terms of that theory (Mathews & Allison, 2010). Thus, 'good' people are likely to be believed and 'bad' people are not.

Logically, however, another possibility exists. When faced with an alibi narrative that casts the provider in a negative light, an evaluator may attribute an honesty motivation to the provider and be more likely to believe his or her alibi (Mathews & Allison, 2010). What other reason exists to account for an alibi provider acknowledging engaging in morally questionable behaviour? Why else would someone endure the embarrassment and risk the potential loss of status and damage to interpersonal relationships that comes with knowledge of his or her activities becoming public? People may assume – rightly or wrongly – that liars are more likely to create stories that either show them in a positive light or are neutral rather than potentially damaging to their reputation. Deception detection research has found that generally, liars' preferred strategy is to "keep the story simple", while truth-tellers typically attempt to be as accurate as possible (e.g. Hartwig, Granhag, & Strömwall, 2006). However, research has yet to investigate the type of narratives that individuals generate in response to a perceived need to conceal their activities. In the majority of these studies, participants are instructed with regard to the context or some of the content of their narratives. As a

result, an assumption that narratives that describe salacious or morally undesirable activities are likely to be truthful and accurate may not be tenable.

Only two studies to date have investigated the role of alibi content. Both have operationalized 'content' to refer to a comparison between salacious or neutral activities. Salaciousness involves lewd or lascivious behaviour. While salacious behaviour typically involves the violation of social norms, it does not necessarily constitute a moral or ethical violation. In the first, Mathews and Allison (2010) provided participants with a description of an armed robbery and murder of a clerk in a convenience store adapted from Olson and Wells (2004). During an interview with police, the suspect presented an alibi that he was either at home watching a movie or at home watching an adult film. Alibi believability judgments were higher and probability of guilt judgments were lower when the alibi was salacious than when it was neutral. This suggested that participants inferred that the suspect's primary motivation was to show his innocence, even if that meant admitting to activities that might be evaluated in a negative light. However, in the second study, Allison (2011), found no effect for alibi salaciousness when the suspect was burning DVDs of regular movies or adult films or was watching a regular movie.

While this research presents a good starting point for the investigation of alibi content and moral judgments, there are several important critiques and unanswered questions. First, universal statements about the effect of salaciousness on alibi

believability and probability of guilt judgments are premature. Given the limited research, only a few 'salacious' alibis have been investigated. A broader range of salacious or morally undesirable activities must be considered before generalizations are defensible. Second, the choice of the particular alibis should be questioned. The undergraduate samples used in these experiments are unlikely to be particularly scandalized by adult films and illegal file sharing; it is unclear whether the participants viewed these alibis as particularly salacious in nature at all. As well, the neutrality of the control alibi was not established. Third, the 'salacious' alibi has only been compared with a neutral alibi, never an alibi that describes activities that are morally desirable, for example volunteering at a charity. As in any nascent area of inquiry, many questions remain to be explored. Two key questions guide the current research: Are alibis that describe morally desirable behaviour evaluated differently than negative or neutral alibis? Could an alibi that describes morally desirable behaviour and casts the provider in a positive light become suspicious?

Authoritarianism

One variable that may shed light on the role of alibi salaciousness is authoritarianism. Before discussing authoritarianism in the forensic context and how it theoretically applies to moral desirability, a discussion of authoritarianism in general is necessary. The study of authoritarianism grew out of a desire to identify what Adorno, Frenkel-Brunswik, Levinson, and Sanford (1950) refer to as "*the potentially fascistic*

individual” (*italics in original*) at the end of the Second World War and beginning of the Cold War, and had its foundation in the study of anti-Semitism and ethnocentrism. This individual who expressed prejudicial attitudes, Adorno, et al. (1950) argued, was particularly vulnerable to anti-democratic propaganda and more likely to behave in a way consistent with anti-democratic ideology. As such, these individuals were thought of as presenting a threat to the traditional social values of the time. They theorized that these potentially pro-fascist ideals were often at the root of prejudice (Altemeyer, 1981).

The goal of Adorno, et al.’s (1950) program of research was to identify an overarching personality structure associated with this susceptibility to anti-democratic or fascist ideology. The result of their work was the *F-Scale*, which was constructed based largely on clinical interviews with participants. However, the scale is entrenched in Freudian theory, which has been critiqued on several grounds, including the existence of repression (Rofé, 2008) and the concept of penis-envy and phallocentrism of the theory (Sayers, 1996). Altemeyer (1981) questioned the definition and composition of the variables, as well as the scale’s construct validity, vulnerability to response sets, psychometric properties, and factor analytic structure.

From Adorno, et al.’s (1950) work, Altemeyer (1981) noted that the items on the *F-Scale* with the best discriminatory power nearly all involve aggressive impulses, adherence to conventional values, and submission to authority and formed a conceptualization of Right-Wing Authoritarianism (RWA) based on the convergence of

these concepts. According to Altemeyer (1981), these three aspects of Adorno, et al.'s (1950) definition of authoritarianism tend to covary, while the others do not have strong interrelationships. In this conceptualization, Authoritarian Submission refers to a tendency to trust, respect, and obey *legitimate* authorities. While different authorities would be accorded different measures of respect, the general tendency for RWA individuals is to accept the actions and directives of legitimate authorities without question. While high RWA's typically prefer ideology on the right side of the political spectrum, their submission is not reserved for any one political ideology; Authoritarian Submission refers simply to the tendency to defer to and accept established authorities.

Authoritarian Aggression walks hand-in-hand with Authoritarian Submission, which refers to a "predisposition to cause harm to someone" (Altemeyer, 1981, p. 151) either with the approval of the authority or through a belief that the action would benefit the authority. In this case, "harm" is defined broadly to include physical, financial, psychological, financial, and other damage. It is the approval of the authority that allows high RWAs to justify violating the social rules against aggression. Also included in this concept is the acceptance or endorsement of aggressive acts by others against the enemies of the authority.

Finally, Conventionalism is "a strong acceptance of and commitment to the traditional social norms in our society" (Altemeyer, 1981, p. 153), which tend to be

based on Judeo-Christian values based on “God’s Law”. This orientation rejects the notion that individuals should develop their own sense of morality through deliberate thought and consideration of various moral theories. Rather, religious leaders and texts form the basis of morality. Conventionalism is concerned with the endorsement of all traditional social norms – it refers to what people *should* do, not what they *actually* do – and includes a belief that other ways of doing things are wrong.

The RWA scale was originally created using a combination of items from various scales measuring authoritarianism or related concepts, including the F-Scale (Adorno, et al., 1950), the Dogmatism Scale (Rokeach, 1960), the balanced F-Scale (Lee & Warr, 1969), and the Conservatism Scale (Wilson & Patterson, 1968), as well as original items. Over repeated pilot testing using students and community members between 1970 and 1973, the items were examined. The final version included 24 items, half of which were reverse scored and yielded a Cronbach’s alpha of .88. Subsequently, Altemeyer (1981) compared the RWA to six other scales of authoritarianism and related concepts. Overall, the RWA showed the best results in terms of inter-item correlations, alpha levels, factor structure, and correlation with other theoretically-related variables.

Authoritarianism as a construct has often been used in forensic psychology research. A meta-analysis by Narby, Cutler, and Moran (1993) found that authoritarianism, measured using several different scales, was associated with an increased likelihood of returning a guilty verdict ($r = .11$). As well, within juries, a high

proportion of authoritarian jurors is associated with more convictions and longer sentences compared to juries largely composed of few members high in authoritarianism (Devine, Clayton, Dunford, Seying, & Pryce, 2001). Authoritarianism is also associated with support for capital punishment (McKee & Feather, 2008; Vidmar, 1974) and increased skepticism of alibis (Culhane, 2005). Authoritarianism may also provide insight into the role of moral desirability in the evaluation of alibis. Individuals who are high on authoritarianism may react differently than those who are low on authoritarianism in response to alibi narratives that describe morally 'good' and 'bad' activities. Conventionalism is expected to lead individuals to react negatively to moral violations. Authoritarian Aggression is anticipated to result in an inclination to reject and punish individuals whose behaviour is not consistent with conventional moral codes. Theoretically, high authoritarian participants are expected to be more likely to form a negative implicit personality theory about the alibi provider who describes engaging in morally undesirable behaviour, whereas low authoritarian participants are expected to be more likely to attribute an honesty motivation.

Summary of Literature Review

Although alibis have the potential to be a very useful piece of evidence for police investigators and jurors, few empirical studies to date have systematically examined how alibis are generated and subsequently evaluated. Despite the apparently common belief that an innocent suspect should be able to provide an alibi, due to memory issues

at encoding, retention, and retrieval, and reliance on schemas, accurate alibis can be remarkably difficult to generate and to corroborate. Empirical and archival research suggests that alibis are often perceived as “weak” and can be ineffective at protecting innocent suspects from prosecution and criminal convictions.

With respect to the evaluation of alibis, the strength of the corroborating evidence appears to be vital, particularly the quality of the physical evidence available to support the alibi. When it comes to changing an alibi, consistency in alibi statements may be preferable even to changes that strengthen the evidence corroborating an alibi. Additionally, the role of the alibi evaluator may influence how alibis are judged. However, further research is needed on these two topics before more definitive statements can be made. While Olson and Wells (2004) dismissed the content of an alibi as having no influence on judgments of its accuracy, research in social psychology has suggested it might yet prove fruitful avenue of inquiry. The type of activities described in an alibi could very well lead evaluators to activate stereotypes and schemas, develop implicit personality theories, and/or make attributions about the motives of the alibi provider. Authoritarianism is one personality trait that is expected to influence these psychological processes and affect people’s judgments about the alibi and the alibi provider.

Current Research

Broadly, the goal of the current research was to shed more light on the question

of what makes a good alibi. More specifically, this research investigated the role of alibi content in judgments about alibi believability and probability of guilt as well as memory for the alibi narratives. Currently, there is insufficient empirical literature to support formal hypotheses, so predictions regarding the results were treated as tentative. To this end, several specific questions were posed:

1. Are alibis that describe morally undesirable behaviour associated with higher alibi believability and lower probability of guilt ratings? Does the degree of undesirability of the activities influence these judgments?
2. How are morally desirable alibis viewed by evaluators? Can an extremely morally desirable alibi be suspicious to evaluators?
3. Does merely referring to a narrative as an alibi lead to lower believability ratings compared to when the same narrative is referred to as an everyday statement?
4. Are morally desirable or undesirable alibis remembered with greater frequency than neutral alibis?
5. What is the role of authoritarianism when evaluating morally desirable or undesirable alibis?

Experiment 1

The first step in examining alibi content is to understand how people view the components of an alibi. Participants were shown 35 individual statements that were conceived to represent a range of morally desirable and undesirable actions, as well as

neutral actions. These alibis all comprised information regarding the location of the alibi provider and the activity in which he was engaged. Participants were randomly assigned to conditions wherein the statements were presented as either alibis or everyday narratives. Participants were asked to rate the alibis on the following dimensions: likelihood of occurrence, believability, moral desirability of the behaviour, and perception of the morality of the individual who had engaged in this behaviour. Experiment 1 had four principal purposes. First, objective evaluations of the morality of the behaviour and of the actor were collected to create a taxonomy of moral desirability in alibis. This taxonomy was used to select ten alibis that represented a range of moral desirability to be used in Experiment 2. Second, the nature of the relationship between participants' evaluations of morality and their perceptions of the believability of the statements was examined. Third, the role of the alibi context itself was assessed in terms of overall believability and the relationship between moral desirability and believability. It has been suggested that merely calling a description of events an alibi will lead to negative perceptions of the narrative (Olson & Wells, 2004; Sommers & Douglass, 2007), but to date no empirical evaluations of this proposal have been undertaken. And finally, the influence of moral desirability on recall memory was measured.

Method

Participants

Participants ($N = 105$) were recruited from Ryerson University's Psychology Research Pool using the online Sona system. Data from one participant were excluded due to participant-reported technical problems with data collection leading to incomplete recording of responses; all analyses were conducted with data from all remaining participants ($N = 104$). Eighty-one of the participants (77.9%) were women and 23 (22.1%) were men. The mean age of the participants was 19.69 years ($SD = 3.60$), with a range of 17 to 35 years. All participants were enrolled in PSY102 or PSY202, the introductory psychology courses at the university, and were given one credit towards their course grades as compensation for their participation. Experimental sessions took place at the Psychology and Law (PAL) Lab, located in the Psychology Research and Training Centre (PRTC) at the Ryerson University campus. The majority of the participants were tested in pairs, though the experimental tasks were all completed individually. The procedures and practices employed in the study complied with Ethical Guidelines for Research with Human Subjects and the study was approved by Ryerson's Research Ethics Board.

Design

The present study included both experimental and correlational elements in its design. The relationship between moral desirability and believability was explored

using correlations and graphic representations. The independent variable of the context in which the statement was encountered – either an alibi or an everyday narrative – was manipulated between participants and used to explore the believability judgment dependent variable. Finally, after the moral desirability of the various statements was quantified, the valence of the statements was used as an independent variable to examine results on the memory report dependent variable.

Materials

The statements were presented to participants using Qualtrics online survey software on a desktop PC or a laptop PC in the Psychology and Law Lab. A screen shot of one of the narratives is available in Appendix A. The Qualtrics survey was programmed to present the alibis to participants in random order to ensure that order effects were not responsible for observed results. Ratings for each of the narratives were presented on two questionnaire pages. The narrative was included at the top of the screen in bold type on both pages. Participants were asked to respond to the following questions:

- How **likely** is it that an adult male in Canada has done this at least once within the past year? and,
- If you found out that an adult male in Canada said he had done this, how **likely** would you be to believe that person was telling the truth?

Responses were made using a visual analogue scale ranging from 0 (“Not at all”) to 100

("Extremely"). Qualtrics refers to this response option as "slider." Grid lines were included at 10-point intervals and gridline values were visible, but the value for the location of the marker was not shown. On the second screen, the narrative was presented again at the top of the screen in bold type. Participants were asked to respond to the following questions:

- You would evaluate this **behaviour** as: and,
- If you found out that an adult male in Canada did this at least once, your evaluation of that **person** would be:

Again, responses were made on a visual analogue ("slider") scale. The response options ranged from -50 ("Very Negative") to +50 ("Very Positive"). The 0 position was labeled "Neutral." The midpoint of the negative half of the scale was labeled "Negative" and the midpoint of the positive half of the scale was labeled "Positive." As on the previous page, marked gridlines at 10-point intervals appeared and the value for the location marker was not presented. The order of presentation of the narratives was randomized by Qualtrics, but the screens for each narrative always appeared in the same order.

Procedure

At the beginning of the experimental session, participants were greeted in the lobby of the PRTC by the experimenter and invited to sit in the PAL Lab's testing room in front of a desktop or laptop computer. Once informed consent was obtained, participants were directed to read on-screen instructions for the study. These

instructions told participants that they would be reading and making judgments about either typical narratives or potential alibis. This variable was manipulated between subjects to minimize the possibility of participants intuiting the study's hypotheses and altering their responses. Assignment to the narrative or alibi group was determined in advance using a random number generator at random.org. Each participant viewed all 35 of the statements. Once participants rated the final alibi, they were asked to recall as many of the statements as possible within 5 to 10 minutes. The first 9 participants who participated completed this task using a paper and a pen; the remaining participants typed their responses into Qualtrics. At the end of the session, a full, educational debriefing was provided and participants were thanked for their participation.

Results

Taxonomy of moral desirability of alibis. The first objective of Experiment 1 was to collect data regarding participants' perceptions of the morality of scenarios so that alibis representing a range of moral desirability could be chosen for Experiment 2. Participants rated the moral desirability of the behaviour in each scenario. Examination of the data showed that many of the ratings were not normally distributed. This is not surprising, as some of the scenarios were created to capture the extreme ends of the scale. Generally, these extreme scenarios produced average scores near ceiling or floor, with skewed distributions. Due to the lack of normality, the mean is an inappropriate measure of central tendency, so median values were used to assess the ratings. Median

values for all statements are available in Table 1. To create the taxonomy, alibis with average moral desirability of the behaviour near +50, +25, 0, -25, and -50 were identified. Ratings for moral desirability of the behaviour and of the person were generally similar, $r = .931, p < .001$. Believability ratings were used to select two alibis for each of those five levels.

First, statements with high variability in moral desirability ratings, evaluated with standard deviation, were excluded to ensure that the moral desirability of the chosen statements was viewed as consistently as possible across participants. For the purposes of this research, standard deviations greater than 20 were considered to be unreasonably high. Alibis with standard deviations between 18 and 19.9 were flagged as potentially problematic. Admittedly, these criteria are somewhat arbitrary. However, as no procedures exist in the literature to guide this process, the chosen criteria served to eliminate the alibis that were clearly not suitable for inclusion in the taxonomy due to high variability, and other criteria were applied to select the best items from those that remained. It should be noted that the appropriate measure of central tendency for use with medians is the median absolute deviation, not standard deviation. However, the two metrics led to similar conclusions in most cases; the majority of the variables with high standard deviations produced relatively high median absolute deviations as well. Second, alibis with believability ratings above 80 and ratings below 50 were eliminated. It was determined that the alibis should be somewhat believable, but not extremely

Table 1

Moral Desirability, Credibility, and Likelihood of Occurrence Ratings of Statements

Alibi Statement	Moral Desirability of Behaviour		Moral Desirability of Person		Believability		Likelihood of Occurrence	
	<i>Mdn (MAD)</i>	<i>SD</i>	<i>Mdn (MAD)</i>	<i>SD</i>	<i>Mdn (MAD)</i>	<i>SD</i>	<i>Mdn (MAD)</i>	<i>SD</i>
*Volunteering to serve dinner at a homeless shelter. +	49.0 (1.0)	11.82	45.0 (5.0)	12.51	60.0 (20.0)	27.83	29.0 (19.0)	20.82
*Shoveling the driveway of an elderly relative +	49.0 (1.0)	14.20	43.5 (6.5)	15.33	76.0 (19.0)	24.52	51.0 (21.0)	25.18
Buying toys to donate to a children's charity. +	47.5 (2.5)	12.73	44.5 (5.5)	13.43	51.0 (25.0)	28.35	30.0 (17.0)	21.11
Donating blood at the hospital. +	41.0 (9.0)	14.34	40.0 (10.0)	15.53	76.5 (15.0)	22.79	50.0 (20.0)	24.00
Helping to clean up garbage at a city park. +	41.0 (9.0)	14.39	36.5 (13.0)	15.09	48.5 (28.5)	32.50	20.0 (15.0)	22.72
Running errands for a sick friend. +	40.0 (10.0)	13.29	40.0 (10.0)	13.94	72.5 (17.5)	26.71	60.0 (20.0)	25.59
Taking a lost cat to an animal shelter. +	40.0 (10.0)	19.34	40.0 (10.0)	16.13	50.0 (25.0)	31.07	19.0 (15.0)	22.64
Attending a benefit event for charity.	38.5 (11.5)	14.80	31.0 (11.0)	14.78	71.0 (21.0)	27.13	50.0 (18.0)	24.33
Babysitting a friend's children.	30.0 (10.0)	15.49	29.0 (14.0)	16.72	70.0 (23.0)	29.77	34.0 (17.0)	24.25
*Jogging in a park.	30.0 (11.0)	16.12	21.0 (11.0)	16.77	89.5 (10.5)	19.85	70.0 (15.5)	21.94
*Walking a neighbour's dog while they are away on vacation.	25.0 (8.0)	14.94	28.5 (11.5)	16.29	80.0 (19.5)	27.95	47.5 (18.5)	25.04
Getting tested for a Sexually Transmitted Infection.	22 (22.0)	25.22	12.5 (18.5)	26.52	70.0 (20.0)	30.71	45.0 (25.0)	27.83
Buying condoms at a drug store.	21.0 (21.0)	21.84	12.0 (12.0)	20.98	98.0 (2.0)	17.04	90.0 (10.0)	16.01
Watching a sporting event on TV at a friend's house. =	15.0 (15.0)	16.53	10.0 (10.0)	18.05	100.0 (0.0)	15.29	92.0 (8.0)	12.75
Reading a newspaper in a coffee shop. =	15.0 (15.0)	17.13	5.0 (5.0)	17.78	95.5 (4.5)	21.41	80.0 (12.0)	19.61
Going grocery shopping.	13.5 (13.5)	19.16	10.0 (10.0)	19.14	100.0 (0.0)	19.00	95.5 (4.5)	23.23
Attending a ballroom dancing lesson. =	12.5 (12.5)	19.04	17.0 (17.0)	18.63	50.0 (30.0)	32.64	18.0 (13.0)	18.75

Repairing items from a World War II memorabilia collection. =	10.0 (10.0)	17.10	5.0 (5.0)	18.46	50.0 (40.0)	36.50	9.0 (7.0)	18.31
Watching a movie at a theatre. =	8.5 (8.5)	16.22	1.0 (1.0)	16.96	100.0 (0.0)	14.10	94.5 (5.5)	13.13
*Going to the doctor's office because of a minor illness. =	1.0 (5.0)	13.35	0.0 (1.0)	13.43	88.0 (12.0)	27.11	57.0 (47)	31.19
Building a ship in a bottle. =	0.0 (2.0)	15.18	1.0 (4.0)	16.11	46.0 (36.0)	36.73	9.0 (8.0)	16.37
*Getting treatment for priapism (erection that lasts 4 hours or more) from a doctor.	0.0 (1.0)	18.58	0.0 (0.0)	17.19	50.0 (32.0)	33.52	19.0 (14.0)	24.01
Watching TV at home.	0.0 (0.0)	13.02	0.0 (0.0)	12.80	100.0 (0.0)	17.30	100.0 (0.0)	10.71
Buying pornographic magazines at an adult store.	-2.5 (4.0)	16.89	-3.0 (5.5)	17.76	85.0 (15.0)	21.75	61.0 (21.0)	26.36
Taking part in an anti-police protest rally.	-4.5 (13.0)	20.65	0.0 (10.0)	19.27	50.5 (21.0)	29.35	25.0 (16.0)	22.49
Going to a strip club.	-6.0 (6.5)	19.96	-4.0 (5.0)	19.47	81.0 (12.5)	22.24	70.0 (20.0)	27.68
Spray-painting graffiti tags in an alley.	-20.0 (11.5)	17.66	-10.0 (10.0)	18.15	50.0 (20.0)	25.47	29.5 (19.5)	24.12
*Having a fist fight outside a bar.	-21.5 (11.5)	15.91	-12.5 (12.5)	18.90	61.0 (20.5)	25.99	56.5 (20.5)	26.62
*Stealing a can of pop from a convenience store. -	-25 (15.0)	15.96	-20 (15.0)	17.71	70 (20.0)	31.22	34.5 (24.5)	28.48
Stalking an ex-lover. -	-35.5 (14.5)	15.14	-34 (16.0)	17.91	72.0 (22.0)	29.20	40.0 (24.0)	27.97
Having sex with a prostitute. -	-37.0 (13.0)	19.80	-37.0 (13.0)	19.17	51.0 (22.0)	28.48	30.0 (20.0)	24.77
Secretly watching through the windows while his neighbour is getting changed. -	-39.0 (11.0)	15.89	-40.0 (10.0)	16.47	70 (20.5)	29.61	40.0 (30.0)	30.01
Buying cocaine from a drug dealer. -	-43.5 (7.0)	17.48	-41.0 (9.0)	18.53	60.0 (20.0)	27.92	23.0 (14.0)	24.76
*Having sex with a good friend's romantic partner. -	-48.0 (2.0)	12.40	-48.0 (2.0)	13.48	70.0 (20.0)	27.74	41.0 (21.0)	27.12
*Snatching a woman's purse. -	-50.0 (0.0)	11.82	-50.0 (0.0)	12.21	50.0 (30.5)	33.44	15.0 (13.0)	21.67

Note. Moral desirability ratings range from -50 to +50. Believability and Likelihood of Occurrence ratings range from 0 to 100. Alibis chosen for inclusion in the taxonomy of moral desirability used in Study 2 are marked with an asterisk. The positive (+), negative (-), and neutral (=) statements used in the analysis of the memory reports are also identified.

credible, to ensure that participants in Study 2 would neither immediately reject nor accept the alibi. Third, alibis with generally similar ratings for moral desirability of the behaviour and of the person were identified. Finally, the two alibis with the most similar believability scores at each level were selected to form the taxonomy of ten alibis.

Relationship between moral desirability and believability. The second objective of Experiment 1 was to explore the influence of moral desirability on judgments of believability. As participants rated moral desirability and believability for all statements, correlation coefficients computed on the raw data would violate the assumption of independence. Consequently, all correlations were calculated on the median values for the moral desirability of the behaviour, the moral desirability of the person, and believability of each statement.

No significant associations were found between the morality of the behaviour and believability, $r = .145$, $p = .405$, and between the morality of the person and believability, $r = .076$, $p = .664$. Scatterplots of the median moral desirability of the behaviour versus median believability as well as the median moral desirability of the person versus median believability both suggested the absence of a clear linear relationship between these variables (see Figures 1 and 2). However, examination of the graphic figures shows that none of the highly believable alibis were morally undesirable, nor were they highly morally desirable. The most believable alibis appear

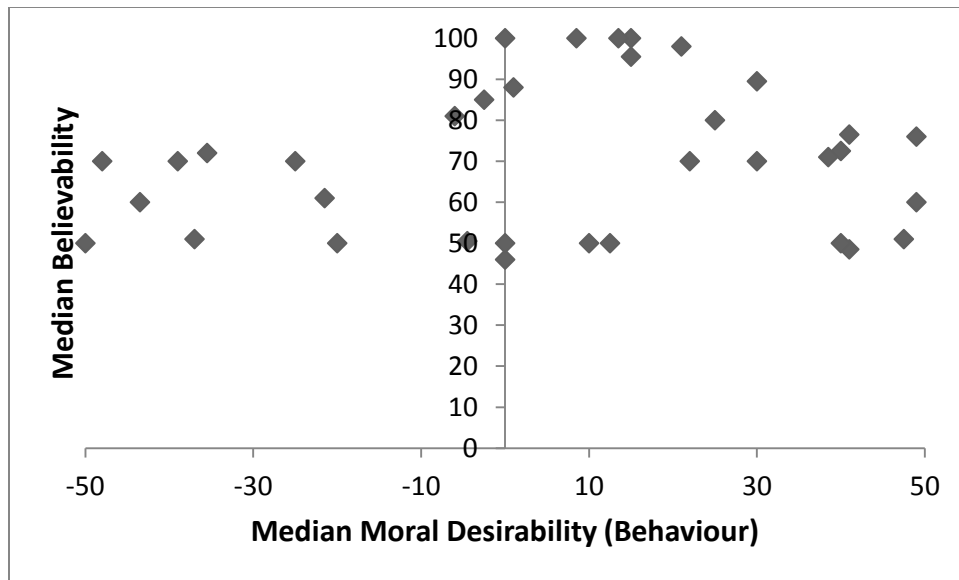


Figure 1. The relation between median moral desirability of the behaviour and median believability ratings for each statement.

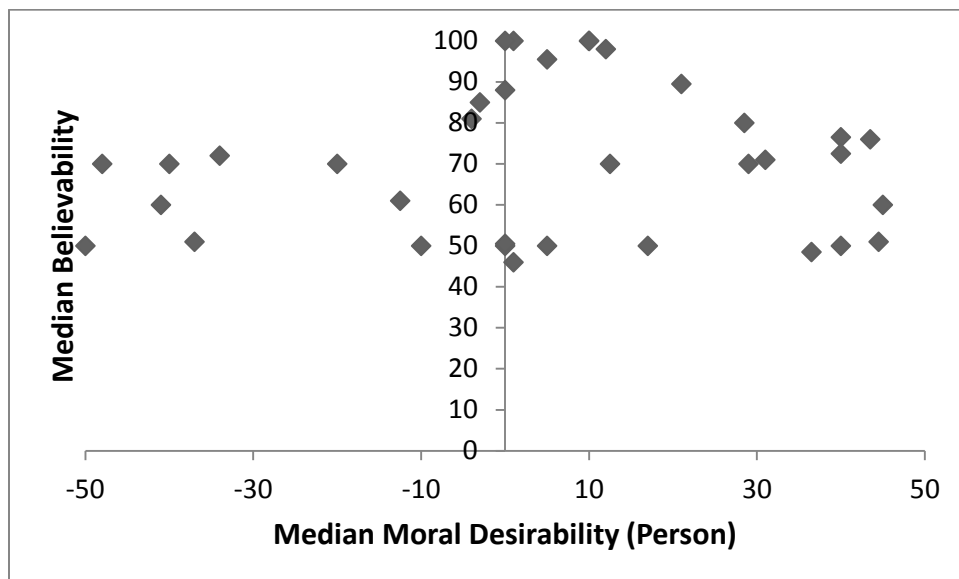


Figure 2. The relation between median moral desirability of the person and median believability ratings for each statement.

to be within the neutral to somewhat morally desirable range. To explore this, the median believability scores were divided into tertiles and correlations between the moral desirability scores and believability scores were computed within each of the

tertiles. Eleven statements were included in the first and third tertiles and 13 were included in the middle tertile. The uneven number of statements in the tertiles was due to natural breaks in believability scores. A difference of nine points in believability exists between the first and second tertiles; had the least believable statement of the middle tertile been included in the first tertile, there would have been no difference in believability scores between it and the resulting least believable statement in the middle tertile. None of these coefficients achieved significance (all $r < .313$, all $p > .298$), though this may be due to the limited number of observations included in the computation of these coefficients. Although visual inspection of the data indicated the possibility of some sort of association between moral desirability and believability, it was not supported by statistical analyses.

The alibi context. The third objective was to examine the role of the alibi context on judgments about narratives. Olson and Wells (2004) suggested that narratives described as alibis would be rated as less believable than narratives described as everyday statements. However, with the current lack of empirical evidence, a non-directional hypothesis was chosen. An average believability score was computed for each participant by summing their believability responses for each statement and dividing by the number of responses they provided. Results supported the tentative hypothesis; participants in the alibi condition ($M = 63.31$) rated the statements as less

believable overall than participants in the narrative condition ($M = 69.40$), $t(102) = 2.03$, $p = .045$, $d = .40$.

To examine whether alibi context affected believability ratings at different levels of moral desirability, believability ratings of the ten alibis chosen for Experiment 2 were compared between the alibi and narrative groups. While this procedure will not serve to identify an interaction between alibi context and moral desirability, per se, the non-normality of the data precludes the use of parametric procedures that could test for interactive effects directly. Instead, non-parametric methods were selected and Mann-Whitney U tests with exact significance levels were computed. Evidence that the alibi group rated only certain statements – rather than all statements – as less believable than the narrative group would suggest the possible presence of an interaction. Verification with different methods would be necessary before a firm conclusion can be drawn. Results of all of these tests are available in Table 2. A Holm-Bonferroni correction was applied to maintain an acceptable Type 1 error rate. In the context of ten comparisons, none of the differences between the alibi and narrative groups reached statistical significance. In all, eight of the comparisons would not have been considered significant even without the alpha correction. The lack of any observed differences allowed for data from all participants to be used in assessing the statements for use in Study 2, rather than using only the ratings from individuals in the alibi group.

Table 2

Descriptive Statistics and Results of Non-Parametric Comparisons for Believability Ratings of Alibi and Narrative Groups

Alibi Statement	<i>Mdn</i>	<i>Mdn</i>	<i>U</i>	<i>p</i>	<i>r</i>
	Alibi	Narrative			
Volunteering to serve dinner at a homeless shelter.	60.0	61.0	1190.5	.373	-.09
Shoveling the driveway of an elderly relative.	66.0	81.0	1112.0	.119	-.15
Walking a neighbour's dog while they are away on vacation.	71.0	82.0	979.0	.015	-.24
Jogging in a park.	81.0	90.0	1141.5	.170	-.13
Going to the doctor's office because of a minor illness.	80.0	91.0	1023.0	.030	-.21
Getting treatment for priapism (erection that lasts 4 hours or more) from a doctor.	49.0	60.5	1070.0	.165	-.14
Having a fist fight outside a bar.	70.0	55.0	1064.5	.062	-.18
Stealing a can of pop from a convenience store.	71.0	64.0	1332.0	.901	-.01
Having sex with a good friend's romantic partner.	66.0	70.0	1246.0	.600	-.05
Snatching a woman's purse.	50.0	50.0	1317.0	.959	-.01

The influence of moral desirability on long-term memory. The final objective of Experiment 1 was to investigate whether the moral desirability of the narrative

influenced performance on an unanticipated recall task. It was expected that statements judged as morally desirable and morally undesirable would be recalled with greater frequency than statements rated as neutral. Due to an error in study administration, the recall test was not provided to two participants, so all analyses were conducted with $N = 102$. Mean recall was 13.46 items ($SD = 5.03$), with a range from 0 to 28 items out of a possible 35 items. No significant differences in total number of items recalled were found between the alibi ($M = 13.24$) and narrative ($M = 13.67$) groups, $t(100) = .43$, $p = .666$, $d = .09$.

The accuracy of the memory reports was assessed by two independent coders, who were very consistent in their evaluations ($r = .993$). Accuracy was quantified as the total number of items recalled correctly. Incorrect items were those that included significant inaccuracies in major components of the alibi (e.g. going swimming at a pool) or lacked adequate detail for the meaning to be easily understood (e.g. “cocaine”). Items with minor inaccuracies (e.g. reporting babysitting a neighbour’s children instead of babysitting a friend’s children) were coded as correct. Due to the high level of correspondence in coding, data from the primary coder was used in all analyses. While participants recalled only 13.24 items, on average, the majority of these items were correct ($M = 12.88$, $SD = 4.94$). Accuracy levels for the alibi group ($M = 12.48$, $SD = 5.28$) did not differ significantly from the narrative group ($M = 13.27$, $SD = 4.61$), $t(100) = .805$, $p = .423$, $d = .16$.

To examine whether the moral desirability of the behaviour described in the alibi influenced the likelihood of the statement being recalled, responses for all statements were separated into quintiles and assigned a rank from 1 (morally undesirable) to 5 (morally desirable). Quintiles were chosen in order to identify the most consistently extreme morally desirable and undesirable statements, eliminate statements that are less unequivocally desirable or undesirable (i.e. quintiles 2 and 4), and allow neutral statements to be identified. Initially, the median value of these ranks was computed for each statement to identify the statements that are most consistently judged to be positive, negative, or neutral, but this method provided an uneven number of statements in each category. Instead, statement ranks were then standardized using a z-score transformation and the seven items at both extreme ends and the middle were chosen. Seven items were used because it was consistent with the decision to employ quintiles. The statements chosen for the three categories are available in Table 1.

After the morally desirable, undesirable, and neutral statements were identified, memory reports were coded by one of the same coders who coded overall memory performance and accuracy. Each participant received recall scores for the number of morally desirable, morally undesirable, and neutral statements correctly recalled. These scores were the percent of items within the category that were recalled correctly. To examine participants' recall, a repeated measures ANOVA was computed using statement valence (desirable, undesirable, and neutral) as a three-level independent

variable. No between-subjects measures were included in the analysis. Results must be interpreted with caution, as the z-scores of the neutral statements had relatively high standard deviations compared to the rest of the statements, which suggests that there was some disagreement among participants regarding the morality of these statements.

Results of the ANOVA show significant differences in recall for the three categories of statements, $F(2, 200) = 17.96, p < .001$, partial $\eta^2 = .15$. To probe the significant overall effect, *t*-tests were computed on all pairwise comparisons, using a Holm-Bonferroni correction. Participants recalled significantly more of the morally undesirable ($M = 43.00\%$, $SD = 21.71$) than neutral ($M = 29.00\%$, $SD = 19.84$) statements, $t(100) = 5.89, p < .001, d = .59$. Morally desirable ($M = 36.78\%$, $SD = 19.31$) statements were also recalled more frequently than neutral statements, $t(100) = 3.67, p < .001, d = .37$. Finally, morally undesirable statements were recalled more often than morally desirable statements, $t(100) = 2.48, p = .015, d = .25$.

Discussion

Implications and Contributions. First, the current study provided the norming data necessary to develop a taxonomy of alibi moral desirability for use in other studies. The ten best alibis that met the criteria were chosen to be included in Experiment 2.

Second, the relationship between moral desirability and believability was investigated. Results correlational analyses did not support the hypothesis that the moral desirability of a statement was related to evaluators' decisions about its

credibility. Although the statements were shown to vary widely in moral desirability, they were all judged to be at least moderately believable. Examination of graphic figures suggests that the most believable statements may be those which are either somewhat morally desirable or morally neutral, though the statistical analyses did not support this view. Future research is needed to ascertain whether this is the case.

Third, support was found for the proposition by Olson and Wells (2004) and Sommers and Douglass (2007) that the word 'alibi' leads evaluators to view a given statement with skepticism. That the current results were found on the basis of differences to two sentences in the initial instructions provided to participants makes the finding particularly compelling, as differences between the alibi and narrative groups were minimal. During the debriefing, participants did not seem to be aware of the manipulation in experiment instructions. Anecdotally, participants appeared mildly surprised when the manipulation was discussed with them.

The implications of this result are clear. Evaluators are likely skeptical of alibi statements before even discovering what the provider's alibi is. Confirmation bias would predict that dubious evaluators would focus their attention on discrediting the alibi, rather than considering it in a balanced fashion. In their investigation of alibi corroboration, Olson and Wells' (2004) strongest alibi was rated only 7.4 out of 10 for believability, and they wondered what would be required for an alibi to be rated a nine or ten. The current results suggested that using the term 'alibi' might preclude the

possibility of a statement ever being rated that highly. If evaluators are predisposed to search for reasons to discredit an alibi in order to confirm their initial skepticism, it is no wonder that true alibis fail to protect innocent suspects from wrongful prosecution and conviction.

Fourth, the moral desirability of the statement was shown to influence the probability that it would be recalled on an unanticipated free-recall task. Both morally desirable and undesirable statements were more memorable for participants than neutral statements. Further, morally undesirable statements were more memorable than morally desirable statements.

Results of the memory test also raised an important methodological question: is it possible to create a truly neutral alibi statement? The relatively high standard deviations for the z-scores of the middle quintile suggested that participants were somewhat less consistent in their responses to the neutral statements than the positive or negative ones. For example, the moral desirability of going to the doctor for treatment of a minor illness would be evaluated differently if it were interpreted as being pro-active regarding health concerns versus wasting limited medical time and resources that could be used to treat people with more pressing health problems. This suggests that neutral statements should be constructed with care and manipulation check items should always be included in experimental materials.

Limitations. One criticism of the current study is the lack of external validity in

the study design. The statements that participants were asked to evaluate were only one sentence, contained limited detail, and were provided on a computer with little context. The lack of context may have contributed to the believability scores all being moderate to high; without context, participants may have had difficulty generating reasons why the statement could be untrue. Both alibis and narratives are likely to be substantially longer and more detailed and provided in particular social contexts by specific individuals. Generalizing the current results to these types of statements is premature. However, the current procedure allowed a great deal of experimental control. Differences in the materials between experimental groups were minimized and the simplicity of the stimuli reduced the possibility of unanticipated variables affecting the results.

Experiment 2

The purpose of Experiment 2 was to evaluate the role of alibi content, generally, and moral desirability, specifically, in alibi believability judgments. The ten alibis selected from Experiment 1 were placed in the context of the initial stage of a murder investigation. Participants were asked to make judgments about the alibi itself, the strength of the evidence against the suspect, and the probability that the suspect was the perpetrator. Additionally, the role that Right Wing Authoritarianism might play in participants' forensically relevant judgments was evaluated.

Method

Participants

Participants ($N = 193$) were recruited from the Psychology Research Participation Pool at Ryerson University. Data from two participants were excluded on the basis of their responses to an open-ended comprehension check item. Both reported that the suspect claimed to have been at a convenience store buying a can of pop, when the correct alibi was that he was stealing a can of pop. This misunderstanding fundamentally alters the morality of the behaviour; the alibi was supposed to be somewhat morally undesirable, but the events described by participants are, arguably, relatively neutral. Indeed, these participants rated the moral desirability of the behaviour as 1.70 and -.34 on a scale ranging from -50 to +50, suggesting that they did misinterpret the alibi narrative. Some participants chose not to respond to the comprehension check item, but were not excluded from analyses. The final sample for the study ($N = 191$) included 142 women (74.3%) and 48 men (25.1%). One participant (0.5%) chose not to provide information regarding sex. Participants ranged from 18 to 51 years of age, with a mean age of 21.19 years ($SD = 5.25$). The same participant chose not to provide information regarding age.

Participants were compensated for their participation with course credits toward their PSY102 or PSY202 grades. The experimental sessions took place in testing rooms in the PRTC at the Ryerson University campus. Participants took part individually or in

groups of up to five participants, though all data collection was completed independently and participants were instructed not to discuss the experiment during the session. The procedures and practices employed in the study complied with Ethical Guidelines for Research with Human Subjects and the study was approved by Ryerson's Research Ethics Board.

Design

Participants were provided with a set of documents describing a police investigation into a murder. The alibi offered by the suspect was manipulated between subjects as the independent variable. Dependent measures were judgments of the alibi's truthfulness and accuracy, ratings of the strength of the evidence against the suspect, and estimations of the probability of the suspect's guilt. A measure of Right-Wing Authoritarianism was also administered as a potential correlate with judgments about the alibi, the evidence, and probability of suspect guilt.

Materials

Participants were provided with "police documents" that included a Police Summary Report and a transcript of the detective's interview with a suspect named Robert Harris. Both were created to look like genuine police reports. The documents are available in Appendix B. The Police Summary Report provided basic information about the case ostensibly compiled by the responding officer, including the time of the 911 call, a description of events provided by the neighbour of the victim, and the

identification of a suspect in the crime. Documents from the Innocence Project's case files were used as a template for content and language of the Summary Report.

The Police Interview Transcript was a direct transcript of a conversation that supposedly took place between the detective in charge of the case and the suspect. At the end of the transcript, the detective asked the suspect where he was at the time of the crime and he responded with one of the ten alibis chosen from the results of Experiment 1. The alibis were re-worded slightly to fit within the format of an interview transcript. Parts of Innocence Project documents as well as other police interrogation transcripts found on the internet were used to maintain as much external validity as possible. The alibi about a fistfight outside a bar was altered to indicate that the suspect had attempted to hit another patron of the bar and had been removed by security. This was done to avoid participants questioning whether the suspect had injuries consistent with a physical altercation, as the presence or absence of physical evidence supporting the suspect's alibi would naturally influence judgments. This would introduce a confound into the experiment, as none of the other alibi narratives could easily provide such obvious physical evidence to quickly support or refute the suspect's statement. This very issue has been in the news media recently with the shooting of Trayvon Martin by George Zimmerman in Sanford, Florida. Zimmerman's allegation that he acted in self-defense after an altercation with Martin is being questioned due to his apparent lack of injuries in police video from that evening, although a medical report released later

suggests Zimmerman had a fractured nose, black eyes, and lacerations on the back of his head on the day of the shooting. As these issues were being regularly reported in the news during data collection, this information was likely to be salient to participants and the absence of discussion regarding the suspect's physical state. An unsuccessful attempt to start a fight, thwarted by security, could easily fail to produce physical injuries to the suspect. It was anticipated that the moral desirability of an attempt to provoke a fight would be evaluated similarly to an actual fight.

The questionnaire comprised two sections. The first included demographic items and questions specifically related to the case. Participants were asked to indicate their age and gender. Next, they rated the truthfulness and accuracy of the alibi statement, the strength of the evidence, and the probability of the suspect's guilt. Confidence self-reports were collected for the alibi evaluation items. Responses were made to each of these items using a Likert scale with seven response options. The specific wording of the anchors varied based on the adjective included in the question (e.g. truthful, accurate) ranging from 1 ("Not at all [adjective]") to 7 ("Very [adjective]"). The midpoint of the scale (4) was labeled "Somewhat [adjective]." For example, for the first item, responses ranged from 1 ("Not at all truthful") to 7 ("Very truthful"), with 4 ("Somewhat truthful") in the middle. As a manipulation check, participants were asked to report the suspect's alibi on an open-ended item. Next, participants responded to four items that corresponded to the questions asked in Experiment 1 using a visual

analogue scale 14.7cm long. Minor re-wording of the items was required for clarity (see Appendix C). An open-ended qualitative question was also included for participants to provide any general comments they had about the case.

In the second questionnaire section (Appendix D), participants were administered a revised version Altemeyer's (1981) Right-Wing Authoritarianism (RWA) scale. The revision was provided by Dr. Altemeyer and is included in Wrightsman, Batson, and Edkins' (2004) *Measures of Legal Attitudes*. The scale includes 30 items designed to test the convergence of Authoritarian Submission, Authoritarian Aggression, and Conservatism. Participants respond to each of the statements by indicating their level of agreement from -4 ("Very strongly disagree") to +4 ("Very strongly agree"). A 0 ("Neutral") option is provided. Half of the items are worded to be pro-trait (e.g. "Our country desperately needs a mighty leader who will do what has to be done to destroy the radical new ways and sinfulness that are ruining us.") and the other half are contra-trait (e.g. "A lot of our rules regarding modesty and sexual behavior are just customs that are not necessarily any better or holier than those which other people follow."). Reliability scores for the current version of the RWA are not available, but Altemeyer's (1981) original scale achieved acceptable internal consistency ($\alpha = .88$).

Procedure

The experimenter greeted participants in the lobby of the PRTC and invited them

to sit in the testing room. After informed consent was obtained, participants were told that they would be given information about the initial stage of a police investigation into a murder and that they would be asked to make judgments about particular aspects of the case. Participants were then given the Police Summary Report and Police Interview Transcript. Participants were randomly assigned to view one of the ten available alibis using a random number generator at random.org. When participants were tested in groups, the person seated immediately to the left of the door was considered to be the first participant and was assigned to the first condition on the randomization list; assignment to condition proceeded clockwise around the central table. When participants had finished reading through the documents, they were removed and the questionnaire was handed out, including the items related to the murder case as well as the RWA scale in its entirety. Following completion of the questionnaire, participants were thoroughly debriefed.

Results

Moral Desirability and Forensic Judgments. Before any inferential tests were conducted, statistics were computed to ensure that the moral desirability of the alibis was consistent with the results from Study 1. After responses on the visual analogue scales were measured to the millimetre, responses were coded to be consistent with the range of the item. For example, for the moral desirability items, a mark placed at 4.5cm was divided by 14.7 (i.e. the total length of the line), multiplied by 100, then 50 was

subtracted from the product because the scale ranged from -50 to +50. Descriptive statistics for all alibis are available in Table 3. A series of single-sample *t*-tests were conducted on the responses from Experiment 2 to compare the moral desirability of the person and of the behaviour between the current results and responses of participants in the alibi group of Experiment 1. As the distributions of the Experiment 1 variables were not normally distributed, means are not an appropriate measure of central tendency, so medians were used as the test values in the current analyses. The distributions in Experiment 2 are normally distributed, therefore mean and median values for these variables should be similar. Results from these analyses are available in Table 4.

The general pattern of moral desirability ratings in the current study was a shift towards neutrality. Results from the open-ended item that asked participants to report Harris' alibi suggest that participants did not interpret the term 'alibi' in a consistent way. Some participants reported Harris' activities for the whole day, some for just the time of the crime. Some participants made explicit reference to alibi witnesses, while others did not. Given the variation in interpretations of the term 'alibi' and uncertainty as to what, precisely, the participants believed they were rating, interpretation of the results must be made tentatively. The items, as provided to participants, likely did not adequately capture their beliefs regarding the morality of the particular activity Harris claimed to be engaged in at the time of the murder. Consequently, comparisons

Table 3.

Moral Desirability, Believability, and Likelihood of Occurrence of Activities Described in Alibi Statements.

Alibi Statement	Moral Desirability of Behaviour		Moral Desirability of Person		Believability		Likelihood of Occurrence	
	<i>M (SD)</i>	<i>Mdn</i>	<i>M (SD)</i>	<i>Mdn</i>	<i>M (SD)</i>	<i>Mdn</i>	<i>M (SD)</i>	<i>Mdn</i>
Volunteering to serve dinner at a homeless shelter.	10.46 (16.48)	3.40	11.43 (21.70)	18.03	51.91 (22.66)	49.66	37.69 (25.40)	29.93
Shoveling the driveway of an elderly relative	3.82 (21.91)	.17	4.56 (22.65)	5.10	58.78 (23.97)	60.27	65.32 (19.77)	67.35
Jogging in a park.	5.96 (13.51)	4.08	7.06 (12.75)	1.02	57.44 (17.87)	53.74	55.06 (27.75)	55.44
Walking a neighbour's dog while they are away on vacation.	-.83 (18.08)	.00	-5.23 (22.51)	.00	65.03 (23.61)	72.11	48.80 (27.57)	48.98
Going to the doctor's office because of a minor illness.	8.54 (14.69)	5.78	-.59 (19.13)	.34	61.12 (20.61)	66.30	56.22 (25.72)	61.57
Getting treatment for priapism (erection that lasts 4 hours or more) from a doctor.	-3.49 (14.99)	.34	-7.57 (19.86)	-8.50	42.46 (22.52)	43.54	29.10 (18.52)	24.49
Trying to start a fist fight in a bar.	-9.05 (11.54)	-5.78	-11.56 (15.53)	-8.50	46.81 (16.91)	48.30	44.62 (23.67)	48.30
Stealing a can of pop from a convenience store.	-12.22 (16.53)	-8.50	-13.66 (14.54)	-9.86	53.34 (18.98)	49.66	32.20 (28.85)	39.46
Having sex with a good friend's romantic partner.	-13.33 (20.71)	-18.03	-16.05 (22.03)	-18.71	66.02 (23.74)	73.47	43.96 (22.67)	44.22
Snatching women's purses.	-15.31 (18.28)	-20.00	-23.32 (20.99)	-25.51	47.79 (24.59)	47.62	27.78 (26.80)	46.26

Table 4

Single Sample t-tests Comparing Moral Desirability Ratings Between Study 1 and Study 2

Alibi Statement	<i>t</i>	<i>df</i>	Test value	<i>p</i>	<i>d</i>
Volunteering to serve dinner at a homeless shelter.					
Behaviour	-10.19	19	48	< .001	-2.28
Person	-7.14	18	47	< .001	-1.64
Shoveling the driveway of an elderly relative.					
Behaviour	-8.94	17	50	< .001	-2.12
Person	-7.58	17	45	< .001	-1.79
Walking a neighbour's dog while they are away on vacation.					
Behaviour	-6.81	16	29	< .001	-1.65
Person	-6.09	16	28	< .001	-1.48
Jogging in a park.					
Behaviour	-7.96	19	30	< .001	-1.78
Person	-6.64	19	26	< .001	-1.49
Going to the doctor's office because of a minor illness.					
Behaviour	2.18	17	1	.044	.51
Person	-.13	17	0	.897	-.03
Getting treatment for priapism (erection that lasts 4 hours or more) from a doctor.					
Behaviour	-1.08	18	0	.324	-.23
Person	-1.66	18	0	.114	-.38
Having a fist fight outside a bar.					
Behaviour	7.92	18	-30	< .001	1.82
Person	6.72	18	-21	< .001	.61
Stealing a can of pop from a convenience store.					
Behaviour	3.56	16	-26.5	.003	.86
Person	3.07	16	-24.5	.007	.75
Having sex with a good friend's romantic partner.					
Behaviour	7.72	18	-50	< .001	1.77
Person	6.72	18	-50	< .001	1.54
Snatching women's purses.					
Behaviour	8.27	18	-50	< .001	1.90
Person	5.54	18	-50	< .001	1.27

between these ratings and those from Experiment 1, where participants were only asked to rate one behaviour at a time and the word 'alibi' was not included in the question, are unlikely to be valid or meaningful. Unfortunately, under these circumstances it is not possible to determine with certainty whether the moral desirability manipulation operated as expected.

To examine the role of moral desirability on participants' judgments, four univariate ANOVAs were computed using alibi truthfulness, alibi accuracy, the strength of the evidence against the suspect, and the probability of the suspect's guilt as dependent measures. As the equivalence of the two alibis within each moral desirability category (i.e. very morally undesirable, somewhat morally undesirable, neutral, somewhat morally desirable, and very morally desirable) could not be established, the categories were abandoned. The independent variable in all analyses comprised ten levels, one for each alibi shown to participants. Descriptive statistics are available for each of the dependent measures in Table 5.

The moral desirability of Harris' activities did not influence judgments about the truthfulness of the alibi, $F(9, 181) = .76, p = .652$, partial $\eta^2 = .04$, the accuracy of the alibi, $F(9, 181) = .93, p = .504$, partial $\eta^2 = .04$, or the strength of the evidence against him, $F(9, 181) = .861, p = .561$, partial $\eta^2 = .04$. However, the activities described in Harris' alibi did influence judgments about the probability of his guilt, $F(9, 181) = 2.15, p = .028$, partial $\eta^2 = .10$. Means for all alibis are presented in Figure 3.

Table 5.

Descriptive Statistics for Alibi Truthfulness, Alibi Accuracy, Strength of Evidence, and Probability of Suspect Guilt

Alibi Statement	Alibi Truthfulness	Alibi Accuracy	Strength of Evidence	Probability of Suspect Guilt
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Volunteering to serve dinner at a homeless shelter.	4.15 (1.73)	4.00 (1.56)	3.50 (1.82)	3.85 (1.53)
Shoveling the driveway of an elderly relative	3.83 (1.51)	3.94 (1.66)	3.72 (1.53)	4.06 (1.16)
Jogging in a park.	4.05 (1.15)	3.70 (1.26)	4.10 (1.52)	3.95 (1.05)
Walking a neighbour's dog while they are away on vacation.	4.11 (1.41)	4.00 (1.57)	4.06 (1.83)	3.89 (1.41)
Going to the doctor's office because of a minor illness.	4.53 (1.02)	4.42 (1.22)	3.58 (1.58)	3.63 (1.12)
Getting treatment for priapism (erection that lasts 4 hours or more) from a doctor.	4.30 (1.46)	4.25 (1.74)	4.30 (1.59)	4.65 (1.27)
Trying to start a fist fight in a bar.	4.25 (1.62)	4.30 (1.59)	3.85 (1.60)	4.30 (1.49)
Stealing a can of pop from a convenience store.	4.18 (1.19)	3.94 (1.20)	4.41 (1.66)	4.71 (1.11)
Having sex with a good friend's romantic partner.	4.80 (1.36)	4.85 (1.39)	3.60 (1.60)	3.35 (1.18)
Snatching women's purses.	4.00 (1.25)	4.11 (1.49)	4.37 (1.42)	4.21 (1.18)
ALL ALIBI STATEMENTS	4.23 (1.38)	4.16 (1.48)	3.94 (1.61)	4.05 (1.30)

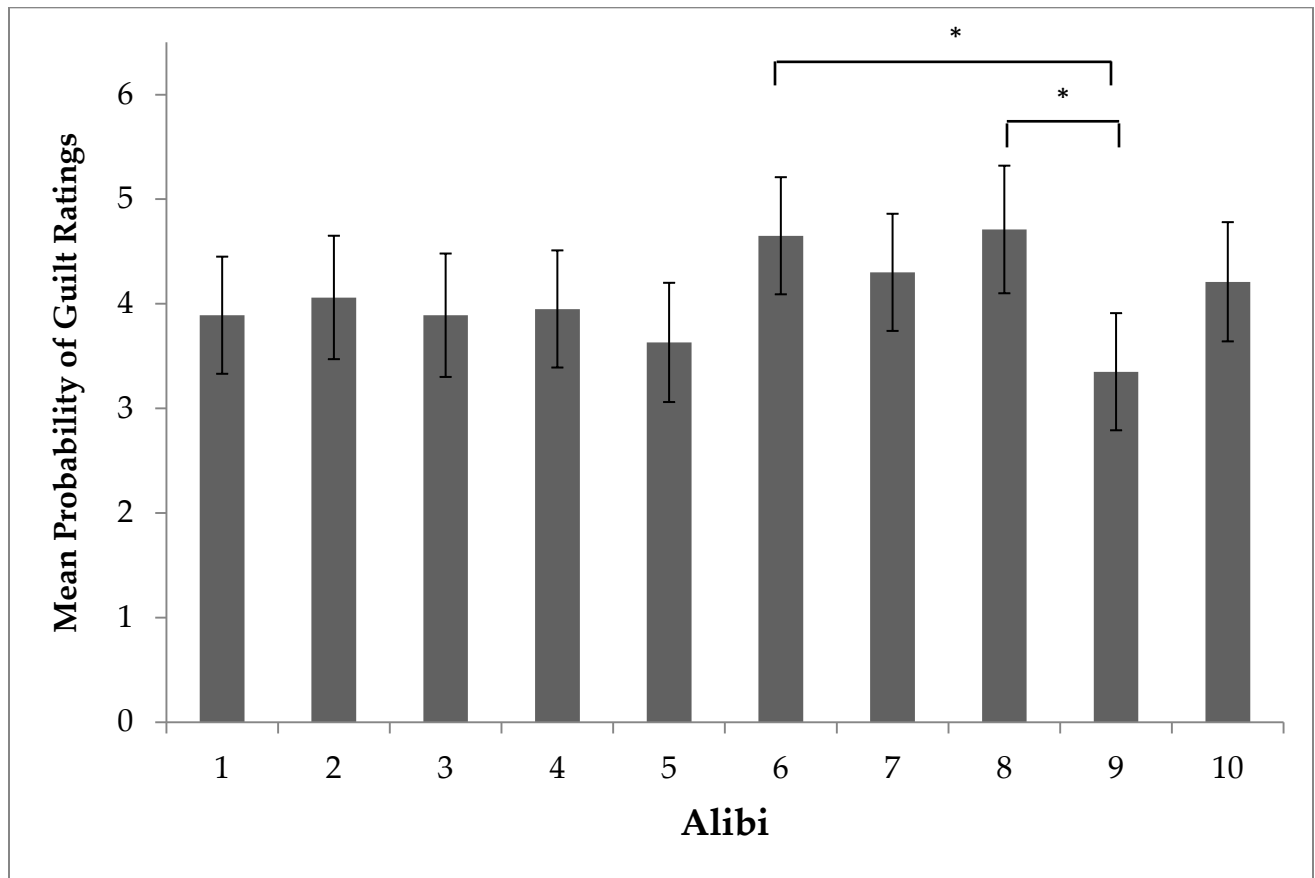


Figure 3. Mean probability of guilt ratings by alibi condition.

Note. Alibi conditions are as follows:

1. Volunteering to serve dinner at a homeless shelter.
2. Shoveling the driveway of an elderly relative.
3. Jogging in a park.
4. Walking a neighbour's dog while they are away on vacation.
5. Going to the doctor's office because of a minor illness.
6. Getting treatment for priapism (erection that lasts 4 hours or more) from a doctor.
7. Trying to start a fist fight in a bar.
8. Stealing a can of pop from a convenience store.
9. Having sex with a good friend's romantic partner.
10. Snatching women's purses.

Note. Error bars are computed using Masson and Loftus' (2003) equation for between-subjects designs.

$$CI = M_j \pm \sqrt{\frac{MS_{within}}{n_j}} (t_{critical})$$

To probe the significant omnibus test for participants' ratings of the probability of Harris' guilt, post-hoc analyses were conducted. As there was insufficient previous literature to support planned comparisons or specific contrasts, all possible pairwise comparisons were computed with a Holm-Bonferroni procedure. In the context of 45 pairs, only two comparisons achieved significance. The probability of the suspect's guilt was estimated to be lower when he reported having sex with a friend's romantic partner ($M = 3.35$, $SD = 1.18$) than when he indicated he was stealing pop from a convenience store ($M = 4.71$, $SD = 1.12$), $p = .001$, or receiving treatment for priapism ($M = 4.65$, $SD = 1.27$), $p = .001$. The comparison with the next lowest p value, stealing pop from a convenience store compared to going to the doctor for a minor illness, did not reach significance under the Holm-Bonferroni correction, $p = .012$ ($\alpha = .05/43 = .0011$). Interestingly, the results of the comparisons show that one of the very morally undesirable alibis produced lower probability of guilt judgments than one of the somewhat morally undesirable and one of the neutral alibis. The other alibi that was intended to be highly morally undesirable, snatching women's purses downtown ($M = 4.21$, $SD = 1.18$), was not significantly different from any of the other alibis in terms of probability of guilt.

Right Wing Authoritarianism. The psychometric properties of the RWA were assessed prior to its inclusion as a variable in any inferential tests. In total, 182 participants (95.3%) responded to all items of the RWA. Analyses were conducted with

only the participants who completed the measure. The RWA was shown to have superior internal consistency to the original scale (current scale $\alpha = .95$; original scale $\alpha = .88$). Observed scores ranged from -118 to +52, from a possible range of -120 to +120. Positive scores, particularly those above +60 (Wrightsmann, Batson, & Edkins, 2004), are associated with authoritarianism. The majority of the participants' scores did not reflect authoritarianism ($M = -47.06$, $SD = 40.45$) and none of the participants scored above the cutoff of +60.

RWA total scores were used as a predictor in regression models with assessments of the truthfulness and the accuracy of the alibi, the strength of the evidence against the suspect, and the probability of the suspect's guilt as outcome variables. The alibi moral desirability category was excluded as a predictor in the models because of uncertainty regarding the validity of the categories. RWA total scores were significant predictors of all four criterion measures. A significant negative linear relationship was found between RWA total scores and judgments of the truthfulness of the alibi statement, $b = -.005$, $SE = .002$, $\beta = -.160$, $R^2 = .020$, $t = -2.18$, $p = .030$. Higher scores on the RWA, indicating greater endorsement of authoritarian attitudes, were associated with lower ratings of alibi truthfulness. Similarly, a negative linear relationship was found between RWA scores and ratings of alibi accuracy, $b = -.006$, $SE = .003$, $\beta = -.172$, $R^2 = .030$, $t = -2.35$, $p = .020$. Higher authoritarianism scores were associated with lower ratings of alibi accuracy. This is not surprising, as ratings of alibi

accuracy and truthfulness were significantly correlated, $r_s = .611, p < .001$. RWA scores were also a significant predictor of assessments of the strength of the evidence against the suspect, $b = .007, SE = .003, \beta = .171, R^2 = .029, t = 2.33, p = .021$. Higher RWA scores were associated with higher ratings of the strength of the evidence against the suspect. Additionally, RWA scores were a significant predictor of probability of guilt ratings, $b = .008, SE = .002, \beta = .245, R^2 = .060, t = 3.39, p = .001$. Higher scores on the RWA were associated with higher judgments of the probability of the suspect's guilt.

Logically, evaluations regarding the truthfulness and accuracy of an alibi as well as the strength of the evidence against the suspect would be expected to be associated with judgments of the probability of the suspect's guilt. To ascertain whether this is the case, ratings of alibi truthfulness, alibi accuracy, strength of evidence against the suspect, and RWA total scores were entered as predictors into a forced entry multiple regression model with probability of guilt ratings as the outcome measure. The overall regression model was significant, $F(4, 177) = 39.91, p < .001, R^2 = .46$. The accuracy of the alibi was not a significant predictor of guilt ratings, $b = -.078, SE = .062, \beta = -.092, t = -1.26, p = .208$. However, alibi truthfulness, $b = -.231, SE = .067, \beta = -.253, t = -3.45, p = .001$ and the strength of the evidence against the suspect, $b = .373, SE = .046, \beta = .474, t = 8.09, p < .001$ were both significant predictors of probability of guilt. Lower ratings of alibi truthfulness and higher ratings of the strength of the evidence were associated with higher judgments of the probability of the suspect's guilt. RWA scores approached

significance, $b = .003$, $SE = .002$, $\beta = .108$, $t = 1.93$, $p = .056$. The trend was for greater endorsement of authoritarian views to be associated with higher ratings of probability of guilt, even when judgments regarding the alibi and the strength of the evidence are controlled.

One of the research questions for Experiment 2 was to consider what role Authoritarianism might play in the evaluation of morally desirable or undesirable alibis. It was anticipated that individuals who scored high on RWA would be more likely to form a negative implicit personality theory about an individual providing a morally undesirable alibi and reject the statement, while individuals who scored low on RWA were expected to be more likely to attribute an honesty motivation and accept the alibi. To investigate this question, four mediation analyses were conducted with ratings of alibi truthfulness, alibi accuracy, strength of evidence, and probability of suspect guilt as outcome variables, using Preacher and Hayes' (2008) bootstrapping method with 5,000 replacements. In each analysis, perceptions of moral desirability were predicted to mediate the relationship between RWA scores and the outcomes. To obtain a single moral desirability score, participants' VAS ratings of the morality of the action and the actor were summed and then divided by two. This variable represents participants' perceptions of the moral desirability of the alibi – however they understood the term 'alibi' – independent of which particular alibi was presented to them. As previously discussed, the reliability of these ratings of perceived moral

desirability is uncertain, so results of these analyses must be taken with caution.

In the first model, with moral desirability mediating the relationship between RWA and ratings of alibi truthfulness, the total effect (c) of RWA on alibi truthfulness ratings was $-.006$ ($p = .012$) and the direct effect (c') was $-.006$ ($p = .024$). The mediation effect showed a point estimate of $-.001$ and a 95% bias corrected bootstrap confidence interval that included zero (95% CI $[-.0025, .0001]$), meaning that moral desirability did not mediate the relationship between RWA and ratings of alibi truthfulness. However, RWA remained a significant predictor of alibi truthfulness ratings, as in the simple regression analysis, even when this mediating effect was included in the model.

Results for the subsequent three models, with ratings of alibi accuracy, strength of evidence, and probability of suspect guilt, parallel the results for alibi truthfulness. The total effect (c), $-.007$ ($p = .012$), and direct effect (c'), $-.006$ ($p = .025$), of RWA on ratings of alibi accuracy were both significant, but the mediation effect was not, showing a point estimate of $-.001$ and a 95% bias corrected bootstrap confidence interval that included zero (95% CI $[-.0027, .0001]$). For strength of evidence against the suspect, the total effect (c), $.0067$ ($p = .024$), and direct effect (c'), $.0063$ ($p = .035$), were significant. Perceptions of moral desirability did not mediate the relationship between RWA and strength of evidence ratings, with a point estimate of $.0004$ and a 95% bias corrected bootstrap confidence interval that included zero (95% CI $[-.0001, .0020]$). Finally, significant results were found for the total effect (c), $.0076$ ($p < .001$), and direct effect (c'),

.0066 ($p = .003$). Again, moral desirability perceptions did not mediate this relationship, with a point estimate of .001 and a 95% bias corrected bootstrap confidence interval that included zero (95% CI [-.0003, .0027]). In sum, the associations between RWA and the four outcome variables (i.e. alibi truthfulness, alibi accuracy, strength of evidence, and probability of suspect guilt) identified with the simple regressions were found in the mediation analyses as well. However, no significant mediation effects emerged in these analyses. The previously discussed issues around the moral desirability estimates and restriction of range problem with the RWA scores may have contributed to the failure to find any significant mediation effects in these analyses.

Discussion

Implications and Contributions. Results suggested that aspects of the content of an alibi may influence estimations of the probability of the suspect's guilt. Interestingly, the different alibis influenced judgments of the probability of the provider's guilt, even when judgments of the alibi itself were not affected. All of the alibis were judged to be equally accurate and truthful, but alibi condition still influenced decisions about the provider's guilt. Without the literature to support a priori hypotheses and planned contrasts, all pairwise comparisons were computed with a Holm-Bonferroni procedure. It could be argued that the alpha correction was unduly stringent in the present case, as the effect of alibi content on forensically relevant judgments has not been well investigated. However, two comparisons did reach significance, despite the correction.

Second, examination of the graph suggested that different factors may be at play in the morally desirable and morally undesirable alibis. Ratings of the probability of the suspect's guilt were relatively uniform when the alibis described morally desirable behaviour, but seemed to fluctuate to a greater degree when the alibis described morally undesirable behaviour. Indeed, both significant comparisons implicated at least one morally undesirable alibi. Perhaps the exact nature of the activities described in an alibi is somehow more salient when the activities are morally undesirable than when they are morally desirable.

One possible explanation for the apparent differences in probability of guilt with morally undesirable alibis is the imagined state of the victim in the alibi narrative. Past research has shown that the level of harm done to a victim can influence attributions of blame (e.g. Austin, Walster, & Utne, 1976; Wissler, Even, Hart, Morry, & Saks, 1997) and sentence-length decisions (e.g. Kerr & Kurtz, 1977). For example, participants chose harsher penalties when a rape victim became pregnant as a result of her assault than when she did not (Scroggs, 1976). As well, the level of psychological and financial harm to the surviving members of a murder victim's family described in victim impact statements influenced participants' sentence recommendations, with longer sentences for greater degrees of harm (Myers, Lynn, & Arbuthnot, 2002). Few would dispute that the partner who is being cheated on in an extramarital affair is a clear victim of the actions of his or her friend and partner and is likely to experience severe emotional pain

as a result. The harmful effects of the suspect's behaviour may have been less apparent or have been judged as less detrimental in the purse-snatching and bar fight alibis. The event schema for a purse-snatching is likely one in which the thief grabs the purse and runs and does not include any violence. No statistics are currently available, but with the ubiquity of electronic payment options, it seems likely that the majority of Canadian adults carry only a limited amount of cash in purses or wallets. Debit and credit cards can be cancelled, cell phones can be blocked and replaced. The perceived financial loss of the contents of a handbag may have been estimated as being relatively low, with the victim not being seriously wronged due to the lack of any physical injury or significant emotional trauma. With a failed fist fight, the victim did not suffer any physical harm or considerable emotional damage. A can of pop may have been seen as having so little value that its theft is, essentially, a victimless crime. Finally, the results for the priapism alibi could also be interpreted in this manner, but it would be the alibi provider who would be considered the victim. In the morally desirable alibis and the neutral alibi of visiting the doctor due to a minor stomach ailment, there arguably is no victim.

A second possibility is that the alibis were evaluated on the basis of the probability of the narrative being corroborated by a witness. Presumably, a guilty suspect would be unlikely to involve an individual in an alibi who might contradict his or her statement. Logically, the greater the likelihood of corroboration, the lower the probability of guilt should be. An affair with a friend's partner has a relatively high

chance of being corroborated, assuming that the other party involved decides to make a truthful statement. A witness for a purse-snatching or fist fight would be somewhat more difficult to locate and if the shopkeeper was not aware of the theft of the pop, he or she might not recognize the thief at all. However, the results for the two alibis that involved a visit to a medical facility cast doubt on this interpretation. Both alibis should be relatively easy to corroborate using medical records. A patient seeking treatment for priapism would likely be more memorable for staff than a patient seeking treatment for a stomach ailment, and so more likely to be corroborated. The pattern of results was the opposite; the patient with priapism was judged to be more likely to be guilty than the patient with a stomach problem, though this comparison was non-significant. Both of these should have been among the easiest to corroborate, but when the alibi provider was receiving treatment for priapism, the probability of his guilt was judged to be higher than when he was in bed with his friend's wife. As well, the positive alibis varied in the prospect of corroboration, but did not vary in probability of guilt ratings. Perhaps judgments about some types of alibis are more influenced by corroboration than others, but the results from the neutral alibis showed that the possible level of corroboration did not fully explain the pattern of probability of guilt ratings.

One key contribution of the present study was the introduction of RWA into the discussion about alibis. High RWA has previously been linked to more guilty verdicts (Narby, Cutler, & Moran, 1993), longer sentences (Devine, Clayton, Dunford, Seying, &

Pryce, 2001), and support for capital punishment (McKee & Feather, 2008; Vidmar, 1974). To date, only one study has examined RWA in the context of alibis. Culhane (2005) showed that high RWA was linked to increased skepticism of alibis. The current study supported these results. Higher scores on the RWA were associated with lower ratings of alibi truthfulness and accuracy. Thus, it appears that individuals who endorse authoritarian ideals are more likely to approach alibis with suspicion than those who reject authoritarian views. Results also suggested that people high on RWA are more likely than people low on RWA to view the evidence against the alibi provider as relatively strong and, consistent with previous research, the possibility of guilt as greater. Authoritarian individuals have been described as having a fundamental mistrust of other people. This, coupled with discomfort with the unpredictability of life, manifests in obedience to authority (Allport, 1954). The police are one representation of legitimate authority; the state, one of the ultimate authorities, grants power and legitimacy to the police. In the interview transcript, the police detective was depicted as being already suspicious of the alibi provider's statement, saying "any lies or omissions that we note *will cast further suspicion on you*" [italics added]. In deference to authority, participants who showed greater endorsement of authoritarian ideals were relatively suspicious of the provider's statement as well.

In terms of strength of evidence, the scenario suggested that the police authority saw adequate evidence to cast suspicion on the provider in the first place. Authoritarian

Submission, again, would lead participants higher on RWA to be more accepting of the conclusions of the police officers than participants low on RWA. As the final regression model showed, judgments regarding the strength of the evidence against the provider as well as alibi truthfulness were significant predictors of probability of guilt ratings. RWA was shown to influence both of these predictors and was a nearly significant predictor itself in the final model. However, RWA scores only explained between 2% and 6% of the variance in the dependent measures when it was the only predictor in the model. RWA does appear to influence forensically relevant judgments, but the current results suggested that the role it plays may be a small one.

One interesting result was that alibi truthfulness was a significant predictor of probability of guilt judgments, but alibi accuracy was not. Alibi truthfulness and accuracy were found to be significantly correlated, but regression diagnostics did not identify issues with multicollinearity, meaning that the two variables are not measuring the same construct. An accurate alibi, by definition, must be truthful, but a truthful alibi may not be entirely accurate. The spirit with which the alibi was offered appears to have been persuasive to participants, while the perceived objective accuracy of the statement was not. As well, participants may have had more difficulty determining the accuracy of the alibi than assessing its truthfulness. Particular linguistic features of the statement (e.g. lack of hedges) may have been used to assess truthfulness. No evidence was provided to participants that could support or contradict the alibi statement,

making estimations of accuracy relatively more challenging. Truthfulness and the plausibility of the account (e.g. likelihood of occurrence, does not violate the laws of physics) may have been the only information available that was useful for determining accuracy.

One additional question presented itself when considering the current results: how did participants interpret the term 'alibi'? Responses to the open-ended item wherein participants reported Harris' alibi suggested that there was substantial confusion and disagreement as to the meaning of 'alibi'. Twenty-seven participants (14.0%) reported the events of Harris' entire day as his alibi, rather than merely his activities during the time of the murder. The earlier part of Harris' day was spent working on a project for his job and watching a football game, activities that are likely fairly neutral. The movement towards more neutral ratings of moral desirability is logical if participants interpreted 'alibi' as referring to the whole day's activities.

Additionally, sixteen (8.4%) participants appear to have interpreted the term 'alibi' as referring to (or at least including) the individuals who could support the suspect's statement. For example, one participant wrote "Alibi = person that could confirm time and place the suspect was when/during the time of the crime." Another stated "The bar employees?" Yet another reported "He didn't have one. He just went to the park to run around." As Olson and Wells (2004) have noted, within the colloquial use of the term 'alibi', a narrative without evidence to substantiate it may be considered

“no alibi’ at all” (p. 159). Six (3.1%) participants referred to the fact that Harris indicated to police that he did not know the victim well or had never been to her home as his alibi. These statements indicated that Harris lacked an obvious motive for the crime, suggesting that he may be innocent. However, they did not fit within the legal definition of an alibi. Given the variation in interpretations of the term ‘alibi’ and uncertainty as to what, precisely, the participants believed they were rating, interpretation of the results must be made tentatively. The item, as provided to participants, likely did not adequately capture their beliefs regarding the morality of the particular activity Harris claimed to be engaged in at the time of the murder.

Limitations

The first significant limitation of the current study was the wording of the moral desirability items. Responses to these items as well as to the qualitative comprehension check question strongly suggested that the questions were confusing to participants. It was unclear whether ‘alibi’ referred to the provider’s whereabouts for the entire day or for his activities during the time of the crime, or whether corroboration was required to turn a statement into a ‘real’ alibi. Unfortunately, the problems with these items prevented verification that the negative alibis were perceived negatively, the positive alibis positively, and the neutral alibis neutrally. In future studies, the term ‘alibi’ should either be explained to participants or should be omitted entirely from the questions for the sake of clarity. Fortunately, the wording of the items about the

truthfulness and accuracy of the alibi did not use the word 'alibi' and referred to activities "on the evening in question," making it clear that only the events during the time of the murder were relevant.

A second significant limitation is the absence of any participants with RWA scores above the cutoff of +60, though this is not surprising with a typical undergraduate population. Consequently, the regression models cannot be used to make inferences regarding the responses of individuals with RWA scores that are higher than the scores included in the computation of the model. Despite the absence of very high RWA participants, a relationship between RWA and forensically relevant judgments was still observed. Even within the range of normal scores, greater endorsement of authoritarian ideas was related to greater skepticism about alibis, higher estimates regarding the quality of the police's evidence, and higher judgments of the likelihood of the provider's guilt, although RWA alone did not explain a great deal of the variance in the dependent measures. The true relationship between RWA and the variables of interest may be stronger than the results suggested, due to attenuation of the RWA scores in the present sample.

General Discussion

The present research was concerned with five key questions, three of which related to the influence of moral desirability on forensically relevant judgments and on memory performance. Also of interest was whether merely using the term 'alibi'

affected participants' perceptions of a statement. Finally, the role of Authoritarianism on participants' judgments was explored. Results from the two current studies have provided insight into all three of these domains.

Moral Desirability and Forensically Relevant Judgments

One of the primary goals of the current research was to develop a taxonomy of moral desirability of alibi statements. Previous research on alibi salaciousness by Mathews and Allison (2010) and Allison (2011) did not demonstrate that their salacious and neutral alibis were perceived by participants as such. Thus, the first task of the current program of research was to obtain objective measurements of the moral desirability of particular behaviours, including both morally desirable and undesirable acts, for use in research. Participant ratings from Experiment 1 permitted the construction of a five-level taxonomy wherein the statements were roughly equated based on believability. However, one issue exists with the present taxonomy. Results from both studies suggested that the neutral alibis may not reliably be interpreted this way by participants. In Experiment 1, the z-scores for the ranks of the moral desirability ratings for the middle quintile (i.e. neutral statements) had notably higher variability than the z-scores in the other quintiles. In Experiment 2, different results were observed for ratings of probability of guilt of the two neutral statements; one was implicated in one of the two significant pairwise comparisons, while the other was not significantly different from any of the other alibis. Still, the methods of the current research are more

scientifically rigorous than Mathews and Allison (2010) and Allison (2011). After the taxonomy is revised and validated, it will be a valuable tool for future studies that aim to vary moral desirability of statements.

The current studies suggested that moral desirability does not influence judgments about the narrative itself. Experiment 1 failed to show correlations between moral desirability and believability ratings for the statements. Experiment 2 showed that the alibis, selected from Experiment 1 to represent a range of moral desirability, did not differ in ratings of alibi truthfulness or accuracy. Additionally, moral desirability did not affect ratings of the strength of the evidence against the suspect. However, significant differences were observed for judgments of the probability of the suspect's guilt as a function of the different alibis, though the effect was weak and only two pairwise comparisons achieved significance. This all suggested that a content variable other than moral desirability, such as the effect that the alibi activities had on others, may have been operating to influence some judgments. Overall, it appears that morally undesirable alibis may influence participants' judgments – though it is unclear whether it is moral desirability, *per se*, that is responsible for observed differences – while morally desirable alibis do not. Future studies should attempt to clarify the roles of moral desirability and other alibi content variables. Regardless, some aspect of alibi content influenced responses in Experiment 2. The current results have important implications for models of alibi believability. These findings contradict Olson and

Wells' (2004) assertion that alibi content is not relevant to the discussion of alibi believability. No evidence was offered to corroborate any of the proffered alibis, yet differences in probability of guilt estimates were observed. This suggests that Olson and Wells' (2004) taxonomy is incomplete. Future basic research examining aspects of alibi content may necessitate a revision to their model.

Olson and Wells (2004) argued that the primary dependent variables in alibi studies should be items about the alibi itself, rather than verdict choice or probability of guilt, because it is the more sensitive measure for alibi issues. They posited that many factors influence probability of guilt judgments or verdict choice – for instance, the availability of other suspects or the quality of evidence pointing towards guilt – that are unrelated to the alibi. The current results potentially challenged this view, as alibi condition influenced judgments of the probability of the suspect's guilt without affecting ratings of the alibi itself in Experiment 2. It is recommended that alibi studies continue to include judgments about the alibi as well as probability of guilt as dependent measures. Additionally, future studies may wish to consider whether judgments about alibis other than truthfulness and accuracy affect assessments of the likelihood that a particular suspect is guilty.

Moral Desirability and Memory

Basic memory research suggests that innocent alibi providers often may not be able to produce accurate, detailed alibis. These alibi providers were likely engaged in

mundane activities at the time a crime occurred, with no reason to know that their recollections for these activities will become vitally important. As a result, the events may be poorly encoded, forgotten, distorted by post-event information, and difficult to retrieve from memory due to inadequate cues and the activation of event schemas. The current results suggested that memory might also play a role in evaluators' use of alibi evidence. Moral desirability was shown to influence performance on an unanticipated free-recall memory task. Morally undesirable statements were more memorable than morally desirable statements, while both were more memorable than neutral statements. This is consistent with basic memory research which has demonstrated that emotionally arousing images are more likely to be recognized at test than images that are not arousing (e.g. Bradley, Greenwald, Petry, & Lang, 1992; Christianson & Fallman, 1990; Kern, Libkuman, & Otani, 2002). The present results suggest that this effect also applies to memory for written statements using a recall task.

The implications of this result are clear. In the context of a criminal trial, jurors are exposed to a large quantity of information to assist them in determining the guilt or innocence of the accused. Likewise, police officers must sift through a great deal of evidence to identify legitimate suspects. If jurors and officers rely primarily on information that is easily accessible in their memories, these results suggest that defendants with some types of alibis will be at a relative disadvantage. Innocent alibi providers were likely involved in ordinary activities. Consequently, their alibis would

likely be classified as relatively morally neutral, the least memorable of the three categories. When evaluators are making determinations about a suspect's or defendant's guilt, potentially valuable alibi evidence may be neglected in favour of evidence that is more salient. Perhaps the events of mundane alibis, such as Steven Avery's narrative about buying paint in Green Bay with his family, fail to protect innocent providers in part because they are not memorable to evaluators. Defense attorneys may want to attempt to increase the salience of alibi evidence presented at trial to ensure that it is not forgotten during jury deliberations. Future research should examine how this can best be achieved.

The Alibi Context

The current study provides the first empirical support that the term 'alibi' results in skepticism by evaluators. Consequently, innocent alibi providers may not only be faced with the challenge of producing an accurate, detailed alibi, they may also have to contend with evaluators who are inclined to disbelieve their statement as a result of the context in which it is given.

What is currently unclear is *why* the term 'alibi' seems to lead to skepticism. One possibility may be the belief that anyone who is asked to provide an alibi must be a suspect for some other reason. Generally, individuals are not asked randomly for alibis; alibis are taken from individuals whom the police believe might be guilty of a crime. Alternately, 'alibis' may be more carefully scrutinized than 'narratives.' Gilbert (1991)

presented evidence that the acceptance of new information as true occurs simultaneously with understanding that information. Only later is that information potentially subjected to a more labour intensive evaluation and a determination of whether to unaccept the information is made. Alibis may be relatively more likely to be subjected to this latter evaluative process due to a belief that an alibi, as a piece of evidence in a search for truth, *should* be assessed carefully. An individual may be judged as more likely to lie in the context of offering an alibi than in offering the same statement to a friend or acquaintance as a narrative. The additional scrutiny that alibis are subjected to may lead participants to more readily question aspects of the statement (i.e. why was Harris out jogging after dark?) and generate reasons that the statement might be deceptive.

An unanticipated finding of the current research is that no clear consensus exists regarding layperson definitions of the term 'alibi.' Participant responses were inconsistent in terms of the timeframe implied by the term (i.e. the whole day or the time of the crime only), whether an alibi required corroboration by a witness, or whether it referred to any narrative evidence that suggested innocence (i.e. statements that the suspect did not know the victim, presumably implying a lack of motive). This suggests that basic research is necessary to form a solid foundation for increasingly complex models of alibi believability. If researchers are to ask participants whether they believe an alibi is truthful or accurate, it is essential to understand what their definition

of 'alibi' is. Additionally, if the term 'alibi' is misunderstood by the general public and leads evaluators to be overly skeptical, instructions to jury members regarding the appropriate use of alibi evidence may need to be examined. Revisions may be necessary to ensure that jurors have a clear understanding of what an alibi is (and is not) and to prevent them from being unduly biased against this evidence.

Authoritarianism

Authoritarianism showed a relatively weak, but consistent, effect on participants' judgments in Study 2. Individuals who scored higher on the RWA were more skeptical of alibis, viewed the evidence against the suspect as relatively stronger, and evaluated the probability of the suspect's guilt as higher, even though none of the participants scored above the cutoff required to be classified as high RWA. None of these effects were mediated by participants' evaluations of the moral desirability of the alibis presented to them. When judgments regarding the alibi and the strength of the evidence were included in the model, RWA merely approached significance as a predictor. The true influence of Authoritarianism may be greater than the current results suggest without this attenuation in the data, but future studies are necessary to test this supposition directly. The inclusion of personality variables like authoritarianism will allow researchers to examine whether extant models of alibi believability apply equally to all participants and may lead to the development of a more nuanced understanding of the process by which individuals decide whether to believe an alibi or not.

Avenues for Future Research

While the moral desirability of the alibi statement did not influence participants' judgments in the current research, other aspects related to alibi content may yet be relevant, for example, the level of harm caused to another person by the actions described in an alibi. The level of harm caused to a victim of a crime has been shown to affect various legal judgments (i.e. sentence length). Perhaps the harm caused by the actions described in the alibi will influence judgments of alibis as well. To clarify this, a convenience store theft could be described as an alibi where the clerk on duty was either fired for not noticing the theft, given a formal disciplinary notice, or not punished at all. The actions of the thief are identical, but the consequences to a victim of the act are very different.

As well, the congruence between participants' event schemas and the details of the event described in an alibi could be expected to influence judgments about the alibi. Schemas affect what information is attended to and encoded, the rate of decay of memories being retained (Tuckey & Brewer, 2003), and the details that are retrieved from long-term memory (e.g. Brewer & Nakamura, 1984; Taylor & Crocker, 1981). As well, schema-consistent details may be erroneously provided during memory reports (e.g. Greenberg, Westcott, & Bailey, 1998). Schemas have also been shown to affect many types of decisions, for example: judgments about the cause of personal success (Bryan, Dweck, Ross, Kay, & Mislavsky, 2009), consumer decisions (Nakayachi &

Kojima, 1988), and clinical decision making among nurses (Tabak, Bar-tal, & Cohen-Mansfield, 1996). The decision to believe or reject an alibi statement could also be influenced by the evaluator's event schemas.

Literature on deception detection and reality monitoring also provides variables to investigate in the broad topic of alibi content. As one example, Reality Monitoring Theory (Johnson & Raye, 1981) suggests that perceived events have more spatial and temporal information as well as a higher level of detail than imagined events. Deception detection research suggests that truth-tellers do provide more detail than liars in their accounts (Sporer & Sharman, 2006). Reality Monitoring Theory was initially postulated to explain how individuals determined whether information from their own memories was experienced or imagined. Recently, it has been applied to studying how people make judgments about the source of others' memories. Adults are more likely to believe that an event described by another actually happened as the level of detail increases (Johnson, Bush, & Mitchell, 1998). The deception detection literature is a potentially rich source of variables that could be applied to the alibi context, a task that is all the more pressing given the suggestion that 'alibis' might be evaluated differently than 'narratives.' Other variables that could be studied include statement length, contradictions within the statement, corrections to errors within the statement, the certainty of the provider, hedges, and pauses.

Finally, a gap in the literature identified by the present research is the ambiguity

with which individuals appear to view the term 'alibi.' When discussing how evaluators make judgments about alibis, a fundamental question is what, specifically, evaluators believe an alibi is. Put another way, what are the features of laypersons' alibi schemas? The answer to this question could influence jury instructions regarding the use of alibi evidence in their deliberations, as the instructions may take for granted that laypersons possess a clear understanding of the term. Qualitative research with focus groups or individual structured interviews would shed light on the extent of misunderstandings about what is meant by 'alibi.'

Conclusions

An alibi that is judged as credible is sufficient to demonstrate a suspect's innocence, yet currently there is a dearth of literature on innocent individuals' ability to generate alibis and on the factors that influence evaluators' judgments of alibis. Research suggests that alibi generation is a difficult and error-prone task, strong evidence to support an alibi is rare, and that weak alibis (i.e. lacking in corroborating evidence, particularly physical evidence) may not be believed even when they are accurate. Discussion of alibi believability has focused on the strength of evidence that supports the alibi narrative. The current research suggested that the content of an alibi may affect evaluations about the probability of the provider's guilt, though it remains unclear what particular features of alibi content are influential. Moral desirability, as defined by the current research, was insufficient to completely explain the observed

results. Other alibi content variables, such as the perceived harm caused by the events in the alibi, the congruence of the narrative with participants' relevant event schemas, and particular linguistic qualities of the alibi may prove more fruitful. Whether alibi content affects judgments about the alibi statement itself remains uncertain. However, moral desirability did affect the probability of particular alibi statements being recalled.

Results suggested that narratives described as alibis were believed less overall than narratives described as statements. One possible explanation is a perception that an alibi should be scrutinized more stringently than an everyday narrative. As a consequence, individuals evaluating an alibi may be more likely to consider reasons that the statement might be deceptive and to question particular aspects of the story than individuals considering a narrative.

Finally, RWA was associated with all of the judgments made by participants. Individuals who expressed relatively more endorsement of authoritarian ideals viewed the alibi as less truthful and accurate, the evidence pointing towards guilt as stronger, and the probability of the suspect's guilt as higher. Interestingly, this pattern was found despite the absence of participants scoring above the cutoff required to be classified as Right-Wing Authoritarian. Even variability within the low- to normal- range of RWA was sufficient to explain some of the variability in forensic judgments.

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Appendix A

Screen Shot of Materials for Experiment 1:

▼ Block 1

Q5

Walking an elderly neighbour's dog.

Not at all

Extremely

0 10 20 30 40 50 60 70 80 90 100

How **likely** is it that an adult male in Canada would do this at least once within a year?

If you found out that an adult male in Canada said he had done this, how **likely** would you be to believe that person was telling the truth?

Question	Likelihood (%)
How likely is it that an adult male in Canada would do this at least once within a year?	~5
If you found out that an adult male in Canada said he had done this, how likely would you be to believe that person was telling the truth?	~5

Q6

Walking an elderly neighbour's dog.

Very Negative

Negative

Neutral

Positive

Very Positive

-50 -40 -30 -20 -10 0 10 20 30 40 50

You would evaluate this **behaviour** as:

If you found out that an adult male in Canada did this at least once, your evaluation of that **person** would be:

Question	Evaluation (%)
You would evaluate this behaviour as:	~5
If you found out that an adult male in Canada did this at least once, your evaluation of that person would be:	~5

Appendix B

Case Materials for Experiment 2:

Supplemental
Crime Report

Toronto Police Division
Form 38.3 Rev. 5/09

3 Location of Occurrence 527 Connolly St		1 VICTIM Person Reporting Offense Price, Valerie		2 Records Section No. 187524	
4 Type of Premises or Name of Business Where Offense Was Committed Suite in detached home (living room)		5 Victim's Race, Sex, Age, D.O.B. W/F, 28, 08/13/1982		6 Date Report Printed 11/08/2010	
7 Date and Time Occurred 11/07/2010	8 Date and Time Reported 11/07/2010 1930hrs	9 Address of Victim/Person Reporting Offense 525 Connolly St		10 Phone	
11 Form Used as: <input type="checkbox"/> CONTINUATION SHEET FOR CURRENT REPORT <input type="checkbox"/> SUPPLEMENTAL INFORMATION <input type="checkbox"/> FOLLOW-UP INVESTIGATION				12 Further Police Action Req'd? <input type="checkbox"/> YES <input type="checkbox"/> NO	
13 Type of Report Continued: <input type="checkbox"/> CRIME <input type="checkbox"/> JUVENILE <input type="checkbox"/> FOLLOW-UP		14 Offense Reported as: Homicide		15 Changed To:	

NARRATIVE:

On Sunday November 7, 2010, at approximately 1915 hours, a 9-11 distress call was received from Janice Parker of 525 Connolly St, reporting a scream and gunshots from the next door residence (527 Connolly St.) and an unidentified male fleeing the residence. Dispatch contacted Officers Fisher and Balfour (11 Division), and dispatched them to the scene. After entering and securing the premises, Fisher called 11 Division to report an apparent homicide at 527 Connolly St. The victim was found on the floor of the living room and it appeared that she had been shot twice in the chest. EMT personnel confirmed the victim was DOA. The investigation was then assigned to Detective Bailey, who prior to leaving 11 Division, contacted Coroner's Investigator, T. Stanfield and Evidence Technician, B. Alexander.

Upon arrival at 527 Connolly St at approximately 2000 hours, Detective Bailey was met by Officer Fisher. Officer Fisher stated that he and Officer Balfour were dispatched to the scene in response to a 9-11 call. When the officers first arrived, they were met by personnel from No.6 fire pumper and life squad No.2. The officers were told that the victim showed no signs of life and the death appeared to be a homicide. They were also told that the firemen first found the victim lying face down on the living room floor. The victim, later identified as Valerie Price, was then turned over onto her back by Fire Department personnel as they attempted to render aid. Nothing else in the apartment was touched by Fire Department personnel.

Officer Fisher also stated that after he viewed the body and carefully checked the other rooms in the apartment, the scene was secured and protected. Officer Fisher then contacted 11 Division for assistance. While waiting for the arrival of the detectives, Officer Fisher interviewed Janice Parker, the neighbour who placed the 9-11 call in the adjacent home at 525 Connolly St. During this time, Officer Balfour remained at the crime scene and ensured that nothing was disturbed. In the interview with Officer Fisher, Ms. Parker reported hearing a scream from the residence, followed by 2 or 3 gunshots. When she looked outside her window, she saw a male running down the street, wearing blue jeans, a

green jacket with two reflective stripes down each arm, and a black baseball cap with a picture or logo on the front. The male was approximately 5'10" to 6'1" tall, average build, with no facial hair, between 25 to 40 years old. It was dusk, so she did not get a good look at the suspect and was not able to say for sure what race the man was.

At approximately 2130 hours, while interviewing people in the neighbourhood for tips, Officers Jiminez and Robertson came across a man matching the witness' description named Robert Harris. He was wearing blue jeans and a black t-shirt. In the hallway of his home the officers could see a black baseball cap with an Arizona Cardinals logo and a green jacket with reflective stripes hanging on a peg. The jacket appeared damp, indicating that Mr. Harris had recently been outside. Since Mr. Harris matched the description that Ms. Parker provided to police, the officers decided to take Mr. Harris in for secondary questioning with a Detective at the police station.

EVIDENCE:

All evidence collected at the crime scene was collected by Evidence Technician Alexander.

3 Location of Occurrence 527 Connolly St		1 VICTIM Person Reporting Offense Price, Valerie	2 Records Section No. 187524
4 Type of Premises or Name of Business Where Offense Was Committed Suite in detached home (living room)		5 Victim's Race, Sex, Age, D.O.B. W/F, 28, 08/13/1982	6 Date Report Printed 11/08/2010
7 Date and Time Occurred 11/07/2010	8 Date and Time Reported 11/07/2010 1930hrs	9 Address of Victim/Person Reporting Offense 525 Connolly St	10 Phone
11 Form Used as: <input type="checkbox"/> CONTINUATION SHEET FOR CURRENT REPORT <input type="checkbox"/> SUPPLEMENTAL INFORMATION <input type="checkbox"/> FOLLOW-UP INVESTIGATION			12 Further Police Action Req'd? <input type="checkbox"/> YES <input type="checkbox"/> NO
13 Type of Report Continued: <input type="checkbox"/> CRIME <input type="checkbox"/> JUVENILE <input type="checkbox"/> FOLLOW-UP		14 Offense Reported as: Homicide	15 Changed To:

INTERROGATION OF ROBERT HARRIS, 11/07/2010, 11:01PM:

Det. Bailey: Could you state your full name for the records?

Harris: My name is Robert Harris.

Det. Bailey: Thank you. And where do you live, Mr. Harris?

Harris: 532 Taunton St.

Det. Bailey: And how long have you lived there?

Harris: About 5 years or so.

Det. Bailey: Good, thank you. We are investigating the murder of one of your neighbours, Valerie Price. This is a photo of her [shows Harris the photo]. Did you know the victim at all, Mr. Harris?

Harris: Yes.

Det. Bailey: How well did you know her?

Harris: Not very. I mean, I'd recognize her, we'd say hi if we saw each other on the street, but that's about it.

Det. Bailey: How long had you known her?

Harris: I don't know, maybe a couple of years, but I'm really not sure.

Det. Bailey: And how would you characterize your relationship with her?

Harris: I don't know. Acquaintances, I guess.

Det. Bailey: And have you ever been inside her home?

Harris: No.

Det. Bailey: Could you detail for me, to the best of your ability, your whereabouts today, from the time you woke up on the morning of Ms. Price's death, Sunday, November 7, 2010. Keep in mind that we will be verifying your statement and any lies or omissions that we note will cast further suspicion on you. Murder is a serious crime, Mr. Harris, so really, it's in your best interest to be as honest and forthcoming as possible.

Harris: I got up between 8:30 and 9, spent the morning at home working on a project for work, watched the football game in the afternoon.

Det. Bailey: OK, were you still at home that same evening?

Harris: No.

Det. Bailey: Where were you that evening between 7 and 7:30PM, Mr. Harris?

VERSION 1:

Harris: I was at the home of my friend Michael Beauregard.

Det. Bailey: OK, we will be checking on that. What were you doing there?

Harris: That night I was in bed with Michael's wife, Kaitlynn.

Det. Bailey: What time did you return home?

Harris: A little after 8 that night.

Det. Bailey: And you're sure that is the time you returned home? It could not have been any earlier?

Harris: Yes, I'm positive.

Det. Bailey: Thank you. We're going to need you to provide us with a list of individuals who could support your statement. After that, you are free to go, though we may need to interview you again.

END OF INTERVIEW

VERSION 2:

Harris: I was walking around downtown.

Det. Bailey: OK, we will be checking on that. What were you doing there?

Harris: That night I was stealing purses from women on the street.

Det. Bailey: What time did you return home?

Harris: A little after 8 that night.

Det. Bailey: And you're sure that is the time you returned home? It could not have been any earlier?

Harris: Yes, I'm positive.

Det. Bailey: Thank you. We're going to need you to provide us with a list of individuals who could support your statement. After that, you are free to go, though we may need to interview you again.

END OF INTERVIEW

VERSION 3

Harris: I was at the George and Dragon bar.

Det. Bailey: OK, we will be checking on that. What were you doing there?

Harris: That night I was drinking and got kicked out after I started a fight and took a swing at some guy, but I missed.

Det. Bailey: What time did you return home?

Harris: A little after 8 that night.

Det. Bailey: And you're sure that is the time you returned home? It could not have been any earlier?

Harris: Yes, I'm positive.

Det. Bailey: Thank you. We're going to need you to provide us with a list of individuals who could support your statement. After that, you are free to go, though we may need to interview you again.

END OF INTERVIEW

VERSION 4

Harris: I was at the convenience store

Det. Bailey: OK, we will be checking on that. What were you doing there?

Harris: That night I was stealing a can of pop from the store.

Det. Bailey: What time did you return home?

Harris: A little after 8 that night.

Det. Bailey: And you're sure that is the time you returned home? It could not have been any earlier?

Harris: Yes, I'm positive.

Det. Bailey: Thank you. We're going to need you to provide us with a list of individuals who could support your statement. After that, you are free to go, though we may need to interview you again.

END OF INTERVIEW

VERSION 5

Harris: I was at the doctor's office.

Det. Bailey: OK, we will be checking on that. What were you doing there?

Harris: That night I was getting treatment for an erection that just wouldn't go away.

Det. Bailey: What time did you return home?

Harris: A little after 8 that night.

Det. Bailey: And you're sure that is the time you returned home? It could not have been any earlier?

Harris: Yes, I'm positive.

Det. Bailey: Thank you. We're going to need you to provide us with a list of individuals who could support your statement. After that, you are free to go, though we may need to interview you again.

END OF INTERVIEW

VERSION 6

Harris: I was at the doctor's office.

Det. Bailey: OK, we will be checking on that. What were you doing there?

Harris: That night I was getting treatment for a stomach problem.

Det. Bailey: What time did you return home?

Harris: A little after 8 that night.

Det. Bailey: And you're sure that is the time you returned home? It could not have been any earlier?

Harris: Yes, I'm positive.

Det. Bailey: Thank you. We're going to need you to provide us with a list of individuals who could support your statement. After that, you are free to go, though we may need to interview you again.

END OF INTERVIEW

VERSION 7

Harris: I was walking around the neighbourhood.

Det. Bailey: OK, we will be checking on that. What were you doing there?

Harris: That night I was walking my neighbours' dog because they were away on vacation.

Det. Bailey: What time did you return home?

Harris: A little after 8 that night.

Det. Bailey: And you're sure that is the time you returned home? It could not have been any earlier?

Harris: Yes, I'm positive.

Det. Bailey: Thank you. We're going to need you to provide us with a list of individuals who could support your statement. After that, you are free to go, though we may need to interview you again.

END OF INTERVIEW

VERSION 8

Harris: I was at Beacon Hill Park

Det. Bailey: OK, we will be checking on that. What were you doing there?

Harris: That night I was jogging on the track there.

Det. Bailey: What time did you return home?

Harris: A little after 8 that night.

Det. Bailey: And you're sure that is the time you returned home? It could not have been any earlier?

Harris: Yes, I'm positive.

Det. Bailey: Thank you. We're going to need you to provide us with a list of individuals who could support your statement. After that, you are free to go, though we may need to interview you again.

END OF INTERVIEW

VERSION 9

Harris: I was at the 5th St Mission homeless shelter

Det. Bailey: OK, we will be checking on that. What were you doing there?

Harris: That night I was serving dinner to the homeless.

Det. Bailey: What time did you return home?

Harris: A little after 8 that night.

Det. Bailey: And you're sure that is the time you returned home? It could not have been any earlier?

Harris: Yes, I'm positive.

Det. Bailey: Thank you. We're going to need you to provide us with a list of individuals who could support your statement. After that, you are free to go, though we may need to interview you again.

END OF INTERVIEW

VERSION 10

Harris: I was at my grandparents' home

Det. Bailey: OK, we will be checking on that. What were you doing there?

Harris: That night I was shoveling the snow off their driveway.

Det. Bailey: What time did you return home?

Harris: A little after 8 that night.

Det. Bailey: And you're sure that is the time you returned home? It could not have been any earlier?

Harris: Yes, I'm positive.

Det. Bailey: Thank you. We're going to need you to provide us with a list of individuals who could support your statement. After that, you are free to go, though we may need to interview you again.

END OF INTERVIEW

Appendix C.

Case-Specific Questionnaire Items.

Valerie Price Case

1. What is your age? _____ Years

2. What is your sex? _____

Please answer the following questions as best you can with the limited information from the police file.

3. How truthful do you find the suspect's statement regarding his whereabouts on the evening in question?

1	2	3	4	5	6	7
Not at all truthful			Somewhat truthful			Very truthful

4. How confident are you in your decision for Question #3?

1	2	3	4	5	6	7
Not at all confident			Somewhat confident			Very confident

5. How accurate do you find the suspect's statement regarding his whereabouts on the evening in question?

1	2	3	4	5	6	7
Not at all accurate			Somewhat accurate			Very accurate

6. How confident are you in your decision for Question # 5?

1	2	3	4	5	6	7
Not at all confident			Somewhat confident			Very confident

7. Overall, how strong do you think the evidence is against the suspect?

1	2	3	4	5	6	7
Not at all strong			Somewhat strong			Very strong

8. Based on the evidence provided to you, how likely do you think it is that the suspect committed the crime?

1	2	3	4	5	6	7
Not at all			Somewhat			Very
likely			likely			likely

9. What was Robert Harris' alibi?

10. Regarding Robert Harris' alibi, you would evaluate his behaviour as (please mark a slash through the line below to indicate your response):

Very Negative		Negative		Neutral		Positive		Very Positive		
-50	-40	-30	-20	-10	0	10	20	30	40	50

11. Regarding Robert Harris' alibi, if you found out that an adult male in Canada did this at least once, your evaluation of that person would be (please mark a slash through the line below to indicate your response):

Very Negative		Negative		Neutral		Positive		Very Positive		
-50	-40	-30	-20	-10	0	10	20	30	40	50

12. Regarding Robert Harris' alibi, how likely is it that an adult male in Canada would do this at least once within a typical year (please mark a slash through the line below to indicate your response)?

Not at all									Extremely	
0	10	20	30	40	50	60	70	80	90	100

13. Regarding Robert Harris' alibi, if you found out that an adult male in Canada said he had done this, how likely would you be to believe that person was telling the truth (please mark a slash through the line below to indicate your response)?

Not at all										Extremely
0	10	20	30	40	50	60	70	80	90	100

14. Please use the space below to include any general comments you have about the case.

Appendix D.

Right-Wing Authoritarianism Scale.

Note: For participants, scale directions were repeated at the top of each page (i.e. before items 14 and 26).

Scale Items and Directions: Indicate the degree to which you agree or disagree with each statement by circling the appropriate number:

-4	-3	-2	-1	0	+1	+2	+3	+4
Very strongly disagree				Neutral				Very strongly agree

1. Our country desperately needs a mighty leader who will do what has to be done to destroy the radical new ways and sinfulness that are ruining us.

-4 -3 -2 -1 0 +1 +2 +3 +4

2. Gays and lesbians are just as healthy and moral as anybody else.

-4 -3 -2 -1 0 +1 +2 +3 +4

3. It is always better to trust the judgment of the proper authorities in government and religion, than to listen to the noisy rabble-rousers in our society who are trying to create doubt in people's minds.

-4 -3 -2 -1 0 +1 +2 +3 +4

4. Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly.

-4 -3 -2 -1 0 +1 +2 +3 +4

5. The only way our country can get through the crisis ahead is to get back to our traditional values, put some tough leaders in power, and silence the troublemakers spreading bad ideas.

-4 -3 -2 -1 0 +1 +2 +3 +4

6. There is absolutely nothing wrong with nudist camps.

-4 -3 -2 -1 0 +1 +2 +3 +4

7. Our country needs free thinkers who will have the courage to defy traditional ways, even if this upsets many people.

-4 -3 -2 -1 0 +1 +2 +3 +4

8. Our country will be destroyed someday if we do not smash the perversions eating away at our moral fibre and traditional beliefs.

-4 -3 -2 -1 0 +1 +2 +3 +4

9. Everyone should have their own lifestyle, religious beliefs, and sexual preferences, even if it makes them different from everyone else.

-4 -3 -2 -1 0 +1 +2 +3 +4

10. The "old-fashioned ways" and "old-fashioned values" still show the best way to live.

-4 -3 -2 -1 0 +1 +2 +3 +4

11. You have to admire those who challenged the law and the majority's view by protesting for abortion rights, for animal rights, or to abolish school prayer.

-4 -3 -2 -1 0 +1 +2 +3 +4

12. What our country really needs is a strong, determined leader who will crush evil, and take us back to our true path.

-4 -3 -2 -1 0 +1 +2 +3 +4

13. Some of the best people in our country are those who are challenging our government, criticizing religion, and ignoring the "normal way things are supposed to be done."

-4 -3 -2 -1 0 +1 +2 +3 +4

14. God's laws about abortion, pornography, and marriage must be strictly followed before it is too late, and those who break them must be strongly punished.

-4 -3 -2 -1 0 +1 +2 +3 +4

15. There are many radical, immoral people in our country today, who are trying to ruin it for their godless purposes, who the authorities should put out of action.

-4 -3 -2 -1 0 +1 +2 +3 +4

16. A "woman's place" should be wherever she wants to be. The days when women are submissive to their husbands and social conventions belong strictly in the past.

-4 -3 -2 -1 0 +1 +2 +3 +4

17. Our country will be great if we honour the ways of our forefathers, do what the authorities tell us to do, and get rid of the "rotten apples" who are ruining everything.

-4 -3 -2 -1 0 +1 +2 +3 +4

18. There is no "ONE right way" to live life; everybody has to create their *own* way.

-4 -3 -2 -1 0 +1 +2 +3 +4

19. Homosexuals and feminists should be praised for being brave enough to defy "traditional family values."

-4 -3 -2 -1 0 +1 +2 +3 +4

20. This country would work a lot better if certain groups of troublemakers would just shut up and accept their group's traditional place in society.

-4 -3 -2 -1 0 +1 +2 +3 +4

21. It would be best for everyone if the proper authorities censored magazines so that people could not get their hands on trashy and disgusting material.

-4 -3 -2 -1 0 +1 +2 +3 +4

22. There is nothing wrong with premarital sexual intercourse.

-4 -3 -2 -1 0 +1 +2 +3 +4

23. People should pay less attention to the Bible and the other forms of religious guidance, and instead develop their own personal standards of what is moral and immoral.

-4 -3 -2 -1 0 +1 +2 +3 +4

24. What our country needs *most* is discipline, with everyone following our leaders in unity.

-4 -3 -2 -1 0 +1 +2 +3 +4

25. A lot of our rules regarding modesty and sexual behaviour are just customs that are not necessarily any better or holier than those which other people follow.

-4 -3 -2 -1 0 +1 +2 +3 +4

26. The facts on crime, sexual immorality, and the recent public disorders all show we have to crack down harder on deviant groups and troublemakers if we are going to save our moral standards and preserve law and order.

-4 -3 -2 -1 0 +1 +2 +3 +4

27. It's better to have trashy magazines and radical pamphlets in our communities than to let the government have the power to censor them.

-4 -3 -2 -1 0 +1 +2 +3 +4

28. The situation in our country is getting so serious, the strongest methods would be justified if they eliminated the troublemakers and got us back on our true path.

-4 -3 -2 -1 0 +1 +2 +3 +4

29. It is wonderful that young people today have greater freedom to protest against things they don't like, and to make their own "rules" to govern their behaviour.

-4 -3 -2 -1 0 +1 +2 +3 +4

30. Once the government leaders give us the "go-ahead," it will be the duty of every patriotic citizen to help stomp out the rot that is poisoning our country from within.

-4 -3 -2 -1 0 +1 +2 +3 +4