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Showup Identifications: The Effects of Presence of Stolen Property and Suspect's Denial on
Identification Performance

By

Andrew Smith

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Abstract

A showup identification is the presentation of a single suspect to an eyewitness. I used a simulated theft paradigm and subsequent showup identification to examine the effects of stolen property, suspects' verbal behaviour, and target-presence on eyewitness identification performance. I used a 2 (suspect: innocent, guilty) X 2 (stolen property: present, hidden) X 3 (verbal behaviour: denial with explanation, denial, silence) between-subjects factorial design. Binary logistic regression analysis indicated that both the target and stolen property, independently, and significantly predicted the accuracy of identification decisions. Surprisingly, the presence of stolen property facilitated more accurate identification decisions from eyewitnesses.

Keywords: Showups, eyewitness identification, system variables, context effect, verbal behaviour

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I would like to further dedicate this thesis to all individuals who have been victims of a miscarriage of justice. I would especially like to dedicate this thesis to those individuals who were wrongly convicted based in part on mistaken eyewitness identification. I will remain dedicated to researching eyewitness identifications – the errors of which are anything but common sense.

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Showup Identifications: The Effects of Presence of Stolen Property and Suspect's Denial on Identification Performance

As the number of DNA-based exonerations continue to grow, so too does recognition of the fallibility of eyewitness identification. To date, the Innocence Project has exonerated 268 wrongfully convicted individuals (www.InnocenceProject.org). Mistaken eyewitness identification has contributed to approximately seventy-five percent of these wrongful convictions (Innocence Project, 2009; Garrett, 2011). For decades, laboratory research at the intersection of psychology and law has illustrated the potential for eyewitness identifications to go awry.

Historically, Harvard Professor Hugo Munsterberg paved the way for future research at this intersection. His collection of essays entitled *On the Witness Stand* (1908) presents several psycho-legal phenomena that are relevant to this day. After Munsterberg, research in this area went relatively dormant until interest grew in rampant proportions during the 1970s. One important development during this era was the categorization of system and estimator variables (Wells, 1978). Variables that affect the quality of eyewitness identification, which criminal justice personnel have little or no control over, are called estimator variables. For example, law enforcement personnel cannot control for an eyewitness' poor viewing conditions, but investigators can estimate the effects of viewing conditions on identification performance. On the contrary, those variables that law enforcement personnel have at least some control over are called system variables. Law enforcement personnel have the potential to manipulate system variables—such as the manner in which lineups are conducted—in an effort to prevent mistaken identification (Wells, 1978). In the present study, I examined the effects of two system variables – verbal behaviour of the suspect and stolen property – on eyewitness identifications from showup identification procedures.

Showup identification procedures receive regular use (Behrman & Davey, 2001; Gonzalez, Ellsworth & Pembroke, 2001) and yet receive little attention from eyewitness researchers in comparison to lineup identifications. Using a simulated theft paradigm, I evaluated the effects of the presence of stolen property, and the suspects' verbal behaviour on identification performance from showups. The objectives of this study were to gain a firmer understanding of the variables affecting the quality of showup identifications and to contribute to the literature in this area. Currently, the phenomenology¹ of innocence is a theory coined by Kassin (2005) to account for the behaviour of innocent suspects in interrogations. In the present study, I derived my hypotheses concerning eyewitness performance from this theoretical construct in conjunction with relevant literature.

Eyewitness Identifications from Lineups

In recent decades, eyewitness research has made several critical developments, perhaps most favourably, in the area of lineup identifications. A lineup is a procedure in which law enforcement personnel present, ideally, one suspect (Wells & Turtle, 1986) amongst fillers – non-suspects whom are included in a lineup to reduce the impact of guessing – to an eyewitness. The eyewitness views the lineup and decides if the perpetrator from the event she or he witnessed is present, and if so, identifies that individual. This procedure is either live or photographic.

Lineups have received much attention from eyewitness researchers. Given that the criminal justice system has direct control over the construction of lineups, logically, manipulating lineups might be the most effective approach to curtail mistaken identification. High-quality lineups have the potential to prevent mistaken identification and thus, ultimately, wrongful

¹ Kassin (2005) uses the term phenomenology quite literally to refer to the ironic and unexpected observation that by virtue of being innocent, innocent individuals might be at risk during interrogation. Kassin (2005) by no means uses the term phenomenology in a manner consistent with phenomenologists. Phenomenologists are not concerned with the empirical observation of sociological phenomena but rather with the subjective interpretation of those phenomena (Berger & Luckmann, 1966).

convictions. Accordingly, hundreds of studies, meta-analyses, journal articles, books, encyclopaedia entries and conference presentations have been devoted to eyewitness research in general and lineup methods in particular.

This array of research has led to the development of recommended best practices designed to safeguard against false identification. Some of the practices include the use of: single suspect lineups, fillers that match the perpetrator's description, instructions that warn the eyewitness that the perpetrator might not be present in the lineup, double-blind lineup administration, and the sequential (rather than simultaneous) presentation of lineup members.

The need to use single-suspect lineups—I will refer to both photographic and live lineups generally as lineups, given that the research findings presumably apply to both—becomes clear through considering the inverse. If a lineup contains all suspects and no fillers, then no matter whom the eyewitness identifies she has identified a suspect. Thus, it becomes impossible to distinguish whether the eyewitness identified the suspect from memory or if she guessed or deduced the identity of the suspect. On the contrary, if a lineup contains only *one* suspect and the remaining persons in the lineup are fillers, the ability of the eyewitness to deduce or guess the identity of the suspect decreases, and criminal justice personnel can be more confident that the eyewitness' identification is attributable to her memory for the perpetrator (Wells & Turtle, 1986).

Fillers should match the description of the perpetrator (Wells, Malpass, Lindsay, Fisher, Turtle & Fulero, 2000). When attempting a lineup identification, an eyewitness is likely to look for the presence of characteristics that she or he initially provided when identifying the perpetrator. Selecting fillers that match the perpetrator's description, as provided by the eyewitness, ensures that the suspect does not stand out in the lineup and makes it more difficult for an eyewitness to identify a suspect by deduction.

When conducting a lineup it is also important to instruct the eyewitness that the perpetrator might or might not be in the lineup. By explicitly stating this caveat, an eyewitness with a weak memory of the perpetrator will be less likely to try to guess or deduce the identity of the suspect (Malpass & Devine, 1981). Unbiased lineup instructions have been shown consistently to reduce the risk of false identification (Stebly, 1997).

A lineup is analogous to a scientific experiment. Accordingly, similar to laboratory research, a double-blind administration should be used (Wells & Luus, 1990). Applying a double-blind procedure to lineup identifications simply means that the law enforcement personnel interacting with the eyewitness during the lineup procedure do not know the identity of the suspect in the lineup. This ensures that criminal justice personnel are not implicitly, or explicitly, communicating the identity of the suspect to the eyewitness. Past research suggests that investigator knowledge of suspect identity increases the rate at which eyewitnesses mistakenly identify innocent suspects in sequential lineups (Phillips, McAuliff, Kovera, & Cutler, 1999).

Finally, it is argued that sequential presentation is the preferred method for conducting lineups (Wells et al. 2000; Steblay, Dysart, Fulero, & Lindsay, 2001). The traditional simultaneous method presents lineup members (suspect and fillers) to the eyewitness at the same time. Lindsay and Wells (1985) hypothesized that this method of presentation encourages relative judgments – viewing all members of the lineup simultaneously might encourage eyewitnesses to select the individual that most resembles the perpetrator relative to other lineup members. In order to reduce the likelihood that an eyewitness will attempt to guess or deduce the identity of the suspect Lindsay and Wells (1985) devised the sequential method of presentation. In sequential lineups: members are presented to the eyewitness one at a time, the eyewitness must make an identification decision after each member, once the eyewitness makes an identification decision regarding a lineup member she cannot view that member again, the eyewitness does not

know how many members will be included in the lineup, and if the eyewitness makes an affirmative identification, the lineup parade is discontinued and she cannot view the remaining members of the lineup (Lindsay & Wells, 1985). By presenting lineup members in sequential order, eyewitnesses are less likely to engage in relative judgments comparing lineup members to one another and selecting the one that *most* resembles the perpetrator. Instead, the sequential method of presentation encourages eyewitnesses to engage in more absolute judgment decisions comparing each lineup member to his or her memory of the perpetrator (Lindsay & Wells, 1985). One of the most comprehensive comparisons of sequential and simultaneous lineups suggests that sequential presentation decreases the risk of false identification (Stebly, Dysart, Fulero, & Lindsay, 2001). Despite these findings, not all eyewitness researchers have accepted the sequential lineup as the preferred method of presentation. Malpass, Tredoux, & McQuiston-Surrett (2009) point to a reduction in correct identifications, errors in research, and other methodological issues as evidence that the superiority of sequential lineups has not yet been demonstrated. Moreover, other researchers point to specific contexts in which there might be a sequential advantage: when the lineup is backloaded (for example, when the suspect appears in the fifth or sixth position of a 6 person lineup) or when the lineup is biased – when the suspect is discernibly different from fillers (Carlson, Gronlund, & Clark, 2008).

Showups

The aforementioned best practices for conducting lineups illustrate some practical applications resulting from eyewitness research; however, few studies have focused on showup identifications. A showup identification is a procedure in which law enforcement personnel present a suspect to an eyewitness in absence of fillers. It is a “one-to-one confrontation” between the eyewitness and suspect (Gonzalez et al. 1993). Showup identifications can be live or photographic. Most commonly, law enforcement personnel use showups when they find an

individual matching an eyewitness description in close proximity to the crime, both geographically and temporally (Kassin, Ellsworth & Smith, 1989). Using showups in this context produces at least three advantages, (1) due to their close temporal proximity, showups might limit the effects of memory decay, (2) suspects identified as innocent are immediately released (Gonzalez et al. 1993), and (3) showups create reasonable and probable grounds for detaining a potentially guilty suspect.

Theoretically, however, the most significant drawback to showups is that showups do not allow criminal justice personnel to catch guessers (Gonzalez et al. 1993). As noted above, an all-suspect lineup would make it difficult to distinguish whether the eyewitness recognized the suspect from her memory of the perpetrator or just guessed or deduced the suspect's identity. This line of reasoning is also applicable to showup identifications. Given that law enforcement personnel present a suspect to an eyewitness without fillers, law enforcement personnel cannot distinguish whether the eyewitness has identified the suspect because the suspect matches her memory of the perpetrator or if she has identified the suspect because she is guessing or deducing that this single suspect is the perpetrator.

Incidence of Showup Identifications

Despite the possible limitations of showup identifications, it is likely that for the aforementioned advantages law enforcement personnel will continue to use showups as a method of identification. As evidence of this trend, the research shows that showups are already commonly used. Behrman and Davey (2001) conducted an archival analysis on 271 cases of crimes committed from 1987-1998 in the jurisdiction of the Sacramento City Police Department. The researchers analyzed 689 identification attempts: 258 live showups, 18 photographic showups, 284 photographic lineups, 58 live lineups, and 66 identifications classified separately because law enforcement personnel presented the eyewitness with multiple identification

procedures. Of the 684 identification methods listed, 276 (40%) were of the showup variety. In addition, they compared suspect identification rates across photographic lineups ($N = 284$) and showups ($n = 258$) and found a significant difference in suspect identification rates. Eyewitnesses presented with a photographic lineup identified the suspect 48% of the time, while eyewitnesses presented with a showup identified the suspect 76% of the time (Behrman & Davey, 2001). The accuracy of these suspect identifications, however, is unknown.

Actual Innocence and Showups

Of the first 250 DNA-based exonerations in the United States, 190 (76%) entailed mistaken identification (Garrett, 2011). Garrett (2011) was able to obtain, and examine, trial materials from 161 (85%) of those cases. Of the 161 misidentified exonerees and 278 identification tests examined, 118 exonerees were mistakenly identified in a photographic lineup, 61 in a live lineup, 46 from composite images, and 53 in either a live or photographic showup. As noted above and as mentioned by Garrett (2011), showups are justified when conducted in close proximity to the crime, both geographically and temporally. Of the 53 exonerees wrongly identified in showups only 11 (21%) exonerees were identified in justified, “crime-scene” showups (Garrett, 2011). Still, those 11 showups that were conducted at the crime scene were not immune from increased suggestiveness. Garrett (2011) points to exoneree, Gene Bibbins’ showup, in which he was presented to the eyewitness from the back of a police car as evidence of increased suggestiveness in a showup identification procedure. The remaining 42 exonerees were identified in showups removed both geographically and temporally from the scene of the crime (Garrett, 2011).

Gonzalez, Ellsworth, and Pembroke (1993)

Gonzalez et al. (1993) conducted two experiments and an archival study designed to contrast eyewitness performance from lineups and showups. The first experiment used a staged

theft in a classroom setting in which the perpetrator stole a purse from the professor.

Experimenters subsequently presented participants with one of a (1) target present lineup, (2) target absent lineup, (3) target present showup or (4) target absent showup. In eyewitness research perpetrators are referred to as targets. Therefore, if the target is present this means that the perpetrator is in the identification procedure and if the target is absent this means that the perpetrator is not in the identification procedure. Gonzalez et al. (1993) tested the hypothesis that participants presented with a lineup are more likely to engage in relative judgment decisions when making identifications, but participants presented with showups are more likely to engage in absolute judgment decisions. Supporting the hypothesis, participants in the lineup conditions were significantly more likely to say that the perpetrator was present than were participants in the showup conditions. Participants were more likely to say “yes” the perpetrator is there when presented with a lineup, across both target absent and target present conditions. In target present conditions, three (30%) participants made a correct identification from a showup, whereas, six (67%) participants made a correct identification from a lineup. In target absent conditions, however, 11 (92%) participants rejected the showup identification, whereas, only five (38%) participants rejected the lineup identification (Gonzalez et al. 1993).

Gonzalez et al.’s (1993) second experiment further examined the variables in the first experiment and the effects of suspect similarity on eyewitness identification. The experimenters employed a 2 (target: absent, present) X 3 (foil similarity: high, medium, and low) factorial design to examine lineup identifications. Likewise, target present and absent showups were examined. The similarity of the suspect to the perpetrator was manipulated as high or low in target absent showups. Of 10 participants presented with a target present showup, none made a positive identification. On the contrary, 15 of 25 participants in the target present lineup provided identifications. And, most importantly, in the target-present-low-suspect-similarity condition, six

of nine participants made identifications. This discrepancy between target present showups and target present lineups indicates that the two identification methods are likely not equivalent (Gonzalez et al. 1993).

Their third study was an archival analysis. The researchers compared lineups and showups in the field. Almost all of the 172 showups were live, whereas all of the 52 lineups included were photographic. Results support the two aforementioned laboratory experiments. Eyewitnesses presented with showup identifications were again less likely to say that the perpetrator was present than were eyewitnesses presented with lineup identifications. Possible confounds in this analysis include the use of *photographic* lineups versus *live* showups and a large discrepancy in memory intervals between the two identification methods. Eyewitnesses who participated in a lineup did so between three hours and three weeks after the commission of the offence; the mode was approximately a week. Alternatively, eyewitnesses who participated in a showup did so between fifteen minutes and two weeks after the commission of the offence; the mode was approximately two hours (Gonzalez et al. 1993).

Yarmey, Yarmey, and Yarmey (1994)

In Yarmey, Yarmey, and Yarmey's (1994) study, one of two targets interchangeably approached participants in a naturalistic field setting and initiated a short conversation (approximately fifteen seconds). Approximately two minutes later, another experimenter approached the same participant for the identification component of the experiment. The actual identification procedure took place approximately five minutes after the original encounter between the target and participant. Researchers asked participants to identify the target in one of, a photographic showup identification, a simultaneous photographic lineup, a voice showup, or a six-person voice lineup. The experimenter used unbiased instructions when presenting the identification procedure to the participant. There was no significant difference between

photographic showup and lineup identifications; however, identifications from lineups were significantly more accurate than one would expect by chance, conversely, no significant difference was found between identifications from showups and chance expectations (Yarmey et al. 1994).

Yarmey, Yarmey, and Yarmey (1996)

Yarmey, Yarmey and Yarmey's (1996) primary interest remained in the comparison of showups and lineups, and secondly, the researchers were concerned with measuring the effects of clothing bias and memory retention on showup and lineup identifications. The researchers hypothesized that similar clothing worn by an innocent suspect during the identification phase of the study would increase the likelihood of mistaken identification. The researchers followed the same procedure as the Yarmey et al. (1994) study. The researchers employed a 2 (confederate: one, two) X 2 (identification method: showup, lineup) X 2 (target: present, absent) X 2 (clothing: same, different) X 4 (memory interval: immediate, 30 minutes, 2 hours, 24 hours) between-subjects factorial to assess the results (Yarmey et al. 1996). In the target present condition, showups produced significantly more accurate identifications than lineups. Same clothing as opposed to different clothing also significantly increased the likelihood of identification at the two-hour memory interval. In the target absent condition, showups produced significantly more accurate rejections than lineups. In addition, same clothing produced significantly more false suspect identifications in the twenty-four hour memory interval across both lineups and showups. At both two and twenty-four hour memory intervals, participants were four times more likely to produce a mistaken identification when presented with a showup identification as opposed to a lineup identification method. In addition, same clothing produced significantly more mistaken identifications in showups opposed to lineups.

In their second experiment, Yarmey et al. (1996) focused solely on live showup identifications. They used the same methodical approach as experiment one, however, a third, dissimilar suspect condition was also included in conjunction with the high-similarity suspect condition. The experimenters employed a 2 (confederate: one, two) X 2 (target: present, absent) X 2 (clothing: same, different) X 4 (memory interval: immediate, 30 minutes, two hours, 24 hours) between-subjects factorial design. Across all conditions, the dissimilar suspect did not produce an effect across memory intervals or because of clothing bias. Participants performed better in the target absent condition. Participants were more likely to make a correct judgment in the different clothing condition as opposed to the same clothing condition. The researchers found an interaction between target availability, clothing, and identification performance. When presented with an innocent suspect in different clothing from that of the perpetrator, participants were significantly more likely to provide a correct nonidentification than when the innocent suspect was presented wearing the same clothing as the perpetrator. Additionally, the researchers found a significant interaction effect between target presence, memory interval, and identification performance: In the target absent condition participants performed significantly better than in the target present condition, but only in the immediate memory interval. Finally, in comparing their two experiments, the researchers found no significant difference between live and photographic showup identifications. Participants, however, did perform marginally better when presented with a live as opposed to photographic identification method except in the immediate memory interval, in which the photographic identification method was superior (Yarmey et al. 1996).

Dysart, Lindsay, and Dupuis (2006)

Dysart, Lindsay, and Dupuis (2006) investigated the effects of suspect similarity, the type of clothing worn at the original event and clothing-bias on showup identifications. The target approached employees at shopping malls in Southern Ontario and requested their participation in

a psychology study. The target further explained that an experimenter would return later to conduct the study. At that time, the experimenter instructed the participant that the experimenter would show the participant a photograph and ask the participant to indicate if it was the individual who asked the participant to participate in the study (Dysart et al. 2006).

Suspect similarity conditions consisted of target present, high and low similarity innocent suspects. During the initial interaction, the target wore either common or distinct clothing. For the purposes of this study, common clothing was a bluish-grey short-sleeved plaid shirt. The distinct clothing was a black Harley-Davidson t-shirt with a motorcycle, blue eagle wings, and the Harley-Davidson emblem. Dysart et al. (2006) manipulated clothing worn at the initial interaction to be either the same or different during the identification phase. The researchers also examined the effects of distinct clothing that was similar to but different from that worn during the initial interaction on identification accuracy. The different but similar distinct clothing was a very similar but different Harley-Davidson t-shirt (Dysart et al. 2006).

The memory interval ranged from ten minutes to four hours. However, memory interval produced no significant difference in identification accuracy. High-similarity between an innocent suspect and perpetrator in showup identifications increased the likelihood of mistaken identification. Moreover, the researchers found an interaction between clothing type and clothing bias. Clothing bias was only significant in the distinct clothing condition. Finally, the researchers also found that similar but different distinct clothing produced the same effect as distinct clothing on identification accuracy—it decreased identification accuracy (Dysart et al. 2006).

Stebly, Dysart, Fulero, and Lindsay (2003)

Stebly, Dysart, Fulero and Lindsay (2003) conducted a comprehensive meta-analysis comparing lineup and showup identification methods. The study includes eight papers, twelve hypothesis tests and 3013 participants. All of the showup studies I have reviewed with the

exception of the Dysart et al. (2006) study were included in the meta-analysis. Dysart et al. (2006) conducted their study subsequent to the meta-analysis so, obviously, it could not be included in the meta-analysis. Steblay et al. (2003) predicted that showups would lead to more false identifications than lineups. The authors examined three dependent variables: (1) total correct identifications, (2) correct identifications of perpetrators, and (3) mistaken identification errors.

Results indicated that participant-eyewitnesses shown showups are significantly more likely to produce a correct identification decision than participants shown lineups. Showup identifications were marginally advantageous in target present conditions and were significantly advantageous in target absent conditions. Despite the overall results suggesting the supremacy of showup over lineup identifications, the findings also indicate that when the innocent suspect closely resembles the perpetrator, showups put the suspect at greater risk of mistaken identification than lineups. The researchers found other moderator effects including increased accuracy in showup identifications across target present conditions for child participants, studies that did not employ staged crimes, and for female perpetrators. The researchers' further note that the effects of these moderators are confounded within respective studies and therefore, the effects are inseparable. Additionally, the favourability of showups over lineups increased when considering only adult participants. Marginally favourable improvements in lineups were associated with undergraduate participants. The favourability of lineups was also associated with increased memory intervals. Lineups were also marginally favourable when the perpetrator was a male. Finally, in one study, lineup favourability also increased because of participants viewing an in-class staged crime (Steblay et al. 2003).

Kassin, Ellsworth, and Smith (1989)

Sixty-three experts in the area of eyewitness identification responded to a questionnaire designed to assess the level of consensus on twenty-one eyewitness phenomena. The researchers asked experts to assess the reliability of each topic, one of which was showup identifications. A relevant statement intended for clarification accompanied each topic. The accompanying statement for the topic of showup identifications read, “The use of a one-person showup instead of a full lineup increases the risk of misidentification.” (Kassin, Ellsworth and Smith, 1989, p. 1091) In addition, researchers asked experts to provide their education and professional backgrounds as well as information pertaining to their court experiences. In assessing the statement on showup identifications, five (8%) experts indicated that the research was inconclusive, nine (14%) experts indicated that research tends to support this statement, 13 (21%) experts indicated that this statement is generally reliable, 28 (44%) experts indicated that the statement was very reliable and eight (13%) experts indicated that they did not know or they did not provide a response. In addition, 83% of the experts indicated that the statement associated with showup identifications was reliable enough for presentation in court. Seventy-seven percent of experts said they would testify to this statement in court. Twenty-three percent of experts admitted to previous testimony supporting this statement. Finally, 29% of experts felt that this statement on showup identifications was common sense. As Kassin et al. (1989) noted at the time, this comes as a surprise given that when the researchers conducted this questionnaire, there was no existing research comparing lineups and showups.

Best Practices for Conducting Showup Identifications

Similar to the opinions of the experts (see Kassin et al. 1989), the Innocence Project (2009) and the United States Technical Working Group for Eyewitness Evidence (1999), claim that showups are “inherently suggestive”. Both the United States Supreme Court and the

Canadian Department of Justice recommend using showups only in the rare circumstances that a suspect is apprehended within close proximity to the crime, both geographically and temporally (*Manson v. Brathwaite*; Working Group on the Prevention of Miscarriages of Justice, 2004).

When conducting showups, the U.S. Department of Justice (Technical Working Group, 1999) recommends employing five procedural safeguards to avoid prejudicing the eyewitness. First, before conducting the showup identification, the officer should document the eyewitness' description of the perpetrator. Second, to limit potential bias associated with the suspect's custody, the officer should consider transporting the eyewitness to the location of the suspect. Third, when multiple eyewitnesses are involved, the officer should separate eyewitnesses and instruct them to avoid discussing details of the incident with other eyewitnesses, and if one eyewitness makes a positive identification, the officer should consider employing alternative identification methods with the remaining eyewitnesses. Fourth, the officer should warn the eyewitness that the suspect might or might not be the perpetrator. Fifth, the officer should document the eyewitness' confidence level for both identifications and nonidentifications (Technical Working Group, 1999, p. 26). However, despite these criticisms and recommendations around the use of showup identifications, the little research that exists on showups is limited to the studies reviewed above; and, as noted in my review of the showup literature, the research does not examine the best-practice recommendations for showups.

The Current Study

There are a number of reasons why it makes sense to focus solely on showups; first, archival analyses conducted by Behrman et al. (2001) and Gonzalez et al. (1993) both found significantly lower memory intervals in showups. Behrman et al. (2001) found that 49% of lineup identifications took place within one to seven days after the occurrence and 47% took place in excess of eight days. Conversely, 93% of showups took place within a day of the occurrence

(Behrman et al. 2001). Further supporting this finding, Gonzalez et al.'s (1993) archival analysis found that law enforcement personnel conducted showups between fifteen minutes and two days after the occurrence, whereas they conducted lineups between three hours and three weeks after the occurrence. This difference in memory intervals is critical given that as the length of time between the crime and identification increases, the ability of an eyewitness to make a correct identification decreases (Shapiro & Penrod, 1986).

Second, lineups and showups might differ in environmental contexts. For example, law enforcement personnel can conduct showups at the scene of the crime (Behrman et al. 2003; Gonzalez et al. 1993; Technical Working Group, 1999), whereas it is unlikely that law enforcement personnel could conduct a lineup at the scene of the crime. Showups are therefore convenient.

Third, eyewitnesses might engage in categorically different judgment strategies in showups and lineups (Gonzalez et al. 1993). Similar to the hypothesis of Lindsay and Wells (1985) that sequential lineups are more likely to encourage absolute judgment decisions than simultaneous lineups, Gonzalez et al. (1993) hypothesized that showups might also encourage more absolute judgment decisions than simultaneous lineups. Gonzalez et al.'s (1993) data supports the notion that participants presented with a showup are more likely to engage in an absolute judgment strategy, whereas participants presented with a lineup are more likely to employ a relative judgment strategy. Therefore, an eyewitness presented with a showup identification would be more likely to compare the suspect to his or her memory for the perpetrator, whereas, an eyewitness presented with a simultaneous lineup would be more likely to compare the suspect with fillers employing a relative judgment strategy. Use of the absolute judgment strategy in sequential presentation has been shown to reduce the risk of false identification (Stebly et al. 2001).

Finally, fourth, like lineups the manner in which showups are conducted is not uniform. Showups can be conducted in a variety of environments ranging from the crime scene to the courtroom and almost anywhere in between (Behrman & Davey, 2001; Garrett, 2011; Gonzalez et al. 1993). Showups vary greatly by the length of memory retention (Behrman & Davey 2001; Gonzalez et al. 1993). And finally, showups vary greatly by the degree of suggestiveness that the identification procedure entails (Garrett, 2011). Given the tremendous degree of variability that exists within showup identification procedures and the paucity of empirical research that exists examining showup identification procedures, it is not only appropriate but also necessary that researchers examine showup identifications in their own right.

Given the potential benefits of showups and their common use, I will focus exclusively on showups, with the primary objective of exploring the effects of contextual variables on identification performance. In this experiment, I test hypotheses derived from published work on the phenomenology of innocence and script-processing theory, as reviewed in the following section.

Phenomenology of Innocence and the Issue of Denial

In his pioneering work on the phenomenology of innocence, Kassir (2005) suggests, “innocence might put innocents at risk”. Employing Lerner’s just world theory (*see* Lerner & Simmons, 1966, for example), Kassir (2008) suggests that falsely accused individuals believe in “truth” and “justice” and that ultimately, their innocence will come to light. Several DNA-based exonerees who had falsely confessed to crimes they did not commit explained that they confessed because they believed their innocence would be revealed through further investigation (Kassir, 2005, 2008; Kassir, Drizin, Grisso, Gudjohnson, Leo, & Redlich, 2009).

Kassir (2005) articulates five possible manifestations of innocence that might put innocents at risk of wrongful conviction. First, officers are susceptible to believing that an

innocent suspect is guilty. Second, innocent individuals do not employ their rights to silence or counsel. Third, the veracious and robust denials of innocent suspects induce extremely provoking interrogations. Fourth, some interrogation methods amplify the likelihood of false confession. And, fifth, officers cannot distinguish true and false confessions (Kassin, 2005).

A study by Kassin, Holland, and Wells (2005) illustrates the phenomenology of innocence in the context of a showup identification. Upon learning that a police department in Louisville, Kentucky, commonly requests that suspects waive their rights to a lineup in favour of a showup, Kassin et al. questioned the likelihood that innocent people would sacrifice this right as a result of possessing an unwarranted belief that they are unsusceptible to mistaken identification. The experimenters randomly assigned participants to either a guilty or an innocent condition to investigate this question. They instructed participants in the guilty condition to commit a small theft (for which, an eyewitness was present, who, unbeknownst to the participant, was a confederate), throw the stolen object away, and to return to a predetermined location. The experimenters instructed participants in the innocent condition to go to a different location, where no theft occurred, and to return to the same predetermined location as participants in the guilty condition. In both conditions, after arriving at the location, a condition-blind security guard apprehended the participant and informed the participant that an eyewitness was present during the theft. The participant was then booked and had a mugshot taken. The security officer explained that this was a study of eyewitness memory and that the officer was going to put together a photographic lineup for identification purposes. Shortly after, the security guard explained that there was a lack of composites matching the description of the suspect (participant) and that the suspect could either wait half an hour until the officer could obtain the remaining composites to complete the lineup or alternatively, the suspect could waive the right to a lineup and have his or her photo presented in a showup (Kassin et al. 2005).

Overall, 22 of 30 participants waived the lineup; however, 100% of innocent suspects waived the lineup, while only 47% of the guilty participants waived the lineup. Participants provided three types of reasons for why they decided to waive the lineup: (1) time constraints, (2) tactical advantage, and (3) a lack of fear of identification. More interesting, in the guilty condition, all participants cited tactical reasons for choosing to waive or wait for the lineup. On the contrary, in the innocent condition, all participants waived the lineup, ten citing that they did not fear mistaken identification regardless of the procedure employed, five participants cited tactical reasons, and three participants cited time constraints. Sixty-seven percent of guilty participants predicted that an eyewitness would identify them from a showup identification as compared to only 20% of innocent participants. Fifty-three percent of guilty participants predicted that the eyewitness would identify them from an eight-person photo array. Whereas, only six percent of innocent participants predicted that the eyewitness would identify them from an eight-person photo array. Results also indicated a significant interaction effect; as time passed, innocent suspects rated the security guard as significantly less suspicious than guilty participants, a relationship that was not initially present upon apprehension. This supports the researchers' hypothesis that innocent suspects believe that their innocence is transparent to others. This study implies that two aspects of the phenomenology of innocence are active, (1) an illusion of transparency, and (2) a naïve faith in human memory (Kassin et al. 2005).

Script Processing Theory

Scripts are a form of social schemata individuals employ to facilitate the comprehension of event sequences (Schank and Abelson, 1977). Scripts are cognitive structures organized around routine events (Abelson, 1981). They enhance the ability of individuals to process social information. Episodic memory, which stipulates that memories are stored as individual narratives or episodes, is a premise to script processing theory. Episodes are grouped together when a

sufficient amount are similar and are remembered as a script. When an individual recognizes an event for which a script is available, the individual invokes a script in the service of gap filling (Schank & Abelson, 1977). Gap filling refers to the assumptions or inferences that an individual makes when engaging in an event for which a script is available (Abelson, 1981). Schank and Abelson (1977) argue that the storage of analogous episodes as scripts results in a poor account for detail; although, they suggest that it is this “economizing” of episodes that makes memory possible at all. Thus, many routine events in which individuals engage – eating at a restaurant, purchasing something at a grocery store, and going to the carwash – involve the use of scripts (Abelson, 1981; Graesser, Woll, Kowalski, & Smith, 1980; Schank & Abelson, 1977).

For example, when a customer enters a restaurant she or he has a series of plans, expectations, and goals based on previous experiences, which constitute a script. The owner of the restaurant also possesses a series of plans, expectations, and goals based on previous experiences, which constitutes a script. Both roles comprise what I will classify as a double contingency; if either fails to live up to the expectations of the other, there will be a deviation from the script. The customer has an end-goal of fulfilling his or her appetite in exchange for money. The owner has an end-goal of making money in exchange for food and service. Upon arriving to a restaurant, a host will greet the customer and seat him or her at a table. Next, a server will ask the customer what he or she would like to drink and will bring the customer a menu. The server does not have to ask the customer if he or she needs a menu, nor does the customer have to request a menu. Both parties infer, through gap filling, that having a menu is a prerequisite to ordering food. Similarly, when the meal is ready, the customer does not have to ask for cutlery, cutlery is already at the table given that both parties know from previous experience that cutlery is a requirement to transfer food from the customer’s plate to the customer’s mouth. Finally, after the meal, both the customer and owner expect that the customer

will pay an agreed upon sum of money in exchange for food and service. These are reciprocal actions that both parties expect based on previous experiences in the script (Schank & Abelson, 1977).

This is an ideal script, according to the plans, expectations, and goals of the actors involved. Scripts do not always run according to plan, however. When an individual engages in a script in the facilitation of a routine event and some idiosyncratic occurrence takes place, this occurrence constitutes a deviation from the script. For example, if there is no cutlery on the table when the customer's meal comes the customer might have to request it, as cutlery is required to complete the end-goal of satisfying ones' hunger. This is a relatively simple example of how people employ scripts in routine social situations. Scripts, however, vary in complexity from extremely simple, to extremely complex (Schank & Abelson, 1977). In the following section, I will review the possibility of a much more complex script for accusations involving transgressions.

Relevance of the Phenomenology of Innocence and Script Processing Theory to Showup Identification Procedures

One issue of concern in applying script-processing theory in conjunction with the phenomenology of innocence to showup identifications is that eyewitnesses probably do not have a script for showup identifications, given that the eyewitness has likely never participated in one before. There are elements of the present showup study that are common experiences, nevertheless, such as accusations and denials. When an individual accuses an innocent suspect of a transgression, the individual can expect that the innocent suspect will immediately deny culpability. Alternatively, when an individual accuses a guilty suspect of a transgression, the guilty suspect's behaviour is much more variable (Russano, Meissner, Narchet, & Kassin, 2005). The guilty suspect might deny culpability, but the guilty suspect might also confess. In a formal

setting such as an interrogation, the guilty person may invoke his or her right to silence and say nothing.

I predicted that the manner in which an accused individual reacts to an accusation of a transgression influences the accuser's assessment of the suspect's guilt or innocence. Depending on the response of a suspect, he or she will look more or less guilty or innocent. In the accusation of a transgression script, the accuser expects an innocent suspect to behave in a particular scripted manner. Upon accusation, the accuser expects an innocent suspect to both deny culpability and provide an alternative explanation. Other responses are inconsistent with innocent behaviour and represent script deviations. If the accused remains silent, this behaviour is likely to be associated with guilt, as the accused is acting suspiciously or departing from the common sense assumption that innocent suspects are cooperative. Furthermore, given the just world belief that innocent individuals are not wrongly identified, why would an innocent suspect invoke his or her right to silence? This is the line of reasoning that I would expect from an accuser during the accusation of a transgression script. Therefore, the phenomenon of innocence associated with the accusation of a transgression is that although the right to remain silent is designed to protect innocent suspects, by virtue of employing this right, an innocent suspect might lead observers to infer guilt. Likewise, if the accused provides a denial but does not include an explanation, this too constitutes a deviation from the scripted behaviour of an innocent suspect. This response might appear less guilty than remaining silent, but it still lacks the veracity associated with a denial accompanied by an explanation. In the present study, I manipulated the response of accused perpetrators and innocent suspects to conform to the three aforementioned responses to the accusation of a transgression—silence, denial, and denial and explanation—in a showup identification. I evaluated the effects of these different responses on identification performance and associated confidence.

I also manipulated the presence or absence of stolen property during showup identifications. The inclusion of this variable was more exploratory in nature; however, this variable might also induce script processing. Hypothetically, if law enforcement personnel present a perpetrator with stolen property to an eyewitness, the stolen property should have little impact as this is in line with the eyewitness' expectations and the eyewitness should still make an identification. Alternatively, if law enforcement personnel present an innocent suspect with stolen property to an eyewitness, then a script deviation is present. Either the innocent suspect or the stolen property does not belong in the situation. I expect the presence of stolen property to increase the rate of mistaken identification.

In this manner, I expect that the present paradigm will allow for expanding the scope of the phenomenology of innocence beyond the interrogation room to account for the outcomes of social interactions entailed in other criminal procedures, namely, showup identifications. Researchers have used the phenomenology of innocence to explain the reasoning used both by law enforcement personnel and innocent suspects during interrogations. In the present study, in conjunction with script-processing theory, I expect that the phenomenology of innocence will facilitate a greater comprehension of the outcomes associated with showup identification procedures.

In the current study, I used the simulated theft of a backpack and subsequent showup identification to evaluate the effects of backpack-presence and the suspect's verbal behaviour on eyewitness identification performance. I tested the following hypotheses:

H₁: I predict that the verbal behaviour of the suspect will influence the identification decision of the eyewitness. Eyewitnesses will be most likely to identify the suspect when he remains silent and least likely to identify the suspect when he provides a denial and explanation, regardless of whether the target is present or absent. That is, the verbal behaviour of the suspect will not

predict identification accuracy, but will predict choosing (suspect identification v. suspect non-identification).

H₂: I predict that the presence of stolen property will influence the identification decision of the eyewitness. Eyewitnesses will be more likely to identify the suspect when the stolen property is present than when the stolen property is absent, regardless of whether the target is present or absent. That is, the stolen property will not predict identification accuracy, but will predict choosing (suspect identification v. suspect non-identification).

Chapter 2: Method

Participants

Participants ($N = 270$) were recruited via the undergraduate psychology participant pool in exchange for extra credit. The proportion of males ($N = 134$) to females ($N = 132$) was approximately equal. The mean age of participants was 21.06 ($SD = 11.018$) with 92.2% (245) of participants ranging in age from 18 to 22. Of the 264 participants that provided their ethnicities, 0.4% (1) self-identified as Aboriginal, 6.7% (18) self-identified as Arab/West Indian, 5.6% (15) self-identified as Black, 8.2% (22) self-identified as Chinese, 3.4% (9) self-identified as Filipino, 0.7% (2) self-identified as Latin American, 21.3% (57) self-identified as South Asian, 6.4% (17) self-identified as South East Asian, 35.29% (94) self-identified as White, 10.9% (29) self-identified as Other.

Design

I used a 2 (guilty suspect, innocent suspect) x 2 (backpack-present, backpack-hidden) x 3 (silence, denial, denial with explanation) x 2 (two perpetrators were used, each served as the innocent suspect for the other) between-subjects factorial design. All participants were assigned to conditions randomly. The primary dependent variables are identification decisions and confidence. For a table of all variables included in the analysis, see Appendix 1.

Materials

For materials I used a gender-neutral backpack (green and grey; an uncommon color combination on campus), informed consent form (Appendix B), release form (Appendix C), demographic questionnaire (Appendix D), filler task (Appendix D), hidden camcorder, matching shirts and hats for confederates, and walkie-talkies.

Demographic Questionnaire. Participants were asked to complete a demographic questionnaire as part of their filler task. The questionnaire asked participants to provide: gender, age, and race.

Filler Task. In the filler task participants were asked to choose from one of two essays on interpersonal situation tasks and to write a response based on their previous experiences (Appendix D).

Actors and Training

Both suspects in the present study were twenty-four year old males of average height and are of larger proportions. Both confederates are fair skinned with light features. However, facial features have moderate resemblance. Participants wore hats during the study to increase confederate similarity. Both participants also wore blacks t-shirts and like jeans.

Procedure

Upon arrival to the psychology lab (Psychology Lab 1), the experimenter welcomed the participant, escorted him or her to the testing room, and asked the participant to take a (predetermined) seat. The experimenter then stated, “I just have to go get the quiz and then we’ll get started. I’ll be right back”.

At this time, the experimenter slipped into a nearby office both to retrieve the quiz and, unbeknownst to the participant, to cue the confederates waiting in Psychology Lab 3. Psychology Lab 3 is located down the hall and up a flight of stairs, approximately fifty yards away from Psychology Lab 1 (*see* Appendix E for a rough approximation). The experimenter then said, “Where did I put that quiz?” into an awaiting walkie-talkie in the office, which cued the awaiting confederate to come downstairs towards Psychology lab 2. The experimenter then returned to the testing room with the quiz. The quiz contained a demographic questionnaire and the filler task. The experimenter then explained the directions and ensured the participant understood his or her

task. The experimenter then stated, “So, I’m just going to let you get started. I’ll be back when your time’s up.”

At this time, the experimenter exited the testing room (Psychology Lab 1) into Psychology Lab 2, closing the door over behind her or him. The experimenter then slipped a piece of paper under the door of Psychology Lab 2 into the hallway to cue the awaiting confederate, acting as the perpetrator. This was done to ensure that the experimenter was blind to whether the suspect during the identification stage of the procedure was the perpetrator. Moreover, this alerted the confederate that the participant was in position in Lab 1. The confederate then timed two minutes before entering Psychology Lab 1.

The experimenter ensured that the door to the testing room was closed, forcing the perpetrator to push it open upon entering the room. At this time, the perpetrator acted surprised and said to the participant “Oh, sorry, I didn’t think anyone was in here.” The perpetrator then proceeded to a filing cabinet in sight of the participant and retrieved a backpack before exiting through the same door he entered. The total exposure time was approximately ten seconds. The perpetrator then returned back upstairs to Psychology Lab 3 and waited four minutes. During this time, the target (innocent suspect or perpetrator) placed the bag either beside him (backpack-present condition) or hidden from the participant’s sight (backpack-hidden condition).

In the target present condition, the perpetrator – the confederate who actually took the backpack in view of the participant – remained in the session as the guilty suspect. In the target absent condition, the perpetrator exited the experiment by hiding in a hallway for the remainder of the session and the innocent suspect (whom the participant had not yet seen) remained in the session. After the allotted four minutes, the suspect called the experimenter who answered the phone in Psychology lab 1. The phone was near the participant, so the participant easily overheard the experimenter’s end of the conversation. The telephone script was as follows:

Experimenter: Hello?

Suspect: Hi, this is (name)

Experimenter: Hey, how's it going?

Suspect: You left your backpack upstairs.

Experimenter: No, I didn't leave my bag upstairs. It's right here. (*Looks over to the filing cabinet and notices bag is missing*)

Oh my God! My bag's not here! My laptop was in it. Which room did you see it in?

Suspect: It's in the student study space.

Experimenter: I've got to get up there right now. I've got to go. I'll call you back. (*Hangs up phone*).

(*Turns to participant*)

Experimenter: I swear I left my backpack on that filing cabinet. Did you see who took it?

(*Wait for response*)

Come on, I have to go check this out.

After the phone conversation, the suspect or perpetrator quickly pressed record on the video camera and got into position. When the participant and experimenter reached the doorway of Psychology Lab 3, the suspect had a book and bottle of water in front of him. In the backpack conditions the experimenter said, "Hey, that's my bag, did you take it"? In the no backpack conditions the experimenter said, "Hey, where's my bag, did you take it"? In the control conditions, the suspect said nothing. In the denial conditions, the suspect said, "No, I didn't take your bag". In the denial with explanation condition, the suspect said, "No, I didn't take your bag. Some guy was in here a few minutes ago. It was probably him". The experimenter then asked the participant, "Is this the guy who took my bag"? After the participant responded, the experimenter asked, "On a scale of 1-10, how confident are you in your decision"? After the participant's

response, the experimenter explained that this was in fact part of the experiment and that no theft actually occurred. The suspect then left the room, while the experimenter verbally debriefed the participant. During debriefing, the experimenter asked the participant what she thought the study was about, to recall what the suspect said if he said anything at all, and if the stolen property was present during the showup identification.

Chapter 3: Results

Manipulation Checks

Of 270 participants who participated in this study, 89.26% (241) provided responses as to whether or not they were suspicious that the theft was part of the study. The 29 missing responses are attributable to missing video or inaudible responses (the responses were recorded audibly on a hidden video camera). Of those 241 participants, only 11.6% (28) were suspicious that the simulated-theft was part of the study before the showup identification took place. Forty-four percent (120) of the participants were asked if they noticed the presence of the backpack during the showup identification. Only 45% (54) of participants who provided valid responses correctly recalled the presence or absence of the backpack during the showup identification. One hundred twenty participants were asked to recall what the suspect said during the showup identification. Sixty-three percent (75) correctly identified what the suspect said. The 150 missing manipulation checks are attributable to the following: in 65.1% (97) of cases the experimenter led the participant to the correct decision, in 32.9% (50) of cases there was no video or the video was inaudible, and, in 2% (3) of cases the experimenter did not ask the question.

Choosing Rates

In order to test the hypotheses, I first used logistic regression analysis to test main effects and interactions on choosing rates (suspect identification vs. non-identification). All independent variables – target, stolen property, and verbal behavior – were included in the model. The cell means are displayed in Table 2. The model significantly predicted choosing rates (- 2 Log Likelihood = 213.92, $X^2(4) = 43.50$, $p < .001$) and correctly classified 80.4% of cases; however, this was no improvement from the constant-only model that also correctly classified 80.4% of cases. This suggests that none of the independent variables significantly added to the predictive power of the model.

I hypothesized that the verbal behavior of the suspect would influence choosing rates. Specifically, I expected that the suspect would be most likely to be identified when he remained silent and least likely to be identified when he provided a denial and explanation (H_1). Suspects' verbal behaviour did not significantly effect choosing rates, $Wald(2) = .41, p = .813$. H_1 , therefore, was not supported.

I examined the hypothesis that the presence of stolen property would increase choosing rates (H_2). The presence of stolen property did not significantly affect the eyewitnesses decision to choose the suspect, $Wald(1) = .44, p = .508$. Thus, H_2 , was not supported.

The only independent variable that significantly affected choosing rates was target presence. When the target was present ($N = 144$) eyewitnesses were more likely to identify the suspect ($M = .94, SD = .23$) than when the target was absent ($N = 116, M = .63, SD = .49$), $Wald(1) = 31.50, p < .001$.

In addition to main effects, I tested for two- and three-way interactions: stolen property x target, verbal behavior x target, and stolen property x verbal behavior x target. The two- and three-way interactions did not add significantly to the model. When testing for interactions between stolen property x target and stolen-property x verbal behavior x target, final solutions could not be reached as the -2 Log Likelihood iterations never reached convergence.

For exploratory purposes I also tested the effects of participants' ethnicity and gender on choosing rates. For the purpose of logistic regression analysis participants' ethnicities were coded as White ($N = 90$), South or South East Asian ($N = 73$), and other ($N = 92$). Ethnicity did not significantly predict choosing rates, -2 Log Likelihood = 249.17, $X^2(2) = 3.24, p = .198$, and correctly classified 80.4% of cases, which was no improvement from the constant-only model which also correctly classified 80.4% of cases. Gender did significantly predict choosing rates, -2 Log Likelihood = 245.66, $X^2(1) = 10.45, p = .001$, and correctly classified 80.2% of cases;

however, this was no improvement from the constant-only model that also correctly classified 80.2% of cases. Female eyewitnesses were more likely to choose the suspect ($N = 127$, $M = .88$, $SD = .32$) than were male eyewitnesses ($N = 130$, $M = .72$, $SD = .45$).

Identification Accuracy

I examined the impact of the independent variables on identification accuracy (correct vs. incorrect) using logistic regression. All independent variables – target, stolen property, and verbal behavior - were included in the model. The cell means are displayed in Table 4. The model significantly predicted accurate identification decisions, $-2 \text{ Log Likelihood} = 208.07$, $\mathbf{X}^2(4) = 114.99$, $p < .001$, and correctly classified 79.6% of cases. The constant-only model correctly classified 68.8% of cases, suggesting that the independent variables increased the predictive power of the model. Stolen property significantly predicted identification accuracy, $Wald(1) = 4.26$, $p = .039^2$. Eyewitnesses were less accurate when the stolen property was absent ($N = 128$, $M = .36$, $SD = .48$) than when the stolen property was present ($N = 132$, $M = .27$, $SD = .44$). Verbal behavior did not contribute to the predictive power of the model $Wald(2) = 2.19$, $p = .33$. Two- and three-way interactions did not significantly add to the model.

Next, the effects of target were examined. Target significantly predicted identification accuracy, $Wald(1) = 66.90$, $p < .001$. Eyewitnesses were more likely to make a correct identification decision when the perpetrator was present ($N = 144$, $M = .06$, $SD = .23$) than when the perpetrator was absent ($N = 116$, $M = .63$, $SD = .49$).

I also examined the effects of ethnicity and gender on identification accuracy. Ethnicity did not significantly predict accuracy, $-2 \text{ Log Likelihood} = 315.66$, $\mathbf{X}^2(2) = 1.42$, $p = .49$, and

² I also conducted the analysis excluding those participants whom were suspicious that the theft was part of the study ($N = 28$). Given that both the stolen property and the target remained significant predictors of identification accuracy and that I have no empirical bases to suggest that participants who believe that an actual theft occurred differ from those participants that believed no theft occurred, I included all participants in the statistical analyses.

correctly classified 69% of cases, which was no improvement from the constant-only model that also correctly classified 69% of cases. Likewise, gender did not significantly predict identification accuracy, $-2 \text{ Log Likelihood} = 318.30$, $\chi^2(1) = .44$, $p = .51$, and correctly classified 68.9% of cases, which was no improvement from the constant-only model which also correctly classified 68.9% of cases.

Eyewitness Confidence

I conducted a 2 (target) x 2 (stolen property) x 3 (verbal behavior) ANOVA on eyewitness confidence. Participants were more confident when the target was present ($N = 142$, $M = 8.33$, $SD = 1.91$) than when the target was absent ($N = 113$, $M = 7.03$, $SD = 2.55$), $F(1, 243) = 21.51$, $p < .001$. There was no significant main effect of presence of stolen property, $F(1, 243) = 0.07$, $p = .79$, or suspect verbal behavior, $F(2, 243) = 1.00$, $p = .37$. There were no significant interactions.

A moderate correlation was identified between choosing and confidence, $r(251) = .35$, $p < .001$. No significant correlation was found between identification accuracy and confidence, $r(251) = -.06$, $p = .32$.

Chapter 4: Discussion

Neither the verbal behaviour of the suspect nor the presence of stolen property influenced the identification decisions (positive identification v. rejection) of eyewitnesses. Target was the only variable that predicted the identification decisions of eyewitnesses. Although neither hypothesis garnered support, the presence of stolen property, surprisingly, increased the accuracy of eyewitnesses. My initial hypothesis that the presence of stolen property would increase suspect identifications (H_2) rested on the assumption that the presence of stolen property would increase the suggestiveness of the identification procedure, thereby leading to more suspect identifications. Results suggest, however, that the presence of stolen property might have served as a contextual cue to remembering, facilitating greater eyewitness identification accuracy.

A context effect refers to the presence of some cognitive or environmental stimulus during or prior to the retrieval phase of memory that services to facilitate or diminish memory performance (Davies & Thomson, 1988). There are three processes of memory: encoding, storage, and retrieval (Tulving & Thomson, 1973). During the encoding phase, individuals actively input to be remembered information into memory storage. During the storage phase, individuals do exactly that – store the memory for later. Finally, during the retrieval stage of memory, participants retrieve memories for tasks of recognition or recall. All three stages of memory are prone to error (Cutler, 2006; Loftus & Loftus, 1980; Dysart et al., 2006). Human memory does not work like a video recorder, storing information to be played like a DVD later, it is much more fallible (Loftus & Loftus, 1980). The act of remembering is a coalescence of stored information and information available in the rememberers' cognitive or social environment (Tulving & Thomson, 1973). Therefore, in the present study, the memory of the eyewitness for both the crime and the suspect is attributable not only to how she encodes the crime but also to her present environment. Although context effects have a potent and replicable history in tasks of

recall, the effects are rare in tasks of recognition as the stimulus itself provides a powerful cue to recognition; this has been touted as the outshining hypothesis (Smith, 1988). Thus, during a target-present eyewitness identification procedure (perhaps even during a target-absent procedure in which the innocent suspect bears a high resemblance to the perpetrator) one might not expect to find a context effect. There are circumstances, nevertheless, in which the target or the stimulus in an identification procedure might not provide a powerful cue to recognition, and in such instances contextual cues might be particularly beneficial (Cutler & Penrod, 1988).

Instances in which the target might not serve as an effective contextual cue include: when estimator variables such as a disguise are present during encoding, when memory intervals are longer, and when factors that affect accurate retrieval, such as biased lineup instructions, are present (Cutler & Penrod, 1988). Cutler and Penrod (1988) examined two separate context reinstatement techniques; the first, the context reinstatement interview, was employed before the lineup and consisted of mnemonic instructions, photos from the crime scene, and presenting the eyewitness with his or her written description of events. The second context reinstatement technique, in which physical characteristics served as contextual cues, entailed exposing eyewitnesses to the posture, gait, voice, skin colour, and three-quarter view of the suspect. In addition to the two contextual reinstatement techniques, Cutler and Penrod (1988) manipulated lineup instructions, memory interval, target presence, disguise, weapon visibility, lineup size, and the degree of similarity between suspects and fillers (high v. low). Findings indicated that context cues were moderating the effects of variables that inhibit identification accuracy. Amongst participants who did not receive a context reinstatement interview, eyewitnesses who viewed a non-disguised perpetrator performed significantly better than eyewitnesses who viewed a disguised perpetrator; however, amongst participants that did receive the context reinstatement interview there was no significant difference. This suggests that the context reinstatement

interview had the potential to nullify the adverse effects that might be associated with an eyewitness identification in which the perpetrator wore a disguise during the commission of an offence.

Likewise, Cutler and Penrod (1988) also found that the context reinstatement interview provided a similar curative value for correcting the negative effect of biased lineup instructions on identification accuracy. Amongst participants who did not receive the context reinstatement interview, biased lineup instructions significantly reduced identification accuracy. Biased lineup instructions had no significant effect on identification accuracy amongst participants who did receive a context reinstatement interview, however. In terms of choosing rates, the contextual reinstatement interview significantly reduced the effect of biased lineup instructions. Amongst participants who did not receive the context reinstatement interview the effect of biased lineup instructions was quite potent ($d = 0.96$) with participants in the biased lineup instruction condition choosing 99% of the time and participants receiving neutral lineup instructions choosing 65% of the time. Amongst participants who did receive the context reinstatement interview, the effect size was much more modest ($d = 0.51$) with participants in the biased lineup instruction condition choosing 89% of the time and participants receiving neutral lineup instructions choosing 71% of the time.

The presence of physical contextual cues produced similar results. The physical cues improved identification performance in high-similarity suspect lineups but produced no advantage in low-similarity suspect lineups. Physical cues improved identification performance in the two-week memory interval but not in the two-day retention interval. Physical cues also benefited eyewitness who were not shown mugshots prior to the lineup identification procedures but produced no advantage in lineup identifications contaminated by previous exposure to mugshots (Cutler & Penrod, 1988).

Both increasing the exposure of suspect characteristics and the use of a context reinstatement interviews have curative value for eyewitness identification procedures plagued by poor viewing conditions or suggestive procedures (Cutler & Penrod, 1988). Results from the present study suggest that the presence of objects from the scene of the crime during the identification procedure might also service as a cue to remembering. In the present study both suspects wore the same black t-shirts and hats and similar blue jeans. Previous research suggests that a hat is a form of disguise (Cutler, 2006) and that clothing bias inhibits accurate identification decisions (Dysart et al. 2006). The presence of these variables might have made the identification task difficult enough that the target no longer “outshined” the environmental context. Fittingly, the presence of the stolen property during both encoding and retrieval processes of memory appeared to improve identification accuracy.

The suspects’ verbal behaviour had no effect on the choosing rates or the accuracy of eyewitnesses. It could be that the verbal behaviour of the suspect as defined in the present study just does not influence identification performance in showups; however, it could also be that the manipulation was not successful. Only 62.5% of participants were able to correctly recall what the suspect said during the identification procedure. Additional research is needed before one can confidently draw conclusions about the suspect’s verbal behaviour.

An implication that can perhaps be derived from the present study is that one does not want to be presented to an eyewitness in a showup identification procedure. Regardless of culpability, participants chose the suspect 80% ($N = 260$) of the time in the present study; even when the suspect was innocent he was still chosen 63% ($N = 116$) of the time. The mere rate of choosing associated with a showup identification procedure is alarming. Although this choosing rate might have been exacerbated by the difficulty of the identification task (disguise and clothing

bias), this finding should not be overlooked. Further research examining the choosing rates associated with showup identification procedures is recommended.

Although very few participants recognized that the simulated theft was part of the study and no participants recognized that this study examined the presence of stolen property and the suspects' verbal behaviour on identification performance, this study was not without limitations. More than half of the manipulation checks regarding the suspects' verbal behaviour went awry. Manipulation checks were recorded audibly on a hidden video camera during the debriefing session. Only a portion of the manipulation checks represented valid responses, primarily due to technological issues and experimenters leading participants. Given that only 120 participants had valid responses for this manipulation check, further examination of this variable was not possible. Logistic regression requires larger sample sizes and is inadvisable when there is a large ratio of independent variables to sample size (Mertler & Vannatta, 2002). Had there been more valid responses to the manipulation check, further analysis could have been conducted, such as by excluding participants who failed the manipulation check. Consequently, my conclusions regarding the effect of the suspects' verbal behaviour manipulation are tentative. Future studies should examine the effects of suspects' verbal behaviour on eyewitness identification performance in showup procedures.

Chapter 5: Conclusion

The mere rate of choosing associated with showup identification procedures raises concern. Yet, the identification procedure receives regular use (Behrman & Davey, 2001; Garrett, 2011; Gonzalez et al. 1993) and there is little if any reason to believe that this will change in the near future. It might be that there is an “inherent suggestiveness” (Innocence Project, 2009; Technical Working Group for Eyewitness Evidence, 1999) associated with an identification procedure that contains only one member. As mentioned in the introduction, however, showup identification procedures also offer several distinct advantages over other identification procedures. Due to their close temporal proximity, showups limit the effects of memory decay. Suspects identified as innocent are immediately released from custody (Gonzalez et al. 1993). And, showups create reasonable and probable grounds for detaining potentially guilty suspects. For these reasons showup identification procedures have a valuable place in the justice system. Therefore, instead of comparing showups and lineups – two procedures intended for different situations and both offering relative advantages – there is much greater utility in examining the potential for the development of best-practice recommendations for showup identification procedures.

Both the U.S. Supreme Court and the Government of Canada recommend the use of showups only when a suspect is located both geographically and temporally proximal to the scene of the crime (FPT Working Group, 2004; *Manson v. Brathwaite*). Yet, archival data suggests that there is a tremendous degree of variation that exists from one showup identification procedure to another and that showups are sometimes conducted neither geographically nor temporally proximal to the scene of the crime (Behrman & Davey, 2001; Garrett, 2011; Gonzalez et al. 1993). As the innocence data illustrates, the courts often accept these showups that are not conducted near the scene of the crime (Behrman, 2011). Empirical research should explore the

potential advantages of conducting showups temporally and geographically proximal to the scene of the crime over showups that do not meet these criteria. If crime-scene showups do provide a significant advantage over other varieties of showups, an empirical basis to this claim could urge courts to exclude showups conducted away from the crime-scene. Future research should consider examining such potential differences in addition to other system variables that might increase the accuracy of eyewitnesses in showup identification procedures. For example, perhaps the high tendency to make a positive identification from a showup could be dampened through instructions and cautions. Further research can examine this possibility.

This study is unique in that it is amongst the first to employ a simulated-theft paradigm to examine the effects of system variables on eyewitness identification performance from *live* showup identification procedures. When considering verisimilitude, which in relation to showup identification procedures refers to the plausibility that a similar scenario might occur naturally during a criminal investigation, methods such as the one employed in the present study are essential. There is no telling what differences might exist between participants that knowingly witness a staged theft or innocuously meet a target in public and eyewitnesses that witness actual crimes. Therefore, researchers should seek to mirror actual crimes in their studies as closely as possible. Past studies on showups have often presented participants with photographs of suspects as opposed to presenting the actual suspect in a live presentation – likely to be consistent with the lineup procedures with which the showups were being compared. When showups are used in a manner consistent with the recommendations set out by the Government of Canada or the United States Supreme Court, however, it is highly unlikely that the suspect would be presented to the eyewitness in a photograph. Hypothetically, if both the eyewitness and a suspect who matches the description of the perpetrator were in close proximity to the scene of the crime, why would law enforcement present the suspect to the eyewitness in the form of a photograph? In most instances

it would be very peculiar if law enforcement personnel were to search for or take a photograph of a suspect whom is already present at the scene of the crime. Unlike lineups, showups do not entail the need for fillers and therefore it is much more practical for a showup to be conducted live. Both archival analyses that distinguished between live and photographic showup procedures support this reasoning, suggesting that the overwhelming majority of showup identification procedures are conducted in a live format (Behrman & Davey, 2001; Gonzalez et al. 1993). Beyond contributing to the dearth of literature on showup identification procedures, I hope this study provides the catalyst necessary to urge other researchers to use similar methods in future research examining best-practice recommendations for showups.

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Appendix A: Tables*Table 1: Variables Included in the Statistical Analysis*

VARIABLES	DEFINITIONS	MEASURES	LEVEL OF MEASUREMENT	TYPE OF VARIABLE	HYPOTHESES
INDEPENDENTS TARGET	Target is defined as target present or target absent during the showup identification. Target refers to the perpetrator.	Was the perpetrator present or absent for the showup identification? [0] Present [1] Absent	Nominal	Categorical	H ₁ , H ₂
BACKPACK	Backpack is defined as backpack present or backpack absent during the showup identification.	Was the backpack present or absent during the showup identification? [0] Absent [1] Present	Nominal	Categorical	H ₂
DENIAL	Denial is defined as silence, denial ³ , or denial + explanation ⁴ during the showup identification.	Did the suspect remain silent, provide a denial or provide a denial + explanation? [0] Silent [1] Denial [2] Denial + Explanation	Nominal	Categorical	H ₁
DEPENDENTS IDENTIFICATION	Identification is defined as whether or not the participant identified the suspect.	Did the participant identify or reject the suspect? [0] Not him [1] Yes him [9] Missing	Nominal	Categorical	H ₁ , H ₂
IDENTIFICATION ACCURACY	Did the participant make an accurate identification decision?	[0] Yes [1] No	Nominal	Categorical	N/A

³ “No, I didn’t take your bag”.

⁴ “No, I didn’t take your bag. Some guy was just in here. It was probably him”.

VARIABLES	DEFINITIONS	MEASURES	LEVEL OF MEASUREMENT	TYPE OF VARIABLE	HYPOTHESES
CONFIDENCE	Confidence is defined as how confident the participant is in the identification or nonidentification.	“On a scale of 1-10, how confident are you in your decision”? Likert scale (1-10) [1] No Confidence [10] Extremely confident	Ordinal	Discrete	N/A
Hypothesis 1	Remaining silent will increase the rate of suspect identification. Denial with an explanation will decrease the rate of suspect identification.				
Hypothesis 2	The presence of stolen property will increase the rate of suspect identification.				

Table 2: Choosing Rate Cell Means

	Verbal Behaviour	Stolen Property Present (%)	Stolen Property Absent (%)	Totals(%):
Target Present	Silence	100 (24)	92 (24)	96 (48)
	Denial	100 (26)	92 (24)	96 (50)
	Denial+Explanation	100 (23)	83 (23)	91 (46)
	Total:	100 (73)	89 (71)	94 (144)
Target Absent	Silence	65 (20)	61 (18)	63 (38)
	Denial	55 (20)	58 (19)	56 (39)
	Denial+Explanation	60 (20)	79 (19)	69 (39)
	Total:	60 (60)	66 (56)	63 (116)
Totals:		82 (133)	79 (127)	80 (260)

N = (260). Suspect Identifications: 1 = yes, 0 = no.

Table 3: Logistic Regression Analysis for Variables Predicting Identification Decision

Variable	<i>B</i>	<i>SE B</i>	e^B
Target	-2.61*	.8	.07
Stolen Property	.23	.34	1.26
Denial	.04	1.02	1.04
Denial+Explanation	-.79	.89	.46
Denial*Target Absent	-.32	1.12	.73
Denial+Explanation*Target Absent	1.07	1.02	2.91
Constant		3.03	
- 2LL		211.73	
X^2		16.1	
<i>df</i>		6	
Cox and Snell R^2		45.68	

Note: e^B = exponentiated *B*. -2 LL = -2 Log Likelihood. Independent variable codings: target (0= present, 1= absent), Stolen Property (0= absent, 1= present), and Verbal Behaviour (0= silent, 1= denial, and 2= denial+explanation). Dependent variable codings: identification accuracy (0= No, 1= Yes).

* $p \leq .05$

Table 4: Identification Accuracy Cell Means

	Verbal Behaviour	Stolen Property Present (%)	Stolen Property Absent (%)	Totals (%):
Target Present	Silence	100 (24)	92 (24)	96 (48)
	Denial	100 (26)	92 (24)	96 (50)
	Denial+Explanation	100 (23)	83 (23)	91 (46)
	Total:	100 (73)	89 (71)	94 (144)
Target Absent	Silence	35 (20)	39 (18)	37 (38)
	Denial	45 (20)	42 (19)	44 (39)
	Denial+Explanation	40 (20)	21 (19)	31 (39)
	Total:	40 (60)	34 (56)	37 (116)
Total:		73 (133)	65 (127)	69 (260)

N = 260. Identification Accuracy: 1 = yes, 0 = no.

Table 5: Logistic Regression Analysis for Variables Predicting Identification Accuracy

Variable	<i>B</i>	<i>SE B</i>	<i>e^B</i>
Target	3.77*	.81	43.43
Stolen Property	-.73*	.35	.48
Denial	-.03	1.02	.97
Denial+Explanation	.79	.9	2.21
Denial*Target Absent	-.27	1.13	.76
Denial+Explanation*Target Absent	-.54	1.02	.58
Constant		-2.83	
- 2 LL		207.78	
X^2		114.79	
<i>df</i>		6	
Cox and Snell R^2		.36	

Note: e^B = exponentiated *B*. -2 LL = -2 Log Likelihood. Independent variable codings: target (0= present, 1= absent), Stolen Property (0= absent, 1= present), and Verbal Behaviour (0= silent, 1= denial, and 2= denial+explanation). Dependent variable codings: identification accuracy (0= correct, 1= incorrect). * $p \leq .05$.

Table 6: Confidence Level Cell Means

Perpetrator- Present	Verbal Communication	Stolen Property Present (%)	Stolen Property Absent (%)	Totals (%):
	Silence	90 (24)	81 (22)	85 (46)
	Denial	82 (26)	77 (25)	80 (51)
	Denial +Explanation	85 (23)	90 (21)	87 (44)
	Totals:	86 (73)	82 (68)	84 (141)
Perpetrator- Absent	Verbal Communication			
	Silence	73 (19)	79 (17)	76 (36)
	Denial	70 (19)	73 (19)	71 (38)
	Denial +Explanation	68 (17)	65 (21)	66 (38)
	Totals:	71 (55)	72 (57)	71 (112)
Totals:	Verbal Communication			
	Silence	83 (43)	80 (39)	81 (82)
	Denial	77 (45)	75 (44)	76 (89)
	Denial +Explanation	78 (40)	77 (42)	78 (82)
	Totals:	79 (128)	77 (125)	78 (253)

N = (253).

Table 7: Confidence Correlated with Accuracy by Condition

Perpetrator Present		Accuracy (1 = Incorrect)
	Confidence Correlation	-.207
	Sig (2-tailed)	.014
	N	140
Perpetrator Absent		
	Confidence Correlation	.311
	Sig (2-tailed)	.001
	N	110
Totals:		
	Confidence Correlation	-.068
	Sig (2-tailed)	.286
	N	250

Appendix B: Consent Form

You have been invited to voluntarily participate in the following research project: Accuracy of Identifications from Showups. In this study, you viewed a simulated theft. Then, you were asked various questions about the person who was suspected of committing the theft. The purpose of this study is to learn how a suspect's denials can affect witnesses' identification decisions. The entire session should last approximately one half hour.

There are no known physical, psychological, economic, or social risks associated with this study. Your participation in this study is completely voluntary and you may withdraw from this study at any time without any consequences or penalties. You are not obliged to answer any questions that you find objectionable or which make you uncomfortable. You will be given one half credit for your participation in this study. Full credit will be awarded whether you complete the study or not.

All information will be coded and stored in a secure area. Only the primary researcher, his assistants, and other researchers interested in psychology will have access to the data (e.g., for meta-analyses). Individual performance will remain confidential and will not be released to professors, employers or in publications. Only group results will be reported (e.g., conferences presentations, journal articles).

This study has been reviewed and cleared by the Research Ethics Board at UOIT (REB # 08-076). The principal investigator is Dr. Brian Cutler of the Faculty of Criminology, Justice, and Policy Studies, UOIT. In the event that you have any questions, concerns, or complaints, you may contact any of the following individuals: Dr. Cutler (brian.cutler@uoit.ca; 905-721-8668 ext. 3807) or the compliance office (compliance@uoit.ca; 905-721-8668, ext. 3693).

I have read and understood the statements above. I have had my questions answered to my satisfaction and I understand that I may ask additional questions at any time. My signature, below, indicates my free and informed consent to participate in this research.

Name (please print) _____

Signature _____

Date _____

Appendix C: Release Form*Release Form*

During this study you were recorded with a hidden video camera. For a variety of studies we use recordings of people (still photographs and/or videotapes, voice recordings, etc.). In eyewitness identification studies, the videos are shown to people who are asked to determine whether witnesses are accurate. Other studies could involve the use of these stimuli for cue analysis, training, or any number of other purposes. These materials will be used as stimuli in research and may be presented for illustration at conferences and in classes or shared with other researchers doing similar work.

Results of the research will not identify anyone by name; all data are strictly confidential. Similarly, you will never be identified by name when the recordings of you are used or presented.

You are free to withdraw your permission to use these materials. Note that we will not be able to guarantee that other researchers that we share stimuli with would delete your materials. We believe that this is acceptable as we see no negative consequences of these materials being used. However, if you have any concerns, please do not sign this form and we will erase the materials now.

Your signature below indicates that you are aware of all potential uses of these materials and agree to permit such uses.

This research is conducted by students and research assistants of Dr. Brian Cutler (brian.cutler@uoit.ca; 905-721-8668 ext. 3807). If you have any questions, concerns or complaints about this experience, please contact Dr. Cutler or the compliance office (compliance@uoit.ca; 905-721-8668, ext. 3693)

NAME (Please Print Clearly): _____

DATE: _____

SIGNATURE: _____

Appendix D: Filler Task and Demographic Questionnaire

Interpersonal Situations Task

P: _____

C: _____

Date: _____

Please provide the following information:

1. Gender: Male Female

2. Age: ___ years

3. Race (check the one that most describes you):

- Aboriginal (Inuit, Métis, North American Indian)
- Arab/West Asian (e.g., Armenian, Egyptian, Iranian, Lebanese, Moroccan)
- Black (e.g., African, Haitian, Jamaican, Somali)
- Chinese
- Filipino
- Hispanic
- Japanese
- Korean
- Latin American
- South Asian
- South East Asian
- White (Caucasian)
- Other _____

4. University or College Major _____

Year in Program: 1 2 3 4

5: What is your occupation? If not employed, write "student" _____

6: What is your level of employment?

- Not employed
- Part-time employed
- Full-time employed

7: What languages do you speak fluently? _____

Interpersonal Situations Task

You will have a choice between the two topics below. Each topic is a brief quotation that states or implies an issue of general interest. Read each topic carefully; then decide on which topic you could write a more effective and well-reasoned response. Plan and compose a response that presents your perspective on the topic you select. You are free to accept, reject, or qualify the claim made in the topic you selected, as long as the ideas you present are clearly relevant to the topic. Support your views with reasons and examples drawn from such areas as your reading, experience, observations, or academic studies.

OPTION 1: "People work more productively in teams than individually. Teamwork requires cooperation, which motivates people much more than individual competition does."

OPTION 2: "High-speed electronic communications media, such as electronic mail and television, tend to prevent meaningful and thoughtful communication between people."

Appendix E: Lab Layout

