The Effect of Photographic and Live Item Test Media on South African Young Adult Identification Accuracy

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Abstract

Eyewitness testimony can provide valuable information which can be used within criminal proceedings to determine the culpability of a suspect. The problem however is that eyewitness testimony is not always accurate and misidentifications can result in the false non identification of a perpetrator or an incorrect identification of an innocent suspect. To mitigate the problem of misidentifications South Africa insists on the conduct of a live identification parade. It endures all the pragmatic difficulties associated with the conduct of this medium, which have the potential to inflate misidentifications, because of the belief that live lineups will produce more accurate identifications by eyewitnesses. However, available research is too underdeveloped to definitively ascertain if the live superiority hypothesis and by extension the conduct of live lineups, with its intrinsic difficulties, has merit. This study randomized 54 young adults into 'item test media' (ITM) (photographic, live) and lineup composition (target-absent, target present) to test this belief. Participants viewed a spontaneous, live, non-criminal event with two targets and their identification responses were captured. Results showed that ITM was not a significant predictor of accuracy. Results did however show that when a live medium is tested against a photographic medium, using a preferential rule to facilitate this comparison, there is evidence to suggest that live be preferred over photographic media in both conservative and high guilty base rates (.06 & .09).

Keywords: Identification accuracy, item test media, photographic, live, lineup, young adult

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The Fallibility of Eyewitness Testimony

When a crime takes place, suspects can be apprehended through either the discovery of physical evidence or through eyewitness testimony (Li, 2010). Eyewitness testimony, via the direct identification of a suspect in a lineup, is particularly important in cases where physical evidence is absent or is otherwise unusable as it has either deteriorated as a result of improper storage, has been destroyed or lost (Wells et al., 2019). These identifications tie the suspect to the crime and play a pivotal role in establishing the identity of the perpetrator in criminal proceedings (Begakis, 2017). Given that physical evidence can be planted, intuitively, an eyewitness appears to be a credible source of evidence regarding the culpability of a suspect (Albright, 2017).

However, suspect identifications are not always accurate. The powerful combination of both scientific studies of identifications by eyewitnesses and forensic DNA testing has shown the magnitude with which mistaken identifications can and do occur (Wells et al., 2019; Li, 2010). Scientific studies have identified certain real-world conditions, under the "control of the criminal justice system", known as system variables, which can drastically increase the likelihood of mistaken identifications (Wells et al., 2019 p. 3). Additionally and to date, 367 wrongfully convicted, including 21 death-row inmates, have been exculpated through forensic DNA testing over the last three decades within the United States of America (Innocence Project, n.d.). On average, exonerees served a 14 year sentence and most importantly, 69% of these wrongful convictions were the direct result of mistaken eyewitness identifications (Innocence Project, n.d.). These statistics represent a small fraction of the true number of misidentifications that occur as DNA –rich evidence is not always available to exculpate the wrongfully convicted (Wells et al., 2019). Mistaken identifications pose two problems which underpin the importance of scientific research into identification accuracy, either an innocent suspect is wrongfully convicted or the perpetrator remains at large.

Factors Affecting Accuracy

The relationship between identifications by eyewitnesses and subsequent accuracy of those identifications is dependent on the converging influence of witness and situational specific factors, known as estimator variables, and lineup factors, known as system variables (Semmler, Dunn, Mickes & Wixted, 2019).

Witness factors include age, sex, confidence, race, personality and intelligence (Wells, 1978). A recognition advantage and subsequently an identification advantage, known as the own group bias, exists between people who share the same racial, sex and age groupings (Wright & Sladden, 2003). Witnesses who are either very young or very old are less accurate in identification tasks when compared to adult witnesses (Humphries, Holliday & Flowe, 2012; Memon & Gabbert, 2003). Additionally, females on average perform better than males in face recognition tasks (Wright & Sladden, 2003). However, this advantage diminishes under stressful conditions.

Situational factors include levels of stress and arousal, duration of the event, lighting, viewing distance, a disguise, weapon presence and substance use (Wells, 1978). Recognition performance for unfamiliar faces is improved when the viewing distance is shorter as opposed to longer (Wells et al., 2019). Conversely, a longer viewing distance is associated with less frequent accurate identifications (Wells et al., 2019). Additionally, longer event duration is associated with a greater recognition and subsequently a greater identification accuracy advantage (Wells et al., 2019). However, this is a tenuous claim as mistaken identifications may occur despite a lengthy viewing time.

Lineup factors are particularly important with the underlying assumption being unfavourable conditions that inflate the likelihood of misidentifications, can be changed (Wells, 1978).

Lineup factors include instructions, presentation format, effective size and social dynamics (Wells, 1978). Effective size refers to the number of lineup members who are suitably similar to one another (Tredoux, 1998). Misidentifications are more likely to occur in low similarity lineups when compared to moderate or high similarity lineups (Tredoux, 1998). In addition, both accurate identifications and misidentifications are higher in simultaneously presented lineups when compared to sequentially presented lineups (Steblay, Dysart, Fulero & Linday,2001).

A relationship exists between scientific studies and real-world practices. Scientific studies, particularly owing to research on system variables, have influenced the way eyewitness identification assertions have been tested.

South Africa's Response to Misidentifications

South Africa has a long history of awareness of the problem of misidentifications. The earliest legal acknowledgement of the problem dates back to 1926, "Mistaken identity is the most likely and common cause of miscarriages of justice, and such miscarriages not only shock the public conscience but give rise to doubt and uneasiness as to the administration of justice" (Justice of Peace, 1926 as cited in Tredoux, 2011).This excerpt speaks not only to the severity but also to a greater public awareness of the problem of misidentifications.

A long history of awareness coupled with study findings has meant that certain safeguards have been put into effect to tackle the problem of misidentifications (Tredoux, 2011). One safeguard is a set of cautionary rules surrounding eyewitness testimony (Tredoux, 2011).

Previously this included the cautious evaluation of the testimony given by a single eyewitness (Rust & Tredoux, 1998). This has since been overturned due to the nature and frequency of rape (Tredoux, 2011). Identifications in general should also be evaluated cautiously taking into account the totality of the available evidence (Begakis, 2017). Additionally, this includes the cautious evaluation of testimony given by eyewitnesses who are familiar with the perpetrator (Neil & Palmer, 2010). Eyewitnesses who are familiar with the perpetrator, as a result of living in the same socially enmeshed community, may either be more reluctant to make identifications or may give false testimony (Neil & Palmer, 2010). Another safeguard is the conduct of a lineup, otherwise known as an identification parade in South Africa (Tredoux, 2011). A lineup is necessary to test the assertion of the eyewitness identification (Li, 2010). Lineups are regulated by a set of rules governing the composition and lineup procedure.

This includes the number of people standing in the lineup. In South Africa an 8 person lineup is required (Rust & Tredoux, 1998). However, this number varies from country to country. The USA for instance requires a 6 person lineup while Canada requires 8 (Fitzgerald, Price & Valentine, 2019). Eyewitnesses must be given a warning that the perpetrator may or may not be present in the lineup (Rust & Tredoux, 1998). If this warning is not given, the case can be dismissed. The USA did not implement this warning until 2003 (Rust & Tredoux, 1998).Lineups should be blindly administered so that the administrator does not unknowingly influence an eyewitness' selection (Wells, 1978). South Africa has enacted these cautionary rules and procedural practices to safeguard against the problem of misidentifications. One further

safeguard is the insistence of a live lineup (Fitzgerald, Price & Valentine, 2019). However this is not the only item test media (ITM) that can used to test the assertion of identification

Item Test Media

ITM refers to the media format used to present a lineup to eyewitnesses (Cutler, Berman, Penrod & Fisher, 1994). There are three types of ITM. They are photographic, live or video (Fitzgerald, Price & Valentine, 2018). A photographic medium presents a two-dimensional, square, head and shoulders image of lineup members to the eyewitness (Wells et al., 2019). Mugshots are typically black and white images. A live medium presents a three-dimensional, full body and in person view of lineup members to the eyewitness (Wells et al., 2019). Live media can be dynamic as the witness can request to see lineup members in different poses or request to see them walk from one point to another (Neil & Palmer, 2010). The advantage of the potential dynamic nature of this medium is case dependent (Wells et al., 2019). Gait cues may only be truly beneficial in cases where eyewitnesses have noted something very distinctive about the perpetrator's body or gait. Eyewitnesses can also request that lineup members speak (Wells et al., 2019). Similar to gait cues, voice cues may only be beneficial in cases where there was something incredibly distinctive about the perpetrator's voice that could aid a lineup selection (Wells et al., 2019). Live media by virtue of being live are presented in colour. Photographic and live media are more traditional methods of testing the credibility of eyewitness testimony when compared to the video format (Fitzgerald, Price & Valentine, 2018). A video medium presents a three-dimensional, head and shoulders, dynamic, pre-recorded video of lineup members to the eyewitness (Wells et al., 2019). Video media are typically presented in colour. When comparing video and live to photographic media, video and live media cannot be used if a suspect is at large whilst photographic media can be (Neil & Palmer, 2010). In South Africa, only photographic and live media have been used historically. Both continue to be used depending on the severity of the crime. While used less often, owing to the insistence of live media, photographic media are used in less serious criminal cases appearing before the Magistrate's court (Rust & Tredoux, 1998). Serious criminal cases that appear before the High Court make use live media (Rust & Tredoux, 1998). Given that ITM differ in the type and amount of information presented to eyewitnesses, scientific studies of identifications by eyewitnesses using these different ITM are important. Of particular importance to the South African context are scientific studies on photographic and live media.

Relationship between ITM and Accuracy, Literature Findings

Given the importance of photographic and live ITM to the South African context, the relationship between photographic and live ITM and accuracy within eyewitness studies will be discussed below.

A study conducted by Shepard, Ellis & Davies (1982) reported no significant difference in identification accuracy between live, photographic, colour and black and white slide conditions.

Kerstholt, Koster & Amelsvoort (2004) reported no significant difference was present between live, photographic and video media when the number of correct perpetrator identifications, known as hits, was compared. However, a significant difference for mistaken identifications was reported in target absent lineups between photographic live and video media.

Sporer (1991 as cited in Price, Harvey, Anderson, Chadwick & Fitzgerald, 2018) studied the effect of both ITM, video and photographic, and viewing order, simultaneous or sequential presentation, on identification performance. Looking specifically at findings for sequentially presented live and photographic media, in order to report findings attributable to only ITM, no significant difference was reported when hits, misidentifications or correct rejections in target absent line ups were compared.

When the lineup contained the perpetrator, Cutler & Fisher (1990) reported no significant differences in eyewitness identifications were found between combined video and live conditions compared to a photographic condition. Additionally, accurate identifications when the perpetrator was in the lineup were significantly greater when the video and live conditions were compared to the photographic condition.

Egan, Pittner & Goldstein (1997) reported a significant difference in identification performance between live and photographic ITM. The live medium produced significantly more hits when compared to the photographic medium.

Another study by DuToit & Tredoux (2018) comparing photographic and live media, reported similar results for participants who viewed a live target event, referred to as a live encoding. Accurate identifications were significantly higher in the live medium when compared to the photographic medium. This pattern of results was not mirrored for participants who viewed a photographic at encoding.

When individual studies comparing photographic and live ITM were aggregated into a meta-analysis, results showed that no significant differences were found when the selection of an innocent suspect, known as a false-alarm, was compared (Cutler, Berman, Penrod & Fisher, 1994). In addition more hits were reported for live compared to photographic media however, the difference was not significant.

These equivocal eyewitness findings are at odds with a commonly held belief that live media, by virtue of the information offered to an eyewitness, will produce more accurate identifications than photographic media (Fitzgerald, Price & Valentine, 2018). This belief is known as the live superiority hypothesis and intuitively, this is a plausible inference (Fitzgerald, Price & Valentine, 2018). Although unsubstantiated by eyewitness findings, this belief continues to influence applied practices, such as the insistence of a live parade in SA, and shapes triers of facts perceptions of eyewitness testimony, where greater credibility is afforded to testimony from live as opposed to photographic media (Price, Harvey, Anderson, Chadwick & Fitzgerald, 2018). If eyewitness findings were consistently replicable ITM would still be an important area of research because of this discrepancy. But, how credible are these findings and what could explain them?

Limitations of Equivocal Findings

Equivocal findings could be attributed to individual study limitations. These include a relatively small sample size, lack of a target absent lineup condition as well as the potential presence of other methodological confounds (Neil & Palmer, 2010). These confounds could include the influence of own group bias, viewing distance, the use of a single distinctive perpetrator and a small effective lineup size (Neil & Palmer, 2010).

Additionally, the relative search strategy employed by eyewitnesses in an identification task could account for the equivalent findings (Rice, Phillips & O'Toole, 2013). While both the body and the face offer information that could aid identifications, facial recognition research has shown that identifications predominately rely on facial when compared to body information (Rice, Phillips & O'Toole, 2013). This strategy is mediated by the quality of the medium seen by participants. In moderate to good quality conditions, facial information produced more accurate information compared to body information while in poor quality conditions, no significant difference was observed between face and body information in terms of accurate identifications (Rice, Phillips & O'Toole, 2013). This suggests that equivalent findings could be plausible if the

quality of the photographic medium was sufficiently good so as to be comparable to the quality of viewing live media.

In order to move beyond tentative claims regarding the relationship between ITM and identifications by eyewitnesses, more studies are needed which address previous study limitations (Fitzgerald, Price & Valentine, 2018). Compounding the importance of this research are practical limitations intrinsic to the real-world conduct of a live as opposed to a photographic lineup which could also influence accuracy.

Relationship between ITM and accuracy in applied settings

Live lineups require suitably similar lineup members in order to be a fair test of the assertion of the identification. Finding suitably similar people to participate in the lineup is time consuming and difficult task (Neil & Palmer, 2010). Additionally, all persons conducting or in the lineup must be orchestrated to be in the right place at the right time (Neil & Palmer, 2010). The difficulties of effectively completing these tasks inflate the likelihood of a biased lineup and in turn the likelihood of misidentifications (Neil & Palmer, 2010).

These difficulties account for the longer delays in the conduct of a live when compared to photographic lineups. Longer delays increase the possibility of natural memory trace degradation and possible memory trace contamination (Fitzgerald, Price & Valentine, 2018). This in turn can negatively influence identification performance.

Unlike photographic media which can preserve the likeness of a suspect at the time of an arrest, live media offers suspects the opportunity to intentionally change their appearance before appearing in the lineup (Fitzgerald, Price & Valentine, 2018). When the information available to eyewitnesses is inconsistent between the crime and the lineup, accurate identifications are less likely (Fitzgerald, Price & Valentine, 2018).

Live lineups elicit a greater stress response when compared to photographic lineups. This holds true within experimental conditions where participants are assured that the target event was staged (Brace, Pike, Kemp & Turner, 2009). Eyewitnesses can in turn refuse to make identification, owing to the stress of the task.

In South Africa, lineup members are sourced from the inmate population (Rust & Tredoux, 1998). Each inmate must be accompanied by two law enforcement escourts (Rust & Tredoux, 1998). Not only is this financially costly and dangerous to both law enforcement

officials and witnesses but the difficulties of such a task increase the likelihood of a biased lineup and subsequently misidentifications occurring.

Rationale, Specific Aims and Hypotheses

South Africa insists on the conduct of live identification parades and endures all the practical limitations associated with the conduct of this medium which can inflate misidentifications because of the belief that live lineups will produce more accurate identifications by eyewitnesses (Fitzgerald, Price & Valentine, 2018). However, the body of evidence examining live and photographic ITM and identification accuracy is too underdeveloped to definitively ascertain if the live superiority hypothesis and by extension the conduct of live lineups, with its intrinsic difficulties, has merit (Neil & Palmer, 2010). More research is desperately needed to expand the available research base (Neil & Palmer, 2010). Additionally, research should address study limitations that are present within the available literature.

Between April 2018 and March 2019, 617 210 contact crimes were reported in South Africa (South African Police Services, 2018). A higher prevalence of crime in turn increases the demand for the conduct of live identification parades. It has been roughly estimates that the conduct of a live identification parade totals R30 000(C. Tredoux, personal communication, September 18, 2019). The importance of such research is therefore magnified within the South African context when both the financial cost of administering live lineups and prevalence of crime are considered.

An analysis of the South African Victims of Crime Survey for the period spanning 2018/2019, identified young adults as being the most frequent victims of theft, assault and home robberies (Statistics SA, 2019). Responding to both the underdeveloped body of research on ITM and the high likelihood of young adults witnessing a crime, this study aimed to investigate the effect of photographic and live ITM on South African young adult identification accuracy.

In order to test the live superiority hypothesis, this study first hypothesized that there would be a greater probability of observing a correct outcome with live media when compared to photographic media. Secondly, it was hypothesized that there would be a greater probability of observing a correct outcome with a target present lineup when compared to a target absent lineup. Finally, it was hypothesized that live should be preferred to photographic lineups. Available studies have typically used white samples which is unreflective of the demographic

composition within South Africa. Therefore this study accounted for the effects of self-identified racial grouping on the observed young adult identification responses captured.

Method

Design and Setting

A randomized, 2 x 2 design was used which included the independent variable 'ITM' (photographic, video) as well as the independent variable 'lineup composition' (target present, target absent), with 'identification accuracy' (correct, incorrect) as the dependent variable. Two targets (blonde, brunette) were used for each participant as a manipulation check to control for the potential influence of distinctive facial characteristics on identification accuracy. Lineup bias and effective size were calculated to test the fairness of each of the lineups viewed by participants (blonde, brunette).Participants were randomized according to 'ITM' (photographic, video), 'lineup composition' (target present, target absent), 'viewing order' (first, second), 'target position' (5, 2, 6, 1), and 'target order' (brunette-blonde, blonde-brunette). Participants were placed into these groups when they received their testing forms. Testing forms were ordered and distributed according to the stratified random assignment function on MS Excel 2010.Participants who self-reported familiarity (yes, no) with lineup members outside of the testing session were excluded during data-analysis. Only unfamiliar identification responses have been reported. Testing took place within a single session, in a lecture theatre at the University of Cape Town where participants viewed an unexpected, live, non-criminal event.

Participants

This study obtained 54 undergraduate students who were above the age of 19 (M=22.39, SD=5.23), from the University of Cape Town. Participants signed up within the testing session after viewing a spontaneous, non-criminal event in a lecture theatre. Each consenting participant received one *Student Research Participation Programme Point*, which forms part of their course requirement, and their identification results (correct/incorrect). In addition to age, participants were asked to self-identify their gender, racial grouping and to capture their position in the lecture venue. This study contained 14 males (25.9%), 36 females (66.7%), 1 non binary (1.9%) and 3 gender non disclosures (5.6%). As both targets were white, racial grouping was grouped according to 'same-race', 'other-race'. This study contained 20 same-race (37%), 30 other-race (55.6%) and 4 racial non disclosures (7.4%). On average participants viewed the live event while

seated in the fifth row of desks (*M*=5.13, *SD*=3.24).Additionally, 20 participants were seated in the left section of the lecture theatre (37%), 18 participants were seated in middle section (33.3%) and 13 participants were seated in the right section (24.1%).

Materials

Lineup Construction.

Photographic. A simultaneous 6 person lineup consisting of head and shoulder, colour photographs of South African white females was constructed on a computer. Target present lineups consisted of the target and five suitably similar lineup members, otherwise referred to as foils. Target absent lineups consisted of an innocent suspect and five foils. A target absent and a target present lineup was constructed for both blonde and brunette targets. Photographs were standardized to 3cm in width and 3.8cm in height. Three photographs appeared in the top row and three photographs appeared in the bottom row. This layout was standardized across lineups using a custom template. Each photograph was placed onto the same coloured background and the same white t-shirt was overlaid onto each photograph. The target (blonde, brunette) appeared in a different lineup position depending on the random assignment of lineup conditions. In the first viewing order, the brunette target appeared in position 5 and the blonde target appeared in position 2. In the second viewing order the brunette target appeared in position 6 and the blonde target appeared in position 2. Alternating the position of the target in the lineup ensured that lineup selections were not influenced by target position. A total of 14 photographs were used. All lineup individuals gave permission to both have their photograph taken and for that photograph to be used for research purposes. All foils were suitably similar to the target in physical appearance, gender, age and racial grouping. The suitability of the foils was determined in a pre-study using 6 independent observers who viewed a target and wrote a description of that target. Half the independent observers viewed and wrote a description for the blonde followed by the brunette target while the other half viewed and wrote a description for the brunette followed by the blonde target. Alternating the viewing of the targets in the pre-study ensured that descriptions were not influenced by the order the targets were viewed. If an aspect of a description appeared in 3 or more of the descriptions, it was used as a foil selection criterion. For each of the targets (blonde, brunette) an individual who most resembled the selection criteria was chosen as the innocent suspect.

Live. Simultaneous, 6 person lineups were constructed using the same individuals that were used in the photographic lineups. A target present and target absent lineup was constructed for each target (blonde/brunette).

Presentation Materials

Photographic. All photographic lineups and lineup instructions appeared on a printed lineup selection form. Lineups were printed in black and white to simulate common, real-world photographic ITM procedures.

Live. Lineup members stood side by side holding a printed number which corresponded to their lineup position. As with the photographic lineup, physical appearance was standardized to hair tied back and no jewelry. All members wore a black t-shirt and black jeans. To standardize ITM, participants viewed static (no gait, voice or pose information) lineups.

Answering Materials

Participants' captured their self-reported demographic characteristics on a printed demographic survey. This was included to account for the influence of own group bias on identification performance.

Lineup selections were captured on a printed lineup selection form. Participants marked their selections using a cross (X) in the appropriate box (1,2,3,4,5,6, do not know, not present).

Identification confidence was captured after each identification using a printed confidence form. Participants rated the confidence in their decisions (1-100) both graphically and numerically. This was captured owing to the assumption that the more accurate you are the more confident you will be (Wixted & Wells, 2017).

Description data for both participants was captured using a printed free recall form. This was used to simulate real-world law enforcement practices. The order in which participants described the targets was not prompted thereby ensuring there was no inadvertent influence during this task.

Participant familiarity with lineup members outside of the testing session (yes, no) and attention during the live event were captured on a printed, manipulation check form. Responses were marked 'correct', 'incorrect'. Attention was tested by asking participants a question about a detail of the live event. Attention was included to account for the influence of inattention on identification accuracy.

Evaluating materials

Fifty-eight post-study lineups were administered to independent observers. This mock witness procedure tested the fairness of the lineups (Malpass & Lindsay, 1999). Independent observers were asked to identify the target (blonde, brunette) on the basis of a description. If the lineup were fair and had suitability similar foils, the target would not have been selected above chance level (16.67%) (Malpass & Lindsay, 1999). Viewing of the blonde and brunette lineups were alternated to ensure viewing order did not influence this task. This evaluation procedure was administered to account for the influence of bias on young adult identification performance.

Procedure

Participants viewed a spontaneous, non-criminal event while seated in a lecture. The event consisted of the targets (blonde, brunette) appealing to the students to take part in a fictitious research study of 'numerology'. During the event, participants were exposed to both targets for 1.15min. After they had viewed the event, participants were invited to take part in a research study that would test their memory for the fictitious study appeal. A pack of testing forms was handed out to each student.

Participants were randomly assorted into lineup groups on the basis of the testing forms they received (Appendix A). Participants were reminded to remember the name of the group they were assigned too

Participants gave permission to participate in the study by signing a consent form (Appendix B). Students not wanting to participate were free to leave the lecture early. All participants were then instructed to complete a demographic survey and a free recall description (Appendix C; Appendix D). Once they had completed these tasks, completed testing forms were collected and a 15min distractor video was shown. The video content was course related.

'Photographicgraphic', 'live-target absent' and 'live-target present' lineup groups completed the lineup task in different venues. After the video had been viewed, research assistants led participants to their respective lineup venues. Testing took place within neighboring lecture theatres that were quiet and comfortable.

Participants were instructed to break the seals on their remaining testing forms to begin the identification task.

Live. First viewing order participants were seated in the front and second viewing order participants were seated at the back of the venue. Second viewers were instructed to place their heads on their desks, to cover their eyes and to not peak until it was their turn. First viewers viewed an in person lineup, made their identifications using a lineup selection form and rated the confidence of their lineup selection (Appendix E & F). A further live lineup was shown and participants made their identifications and rated confidence in the same way. No time restrictions were imposed during the identification tasks. Lineup members exited once all participants had made their identifications. Participants completed an attention and a familiarity question (Appendix G). Participants were then debriefed and acknowledged this debriefing with a signature (Appendix H). First viewers were then free to leave the venue. Second viewers moved to the front of the venue and the lineups were administered in the same way.

Photographic. Photographic lineups were administered in the same way using a lineup selection form (Appendix I) however, photographic participants viewed a printed photographic lineup (Appendix J) and both viewing orders completed the identification task at the same time.

Ethical Considerations

This study followed the ethical code of conduct for research involving human participants, as set out by the University of Cape Town. Ethical approval was granted by the Research Ethics Committee of the University of Cape Town, Department of Psychology (Appendix K).

Participation was voluntary. Undergraduate students above the age of 18 were invited to participate. Students were informed of what would be asked of them if they decided to sign up for the study. It was emphasized that participation was by no means compulsory and that participants would not suffer any negative repercussions as a result of deciding not to participate. Participants gave permission to take part in the study by signing a consent form (Appendix B). Once they had signed, they were reminded that they were free to change their minds at any point in the study. Students who did not wish to participate were free to leave the lecture early.

A unique participant number was given to each participant's responses to ensure anonymity during data analysis. Sensitive information that would be able to link a participant to their responses was stored on an encrypted computer and was omitted from the study.

Participants were debriefed once they had completed the study (Appendix H). A second debriefing took place six days later, in which the research design and preliminary findings were discussed.

Each participant received one *Student Research Participation Programme Point* and their identification results. This study involved minimal risk. However, as a precautionary measure, participants received the contact information of neighboring counselling services.

Results

Identification responses were organized in the following way:

Correct. Participant identified the target in a target present lineup.
Participant identified the target as 'not present' in a target absent lineup.

Incorrect. Participant identified a foil in a target present lineup.
Participant identified target as 'not present' in a target present lineup.
Participant could not make an identification (selected 'do not know').
Participant identified the suspect in a target absent lineup.
Participant identified a foil in a target absent lineup.

Data analysis was conducted using IBM *Statistical Package for the Social Sciences Version* 25. Analyses for both blonde and brunette identification responses were run to ensure pattern of results was not the result of a particularly distinctive face. Both sets of results have been reported. Significance was set at $p<.05$.

Assumptions. There is a dichotomous dependent variable (correct, incorrect) and two nominal, dichotomous predictor variables (item test media, lineup composition). Different participants were used in each of the lineup groups and the dependent variable had both mutually exclusive and exhaustive categories (correct, incorrect). As all assumptions were upheld, a binary logistic regression was run to test the effects of ITM and lineup composition on the likelihood that a participant will make a correct identification. More specifically the logistic regression tested the following study hypotheses:

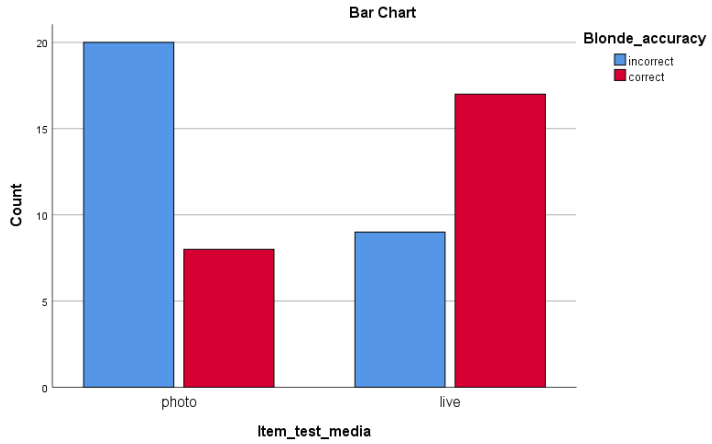
- That there will be a greater probability of observing a correct outcome with live media when compared to photographic media.

- That there will be a greater probability of observing a correct outcome with live target present lineups when compared to live target absent lineups.

Blonde Identification Responses.

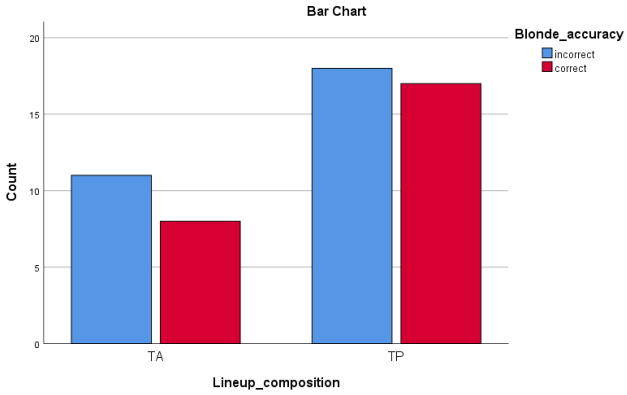
Descriptive Statistics. An examination of the descriptive statistics indicates that the probability of the live group making a correct identification is going to be higher than the probability of the photographic group making a correct identification. The probability of the target present group making a correct identification is likewise going to be higher than the probability of the target absent group making a correct identification. These trends are displayed graphically in figure 1 and 2.

Figure 1



Note. The frequency of correct and incorrect identification responses in photographic and live ITM for blonde identification responses.

Figure 2



Note. The frequency of correct and incorrect identification responses in target absent and target present lineups for blonde identification responses.

Model. The regression model was statistically significant and had no missing cases, Model x^2 (2)= 7.52, p<.05.While the model explained 17.5% of the variance in blonde identification accuracy and correctly predicted 68.5% of cases, it is worth noting that the variance explained is low. The results indicate that item test media (p<.01) added significantly to the model while lineup composition (p=.819) did not. The model predicted the probability for making a correct identification. *Table 1* indicates that a photographic medium is significantly associated with a reduction in accuracy. Conversely, participants who viewed a live medium are 4.9 times more likely to make an accurate identification than those who viewed a photographic medium.

Being in a photographic, target present group is associated with a 27% probability of an accurate identification, while photographic, target absent is associated with a 30% probability of a correct identification. Additionally, live, target present is associated with 64% probability of a correct identification, while live, target absent is associated with a 67% probability of a correct identification.

Table 1

	B(SE)	95% C.I for Odds ratio Lower	Odds Ratio	Upper
included constant	0.60(0.43)			
Item test media	-1.58 (0.61)	0.06	0.20	0.67
Lineup Composition	0.14(0.64)	0.33	1.15	4.06

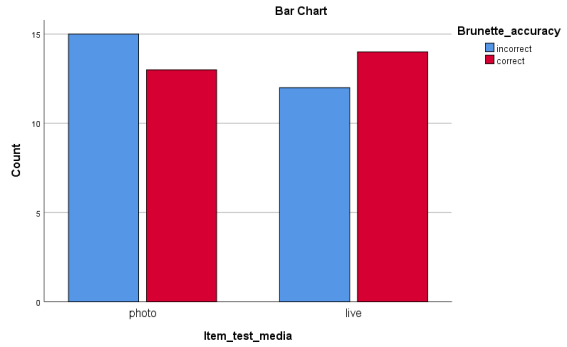
Note. R^2 = .48 (Hosmer & Lemeshow), .13 (Cox & Snell), .17 (Nagelkerke), Model x^2 (2)= 7.52, p<.05.

Brunette Identification Responses.

Descriptive Statistics. Descriptive statistics indicate that the probability of the live group making a correct identification is going to be equivalent to the probability of the photographic

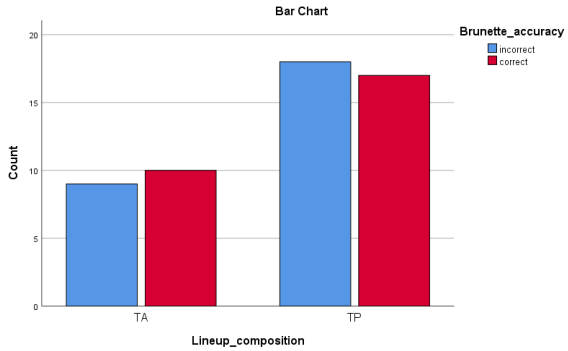
group making a correct identification. Additionally, the probability of the target present group making a correct identification is going to be higher than the probability of the target absent group making a correct identification. These trends are displayed graphically in figure 3 and 4.

Figure 3



Note. The frequency of correct and incorrect identification responses in photographic and live ITM for brunette identification responses.

Figure 4



Note. The frequency of correct and incorrect identification responses in target absent and target present lineups for brunette identification responses.

Model. The regression model was not statistically significant, Model x^2 (2)= .48, p=.785. An examination of the results indicated both item test media (p=.527) and lineup composition (p=.666) did not contribute significantly to the model.

Summary.

There were inconsistent findings for blonde and brunette identification responses. While one model was significant with item test media being a significant predictor of a correct outcome, the other was not. These inconsistent findings suggest a third party influence on the captured results. This could be the result of an idiosyncratic target feature, making the target

distinctly more memorable, a biased lineup, or the result of confounding variables such as distance (between participant and targets during event) or own group bias. To account for these potential influences contingency testing was conducted for both target identification responses.

Confound Contingency Testing.

No significant difference was observed in identification performance between 'same-race' and 'other-race' (N=50): Blonde identification response x^2 (1)=.48, p=.485; Brunette identification response x^2 (1)=1.33, p=.248. This suggests that the observed results were not influenced by the racial grouping.

No significant difference was observed in identification performance between males and females (N=50): Brunette identification response x^2 (1)=.00, p=1.00; Blonde identification response x^2 (1)=.97, p=.324. Similarly, this suggests that the observed results were not unduly influenced by gender.

No significant difference was observed between position within the lecture theatre during the event (left, middle, center) and identification performance (N=51): Brunette identification response x^2 (2)=1.74, p=.418; Blonde Identification responses x^2 (2)=.428, p=.807. This suggests that distance did not have a significant effect on the observed results.

Attention.

An attention manipulation check was included to ensure participants attended to the target event. Participants were asked to supply the area of research the fictitious study wanted to investigate. Answers containing 'numerology' were marked correct. Participant responses indicate that 33.89% of the participants were paying attention during the target event. However, upon further inspection of this question, it is evident that the question used is an insufficient proxy for attention during the target event. Participants could have been paying attention to the faces of the targets and this information would not have been sufficiently captured with the posed question. It is for this reason that further analyses on attention was not conducted.

Lineup Bias and effective Size.

Available studies of ITM and identifications by eyewitnesses do not take into account lineup bias when reporting results. This is an important omission as lineup bias can inflate the likelihood of misidentifications occurring (Malpass & Lindsay, 1999). Fifty-eight post-study lineups were administered to independent observers, who acted as mock eyewitnesses. The mock

eyewitnesses made identifications on the basis of a target description. Identifications for each lineup member were totaled. These totals were used to calculate the effective line up size (*E*) (Tredoux, 1998). This measure indicates the number of suitably similar foils that are present in the lineup (Tredoux, 1998). Another estimate of fairness is lineup bias. Lineup bias estimates the likelihood that a target is chosen. When those estimates exceed chance level, a biasing factor is present within the lineup that is inflating the likelihood of the target being selected (Tredoux, 1998). Lineup bias was calculated using the frequency of target selections, the number of mock eyewitnesses used and the number of people in each lineup. Both lineup bias and effective lineup size are displayed in Table 2.

Table 2

Lineup	*N*	Target	Bias	Tredoux 'E	95% C.I
Blonde	58	Present	.02	4.26	3.51-5.42
Brunette	58	Present	.13	4.01	3.27 -5.21

Table 2 indicates that four suitably similar foils were present in both the blonde and brunette lineups. Bias estimates indicated that both targets were chosen within chance levels (16.67%). This suggests that the photographic lineups for both targets were fair. Live lineups were inspected visually as a final test of fairness. While the brunette lineup was suitably matched in height and build, the blonde lineup was not. Differences in height were noticeable, biasing the selection of the blonde target.

Expected Utility.

Identification responses were reorganized in the following way:

Correct identifications: The target was identified in a target present lineup.

False identifications: The innocent suspect was identified in a target

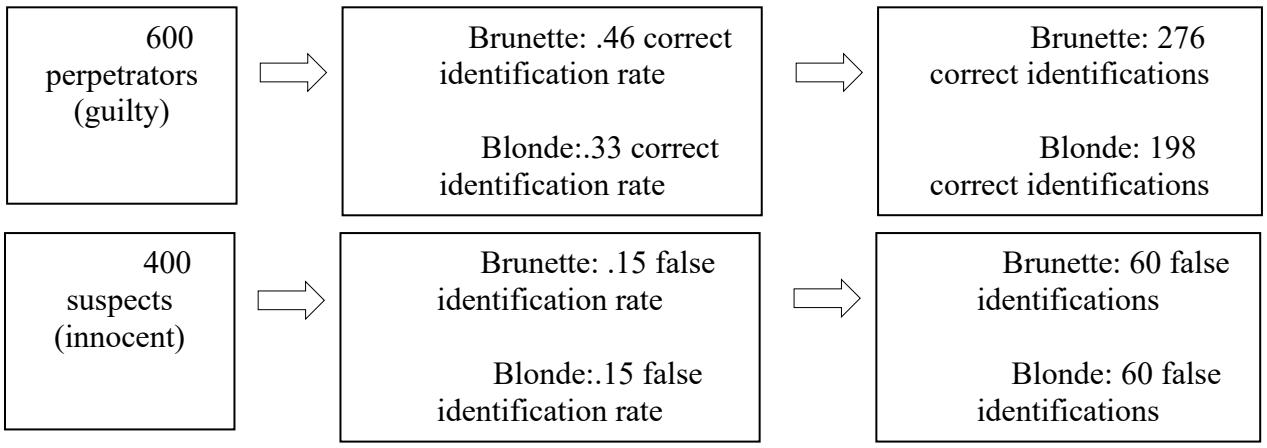
The final study hypothesis was that a live lineup should be preferred to photographic lineup. To test this hypothesis a preference rule from expected utility theory was used.

The preference rule facilitates the comparison of two lineup procedures by calculating a ratio of the number of target selections lost relative to the number of innocent suspect identifications that are reduced by using one procedure over another (Clarke, 2012). This ratio is then compared to second cost ratio. This cost ratio represents the relative costs of mistaken identifications. It represents the cost of convicting an innocent suspect relative to the costs of not identifying a

perpetrator (Clarke, 2012). If the ratio of target selections gained to suspect identification avoided is less than the cost ratio, then the lineup procedure being tested is preferred.

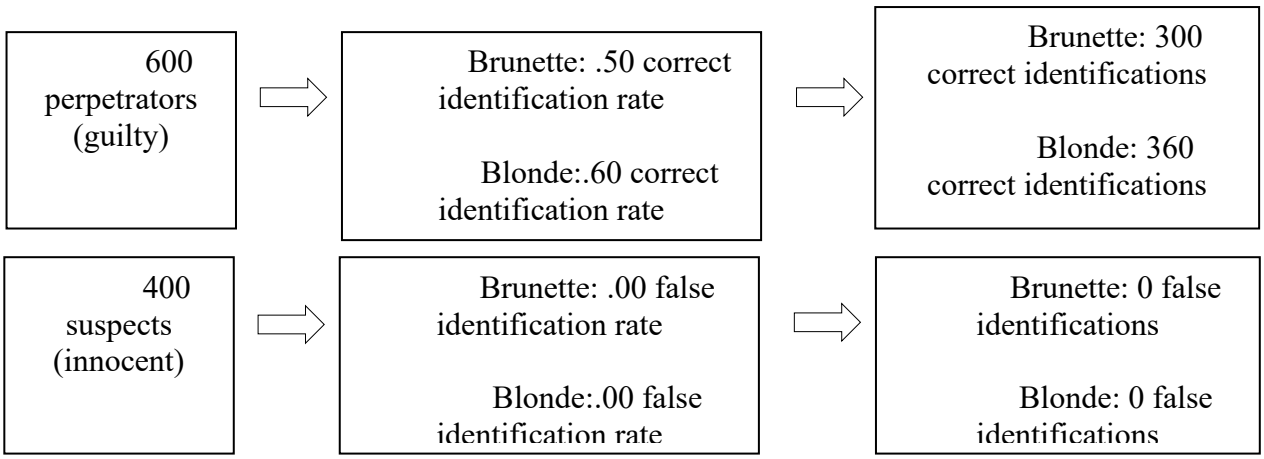
This analysis used the 1 in 10 *Blackstone cost ratio* (Clark, 2012). This ratio sets the acceptable cost of mistaken identifications at 10 perpetrator non identifications relative to 1 innocent suspect identification (Clarke, 2012). Additionally, in order to truly test the hypothesis that live should be preferred to photographic, two different base rates were used. In applied settings the rate at which a perpetrator is present within the total number of lineups conducted is unknown (Clarke, 2012). This analysis therefore used a conservative guilty base rate of .60 and a higher guilty base rate of .90 (Clarke, 2012). The correct identification and false identification rates for blonde and brunette lineups are displayed in *Figure 5*, 6, 7 & 8.

Figure 5



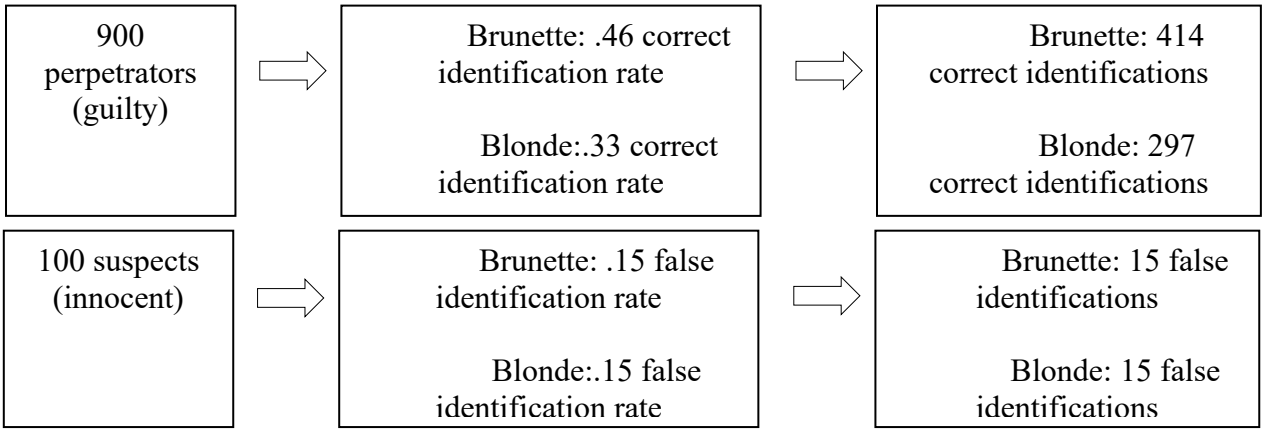
Note. Figure 5 displays the outcome of 1000 photographic lineups with a perpetrator base rate of .60. Correct Identification rate = brunette .46, blonde .33. False identification rate = brunette .15, blonde .15.

Figure 6



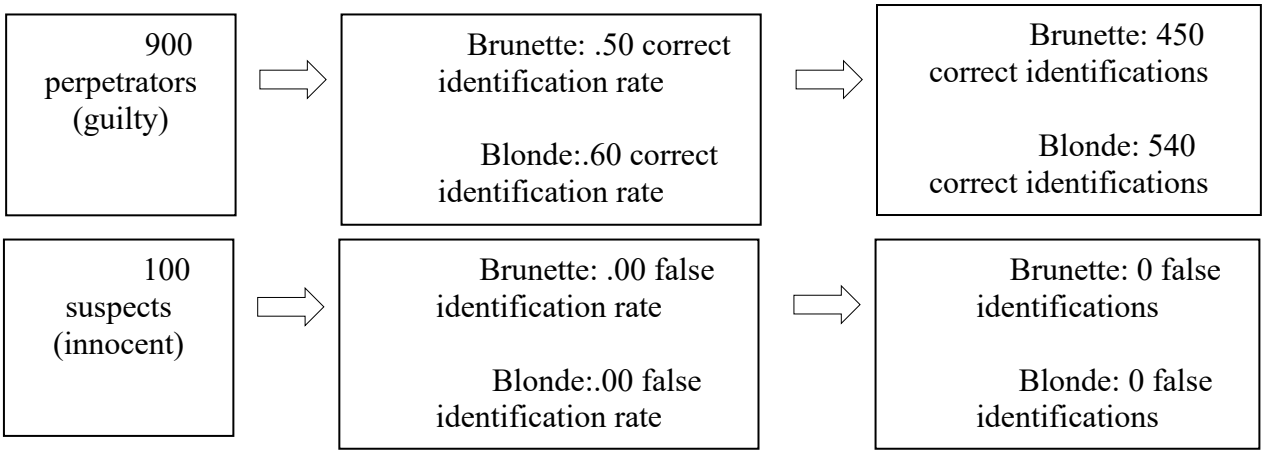
Note. Figure 6 displays the outcome of 1000 live lineups with a perpetrator base rate of .60. Correct identification rate = brunette .50, blonde .60. False Identification rate = brunette .00, blonde .00.

Figure 7



Note. Figure 7 displays the outcome of 1000 photographic lineups with a perpetrator base rate of .90. Correct Identification rate = brunette .46, blonde .33.False identification rate = brunette .15, blonde .15.

Figure 8



Note. Figure 8 displays the outcome of 1000 live lineups with a perpetrator base rate of .90. Correct identification rate = brunette .50, blonde .60.False Identification rate = brunette .00, blonde .00.

Ratio findings. When the guilty base rate is set at .60 and live lineups are compared to photographic lineups, both blonde and brunette ratios (2.7 & .04 accordingly) are well below the *Blackstone ratio* of 10 (Clarke, 2012). This suggests that live lineups would be preferred. When the guilty base rate is set at .90 and live lineups are compared to photographic lineups, the brunette ratio (2.4) is well below the *Blackstone ratio* of 10 while the blonde ratio (16.2) exceeds

it. This suggests that when the guilty base rate is higher, brunette data suggests that live is preferred while blonde data does not support this assertion.

Discussion

The study first hypothesized that there would be a greater probability of observing a correct outcome with live media when compared to photographic media. In order to test this live superiority hypothesis, a logistic regression was run to test the effects of ITM (photographic, live) on identification accuracy. Blonde identification responses produced a significant model with ITM being a significant predictor of a correct identification; however brunette identification responses did not. Within the brunette model, ITM did not significantly predict accuracy. Inconsistencies between findings for blonde and brunette identification responses were attributed to noticeable differences between the blonde target's height and the blonde foils height within the live lineup. This biased the blonde identification responses captured. However, brunette photographic and live lineups were found to be reasonably fair. If the blonde identification responses are excluded from the analyses, the brunette responses suggest that the live superiority hypothesis is unsupported. Within the young adults sampled, a live medium was not associated with a higher likelihood of a correct outcome occurring. This finding is consistent with the conclusion drawn from a meta-analytic review of ITM in which no evidentiary basis for the live superiority hypothesis was observed (Price, Harvey, Anderson, Chadwick & Fitzgerald, 2018).

The results of this study add to an underdeveloped body of research using live ITM. The limited availability of studies using live ITM ensures that only tentative conclusions can be drawn. Only through replication and a greater number of studies can generalizable assertions be made about the merit of the commonly held belief that live media produces more accurate identifications when compared to photographic media. This belief is particularly important within the South African context where this belief shapes triers of facts opinions of the credibility attached to eyewitness testimony given through one medium relative to another, and this in turn shapes the procedural conduct of identifications, whereby a live lineup is insisted upon. Given the importance of investigations into the live superiority hypothesis within the South African context and the fact that available studies are typically conducted using samples with distinctly different demographic compositions to those found within South Africa, this study added to the literature with the inclusion of a diverse, South African sample. The generalizability of this finding is however, limited by a small sample size. While this finding still hold merit and

adds to the available literature, further research is needed to test the replicability of these results. If this finding is replicable this would suggest that both photographic and live are suitable mediums, with one not more associated with a correct outcome relative to the other.

This study also hypothesized that there would be a greater probability of observing a correct outcome in a target present as opposed to target absent lineup. This hypothesis was tested using a logistic regression, where lineup composition (target absent, target present) was included as a predictor of identification accuracy. A significant trend was noted in both blonde and brunette identification responses wherein the frequency of correct outcomes was higher for target present when compared to target absent lineups. However, this trend did not translate into lineup composition being a significant predictor of accuracy. The brunette responses suggest that while the hypothesis may be true for the young adults sampled, the probability of observing a correct outcome within a target present lineup was not significantly greater than the probability of a correct outcome within a target absent lineup. This finding was inconsistent with available research which reports higher identification accuracy is associated with a target present lineup when compared to a target absent lineup.

Lastly, this study hypothesized that live media should be preferred to photographic media. In order to test this assumption a preference rule from expected utility theory was used to compare the ratio of correct identifications lost to the number of false identifications that were avoided in live and photographic lineups at varying guilty base rates. When the guilty base rate is at a conservative .60 rate, both blonde and brunette identification responses suggested that a live lineup be preferred to a photographic lineup. When a higher guilty base rate was tested brunette responses again suggested that the live be preferred while the blonde suggested it should not. If the blonde identification responses are removed from the analyses, thereby removing all bias, the brunette responses suggest that live lineups should be preferred. This finding lends support to the live superiority hypotheses under low and high guilty base rates. This was unexpected given the results for the logistic regression, which showed ITM was not significantly associated with a correct outcome. The observed results could be reflective of only one cost ratio being used. Future research should consider implementing additional cost ratio estimates, beyond the *Blackstone ratio* to see if the pattern of results remains constant.

Conclusion

This study tested the effect of both ITM and lineup composition on the identification responses of South African young adults. Given the prevalence of the belief that a live medium is associated with an increased probability of a correct identification being made, three aligned study hypotheses were formulated to test this belief. Results showed that ITM, and by extension, a live medium were not a significant predictor of correct identifications. A further result showed that live lineups could be preferred to photographic lineups when compared to a 10-to-1 Blackstone ratio. The results therefore suggest an equal refutation and equal support for the live superiority hypothesis within the tested sample.

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Appendix A

Randomized lineup conditions and their group names.

Yellow dot. First viewing order, live-target absent.

Yellow no dot. Second viewing order, live-target absent.

Orange dot. First viewing order, live-target present.

Orange no dot. Second viewing order, live-target present.

Pink dot. First viewing order, photographic-target present.

Pink no dot. Second viewing order, photographic-target present.

Purple dot. First viewing order, photographic-target absent.

Purple no dot. Second viewing order, photographic-target present.

Target absent			Target present	
Viewing order 1 (dot)	First lineup: Brunette, position 5	Second lineup: Blonde, Position 2	First lineup: Blonde, position 2	Second lineup: Brunette, position 5
Viewing order 2 (no dot)	First lineup: Blonde, position 1	Second lineup: Brunette, position 6	First lineup: Blonde, position 6	Second lineup: Brunette, position 1

Appendix B

An example of the Consent Form (Orange Dot)

Your group: 

This study investigates memory for an unexpected event and will be incorporated into this course as a teaching exercise. This study is a core component of my Honour's coursework and is under the supervision of Prof. Tredoux, Dr. Nortje and Mr. DuToit (Hons). This study will take place within this lecture period and will take 30minutes to complete.

Procedure

You will be asked to remember the colour of the group you are assigned too (printed at the top of the page) and if that group assignment had a dot or no dot. You will be given two tasks to complete. Both tasks will ask you various short answer questions about the staged SRPP advertisement you saw at the beginning of the lecture.

Benefits

For your time and your participation, you will receive 1 SRPP point towards your SRPP requirement. This study is designed to complement the memory lecture series and to be used as a teaching tool. To this end, you will receive a copy of your individual results via email and the overall study results will be discussed during Tuesday's lecture (1.10.19). It is expected that not everyone will remember the information accurately.

Risk

This study involves minimal risk.

Voluntary Participation

Participation in this study is voluntary. You do not have to participate in this study. Even if you do, you can refuse any question without needing to give a reason for your decision. Your decision to participate in this study will not affect your marks or your academic career. If you choose to participate, you can change your mind at any time and there will be no negative consequences.

Confidentiality

Your name and student number will be collected so you can get 1 SRPP point for your participation, and so that your individual results can be emailed to your student account. This information will not be distributed. Consent and study forms will be kept in a locked desk. Participant names and student numbers will not be used in the project (we will assign participant numbers or unique IDs instead), nor will they be used in the overall study results presentation or in any future publication based on this research. This study will make every effort to ensure participant confidentiality and that data is anonymized. You can choose whether or not you wish to share your individual results with your classmates and friends, you are under no obligation to do so.

If you would like more information regarding the study, you can talk to the researcher any time, using macdonnell.jade@gmail.com.

If you have any questions about the rights you have as a study participant, comments or complaints about this study, please contact:

Rosalind Adams, UCT Department of Psychology

Contact: 021 650 3417

Email: rosalind.adams@uct.ac.za

I have read the above and I am satisfied with my understanding of the study including its possible benefits and risks. I voluntarily consent to participate.

Name:_____

Student number:_____

Participant signature:_____ Date: 25.09.19

Researchers signature:_____ Date: 25.09.19

Appendix C

Demographic Survey

Demographic and additional Information

Some demographic and additional information is required which can be filled in on the spaces provided (see below).

Name:_____

Age:_____

What gender do you identify with?_____

What race do you identify with?_____

What is the number of the row you are sitting in (Row 1 is closest to the front of the lecture venue)?_____

Are you sitting in the left / middle or right hand section of the lecture venue (from your perspective, facing the front of the lecture venue)? _____

Course code you would like your SRPP point to go towards: PSY2014S

Please read before tearing

Please tear off the consent and demographic forms from your pack. Please pass these forms, turned upside down, to the end of your row where they will be collected.

Next, please complete the first task on the next page.

Appendix D

Free recall description

I would now like you to describe the two people you saw, who gave a staged SRPP advertisement at the beginning of the lecture. Your descriptions could be used as the basis for identifying those people.

When you are finished please tear off this form. When everyone is finished please pass this form, turned upside down, to the end of your row where it will be collected.

Name:_____

Target 1 description:

Target 2 description:

Appendix E

Live Lineup Selection Form

I would now like you to identify the two people you saw, who gave a staged SRPP advertisement at the beginning of the lecture. You will see two lineups, one for each of the people you saw. The two people, who gave the staged advertisement, may or may not be present in the lineup. Please take your time when making your selection. If you see either of the people you saw, who gave the staged advertisement, please make a cross in the appropriate box, using a pen. **X**

If you do not see either of the people you saw, who gave the staged advertisement, or if you are unsure, please make a cross in the appropriate box, using a pen. **X**

Please make sure that no one is able to see the lineup selections you have made. When you are finished please complete the question on the next page.

Name:_____

Colour group:_____

What is the number of the row you are sitting in (Row 1 is closest to the front of the lecture venue)?_____

Lineup 1 Selection:

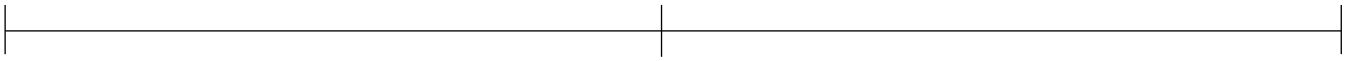
Lineup member	1	2	3	4	5	6	7 **=Not Present**	8 **=Do not know**
Lineup selection								

Appendix F

Confidence

Using a scale of 0 to a 100, where 0 is extremely not confident to 100 being extremely confident, how confident are you with the lineup selection you just made? Please draw a vertical line or dash  on the scale below to indicate how confident you are, and please write the corresponding confidence value in the space provided (see below) i.e. 60%

Lineup 1 Confidence:



0 50 100

Extremely not confident Moderately confident Extremely confident

Please read before tearing

Please tear off lineup 1 selection and confidence forms from your pack. Please pass these forms, turned upside down, to the end of your row where they will be collected.

Next, please turn to the task on the next page and wait for the next lineup to enter.

Appendix G

Attention and Familiarity Questions

Familiarity

Do you know anyone in either of the lineups you saw?

Please answer this question with a yes or a no in the space provided (see below):

Attention

What kind of study was the staged advertisement advertising?

Please read before tearing

Please tear off lineup 2 selection, confidence and control question forms from your pack. Please pass these forms, turned upside down, to the end of your row where they will be collected.

Lastly, please turn to the next page, and read the debriefing form

Appendix H

Debriefing

Thank you for taking the time to participate in this study. This study was conducted under the supervision of Prof. Tredoux, Dr. Nortje & Mr. DuToit (Hons).

While we can recognize familiar faces fairly quickly and accurately, unfamiliar faces pose a greater challenge. Reliable face identification is critically important in police investigations and a lineup task usually tests memory for an unfamiliar face. This is a difficult task. Mistaken identifications are mostly the result of errors of cognition, either a failure in the encoding or in retrieval process (found in 70% of cases) (Innocence Project, n.d.). Mistaken identifications translate into one of the greatest causes of a miscarriage of justice wherein an innocent suspect is wrongfully imprisoned (Innocence Project, n.d.). It is therefore expected that not everyone that participated in this study will remember the information accurately.

Given the challenges involved in unfamiliar face recognition, a universal, common-sensical belief exists in the superiority of a live as opposed to a photographic recognition medium (Fitzgerald, Price & Valentine, 2018). This belief is based on the fact that live and photographic recognition mediums differ in the amount of information, or cues, available to an eyewitness. Unlike a photographic, a live recognition medium offers gait and whole body information (Fitzgerald, Price & Valentine, 2018). It also offers a chance to see the unfamiliar face in different poses (turning left or right) (Fitzgerald, Price & Valentine, 2018). The belief is therefore that the more information available to the eyewitness, the better their chances of making a correct identification. This holds true within South Africa. Serious crimes, which appear before the high court, require a live identification parade be held whereas less severe crimes, which appear before lower or magistrate courts, require a photographic parade to be held.

It should then follow that these differences translate into discernible identification performance (accuracy) patterns across photographic and live recognition mediums. However, this is not the case within the eyewitness literature. Additionally, live parades cost significantly more to conduct than their photographic counterparts.

The study aim was therefore to investigate and compare the effects of recognition medium (photographic or live) on identification performance (accuracy), to test the live superiority hypothesis (Fitzgerald, Price & Valentine, 2018). This will be achieved by measuring and comparing the number of correct hits (correct identifications) and misses (incorrect rejection of a lineup when a target is present or incorrectly identifying a known innocent lineup member, known as a foil).

What happened in the study?

You were asked to describe the two people you saw, who gave the staged SRPP advertisement. You were also asked to identify these two people in a lineup task. You were shown two lineups, one for each of the people you saw. You were randomly assigned into one of four groups when you received the study forms. Based on your group allocation, you will have seen either a live-target absent, live-target present, photographic-target absent or photographic-target present lineups.

Why was I not told to remember the two faces prior to the staged advertisement?

Lineups are a test of eyewitness memory for a specific event and it is known that attentional factors such as whether an object or event was intentionally or incidentally (unexpectedly) encoded can "affect memory performance" (Brewer & Williams, 2005 pg.101).

If you intentionally memorize something you are more likely to recall more information and more accurate information about the thing you memorized (Brewer & Williams, 2005). Events in real life are rarely intentionally committed to memory, this holds true for memories of a crime (Brewer & Williams, 2005). Using an incidental or unexpected live event increases the validity of eyewitness study data.

Counselling Services

If, for any reason, you feel distressed as a result of participating in this study, please tell the researcher/s. We will talk to you about free and/or donation based counselling services that are near to UCT. Once you are comfortable with your options, and should you need it, you can book an appointment with any of the counselling service providers listed below:

1. **UCT Student Wellness**
The Student Wellness Service
Address: Ivan Toms Building
28 Rhodes Ave
Mowbray 7700
Tel: 021 650 1017
Online booking portal: https://outlook.office365.com/owa/calendar/STUDENTWELLNESSSERVICEPSYCHOLOGICALSERVICES@mscloudtest.uct.ac.za/bookings/

2. **Hope Counselling Centre**
Counselling Services operating on donations
i.14 Silverhurst Way
Bergvliet
Email:bookingsbergvliet@gmail.com
ii. 6 Lang Street
Kuils River
Tel: 021 903 0521
Email:hopehousekuilsriver@gmail.com
iii. 236 Blaauwberg Road
Table View
Tel: 021 522 9228
Email:blaauwberg.hopehouse@gmail.com

3. **LifeLine**
Anonymous telephonic counselling between 09h00 and 22h00
Tel : 021 461 1111
Whatsapp Call : 063 709 2620
Free, in person counselling
Tel : 021 461 1113

4. **South African Depression & Anxiety Group (SADAG)**
UCT 24/7 helpline
Tel : 0800 24 25 26 (free from Telkom landline)
SMS : 31393 for a call-me-back

Campus Protection Services

If you see any criminal activity on campus please, report it to Campus Protective Services, using this 24/7 line : 021 650 2222/3

If you would like more information regarding the study, you can talk to the researcher any time, using macdonnell.jade@gmail.com.

Signature

By signing this form, I am satisfied that I have been fully informed on the purpose of the study, the data collection methods used and the reasons behind them.

Participant name:_____

Participant signature:_____ Date: 25.09.19

Please read

There are two copies of this form in your pack. Please sign both copies. When you are finished, please tear off one copy for you to keep. Please raise your hand so the other signed copy can be collected. You are now finished and may leave the venue quietly.

References

Brewer, N., & Williams, K. D. (Eds.). (2005). Psychology and law: An empirical perspective. New York, NY, US: The Guilford Press

Fitzgerald, R., Price, H., & Valentine, T. (2018). Eyewitness Identification: Live, Photographic, and Video Lineups. *Psychology, Public Policy, and Law*, *24*(3), 307–325. doi: 10.1037/law0000164

Innocence Project. (n.d.). *Eyewitness Identification Reform.* Retrieved September 5, 2019, from https://www.innocenceproject.org/eyewitness-identification-reform/

Appendix I

Photographicgraphic lineup selection form

I would now like you to identify the two people you saw, who gave a staged SRPP advertisement at the beginning of the lecture. You will see two lineups, one for each of the people you saw. The two people, who gave the staged advertisement, may or may not be present in the lineup. Please take your time when making your selection. If you see either of the people you saw, who gave the staged advertisement, please make a cross in the appropriate box, using a pen. **X**

If you do not see either of the people you saw, who gave the staged advertisement, or if you are unsure, please make a cross in the appropriate box, **X** using a pen.

Please make sure that no one is able to see the lineup selections you have made. The first lineup can be found on the next page. When you are finished, please turn two pages ahead and complete the next question.

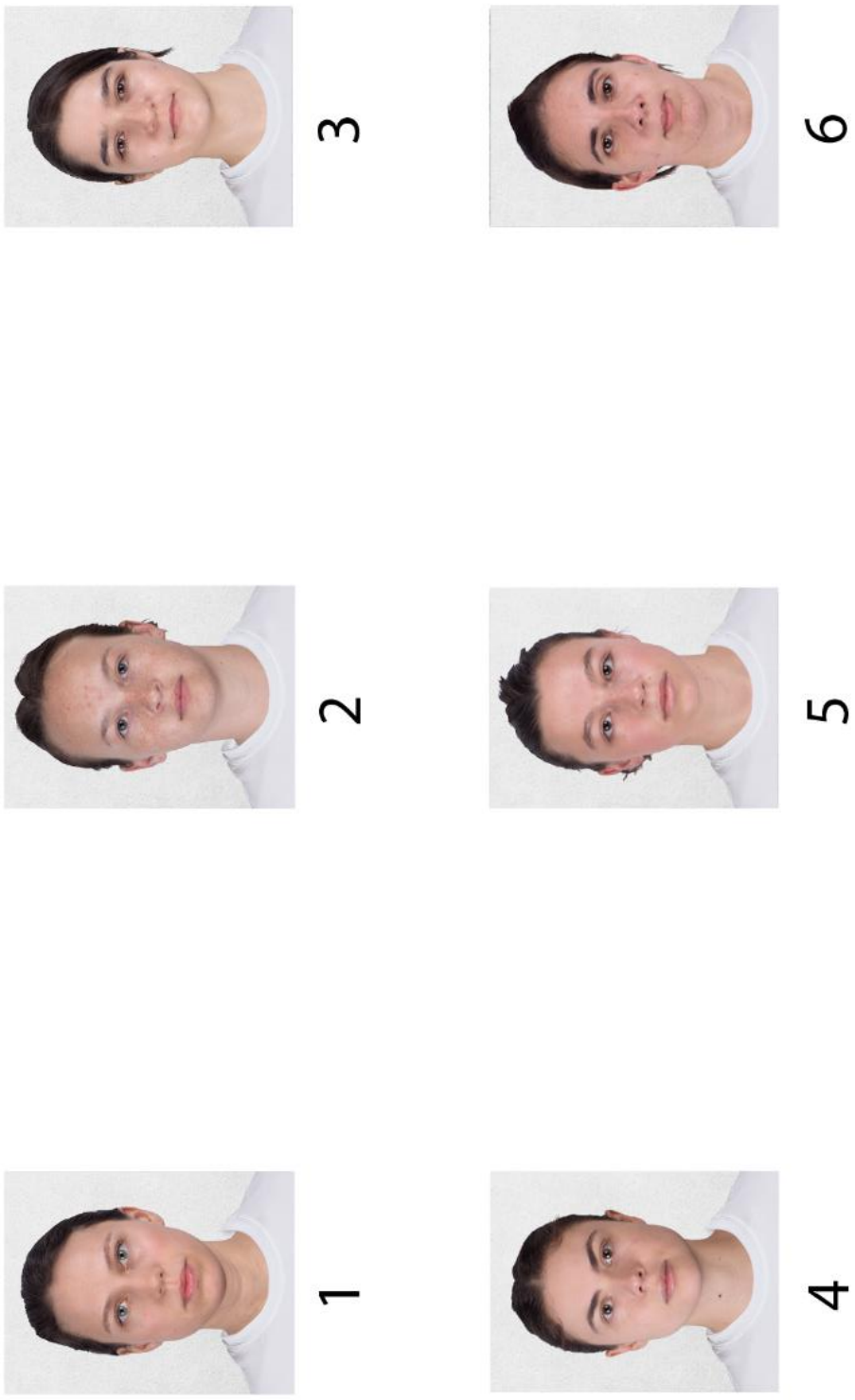
Name:_____

Colour group:_____

What is the number of the row you are sitting in (Row 1 is closest to the front of the lecture venue)?_____

Appendix J

Examples of the target absent photographicgraphic lineups used are displayed.



3

6

2

5

7=not present 8= do not know

1

4

Appendix K

Ethical Approval

Appendix L

An example of the mock eyewitness procedure used to test lineup fairness and effective size.

Description: White female, early 20s, medium-length brunette hair, dark eyes and full lips.