

Identification on the street: A field comparison of police street identifications and video lineups in England

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Abstract

A street identification or live showup provides an eyewitness with an opportunity to identify a suspect shortly after a crime. In England, the majority of suspects identified are subsequently included in a video lineup for the same witness to view. In Study 1, robbery squad data from three English police forces recorded 696 crimes, the identification procedures employed and prosecution decisions. A street identification was the most frequent identification procedure, being attempted in 22.7% of investigations, followed by mugshot albums (11.2%) and video lineups (3.4%). In Study 2, data of 59 crimes were collected in which suspects, identified in a street identification, were subsequently filmed for a video lineup. Across both studies, most (84%) suspects identified in the street were subsequently identified in a video lineup, indicative of a commitment effect, in which a witness conforms to their first identification decision. All suspects identified in two procedures were eventually cautioned or charged to appear in court. The ground truth of suspect guilt in these field data cannot be determined. However, suggestions are made for reducing the likelihood of a mistaken identification of an innocent suspect caught up in an investigation; all possible steps should be taken to reduce the inherent suggestiveness of the street identification procedure.

Introduction

Empirical research has demonstrated that eyewitnesses often make mistaken identifications (for reviews see Wells, Small, Penrod, Malpass, Fulero & Brimacombe, 1998; Wells, Memon & Penrod, 2006), and in some jurisdictions, wrongful convictions have occurred as a result of unreliable eyewitness evidence (see Garrett, 2011; Rattner, 1988). One way of addressing this problem is to ensure that evidence is collected under conditions that mitigate the suggestiveness inherent in requests by the police for a witness to take part in an identification procedure. However, this can be time consuming (e.g., identity parades, lineups). It may be necessary to obtain an identification of a suspect(s) at or near the scene of the crime using a *street identification* (showup)¹. If the culprit(s) has departed, the witness may be driven around the vicinity in a *drive-by* in the hope that the offender(s) is still nearby, and that the witness will point him or her out. In other circumstances, police officers may have observed and detained someone resembling the culprit's description, enabling a *planned confrontation* to ascertain whether or not the detainee is the culprit. The latter procedure has been criticised for being intrinsically suggestive, as the suspect will often be surrounded by police officers (e.g., Wolchover & Heaton-Armstrong, 2004).

In England and Wales, the police adhere to a statutory code of practice, which prescribes both *how* and *when* eyewitness identification procedures are to be conducted (Police and Criminal Evidence Act (PACE), 1984, Codes of Practice, 2011, Code D; see

¹ Due to the legal constraints on the use of showup procedures in the UK, when referring to research and actual cases conducted in the UK, the term *street identification* is used. When referring to procedures and research conducted in the USA the term *showup* is used.

generally, Bogan & Roberts, 2011). For instance, a description of the offender should be obtained from the witness before any procedure. A street identification is *only* permissible where there are *insufficient* grounds to justify a suspect's arrest - a positive street identification provides such grounds. In contrast, if enough information is known to justify arrest, a video lineup *should* be conducted instead. The English courts have been criticised for deferring too readily to police claims regarding the necessity of a street identification. Where the procedure is conducted as a matter of expedience rather than necessity, the suspect is improperly denied the greater safeguards offered by a lineup (Wolchover & Heaton-Armstrong, 2004). In a well-constructed lineup, mistaken identification risk is spread across all persons. A witness' error is revealed if he or she chooses a foil – known to be innocent. In contrast, in a street identification, the risk of error is shouldered entirely by the suspect.

The risk of a mistaken identification may be inflated by clothing – errors are more common if an innocent suspect wears clothing matching that worn by the culprit during the crime (Dysart, Lindsay & Dupuis, 2006; Lindsay, Wallbridge & Drennan, 1987; Yarmey, Yarmey & Yarmey, 1996). Some video identification suites in England provide suspects with alternative clothing, particularly if distinctive, or damaged (e.g., blood stains), reducing the likelihood of an identification being made on this basis. No protection will be provided during a planned confrontation if an innocent suspect's clothing meets a witness' description, or if the same clothing is worn in the video lineup.

These concerns have some foundation. A showup, in which the witness is given the opportunity to view the face of the suspect, had been used in 53 of the first 250 DNA-exoneration cases in the United States (Garrett, 2011). This suggests that the procedure might be a contributory cause of miscarriages of justice. However, the police use of street identifications has not been the subject of study in England and Wales, and no systematic

records are kept. One of the objectives of the research described in this paper was to begin to fill this gap in the stock of empirical knowledge relating to the use of this procedure.

(i) Field studies of showups

Only three published field studies, conducted in the United States, have investigated police use of the showup (Behrman & Davey, 2001; Flowe, Mehta & Ebbesen, 2011; Gonzalez, Ellsworth & Pembroke, 1993). These compared their use and outcomes relative to other procedures. Gonzalez *et al.* (1993) analysed 224 cases in California. Identification of the suspect was more common from showups (56%) than lineups (22%). In an archival study in California, Behrman and Davey (2001) analysed 284 photo lineups, 58 live lineups, 258 live showups and 18 photograph showups. Sixty-six additional cases employed both showups and lineups. Suspect identification rates were higher in the live showups (76%) than in the photograph lineups (48%), although this may be a consequence of presentation method (live vs. photograph). Flowe *et al.* (2011) randomly sampled archived felony cases referred to a south west US city's prosecution service. From those examined, 247 suspects had been included in at least one identification procedure. The most common was a showup (60%), followed by a photograph lineup (33%), with 4% involving both. The proportion of suspects identified was 95% for showups and 89% for lineups. However, it should be noted that this sample only includes cases that the prosecutors believed had a high chance of conviction.

(ii) Laboratory studies of showups

With field data, it is rarely possible to determine the 'ground truth' as to a suspect's guilt (see Horry, Halford, Brewer, Milne & Bull, in press). However, the inclusion or not of the 'culprit' can be controlled in the laboratory. Experiments investigating showups have tended to focus on presentations of a single photograph. This literature has addressed two

questions. The first is whether a showup is inherently unfair. The second is whether the use of repeated identification procedures, such as when a showup is followed by a lineup, is unfair.

In relation to the first question, Steblay *et al.* (2003) conducted a meta-analysis of the empirical literature examining photograph showups and lineups which revealed that in culprit-present trials, correct identification rates from showups and lineups were similar (approximately 45%). In culprit-absent conditions, fewer mistaken identifications were made to showups (15%) than lineups (43%), suggesting that a showup may be fairer for an innocent suspect. However, in a subset of these studies, the foil most closely matching the culprit's appearance was designated as an innocent suspect. Innocent suspect identifications were slightly lower from lineups (17%) than from showups (23%; $p = .06$). This suggests that for an innocent suspect, a lineup may provide greater protection against a mistaken identification (for a further discussion of this point see Dysart & Lindsay, 2007a).

Valentine, Davis, Memon and Roberts (2012) compared identification rates from live street identifications with video lineups. In one experiment, 20 minutes after a live act, correct culprit identification rates were higher from lineups (72%) than from street identifications (51%). With the same delay, the opposite was found in a second experiment (lineup: 52%; street identification: 80%). In a third, there were no reliable differences in culprit identifications from street identifications conducted within 20 minutes (46%), or lineups (55%) between 24 hours and a month later. The authors suggest these varying results were a consequence of variations in culprit actor distinctiveness - this will also vary in real police investigations. Culprit-absent procedures were also conducted. With foil identifications excluded (23% of all selections); innocent suspect identification rates were low in two experiments ($> 10\%$). In the third, innocent suspect identifications were high from both video lineups (43%) and street identifications (36%), although this difference was not

significant. These rates are a cause for concern - the authors suggest that variations in innocent suspect rates were dependent on variations in the similarity of appearance of the culprit and innocent suspect actor pairs. This may also occur in real police investigations.

iii) Repeated identification procedures

In England and Wales, a video lineup *should* be conducted if a suspect, having been identified in a street identification, still disputes identity (*R v Forbes* (HL), 2001). A witness may therefore participate in a *repeated identification* procedure involving the same suspect(s). At least 14 DNA-exonerated individuals were identified in such procedures (Garrett, 2011). In their sample of 33 police cases, Behrman and Davey (2001) found that 73% of witnesses identified the same suspect when presented in both a showup and a lineup. However, no English field research has been conducted on this topic, and a second objective of the current project was to collect data about such procedures.

A substantial body of empirical research has found that identifying someone from a mugshot book (e.g., Blunt & McAllister, 2009; Brown, Deffenbacher, & Sturgill, 1977; Dysart, Lindsay, Hammond, & Dupuis, 2001; Gorenstein & Ellsworth, 1980; Goodsell, Neuschatz, & Gronlund, 2009; Haw, Dickenson, & Meissner, 2007; Hinz & Pezdek, 2001; Memon, Hope, Bartlett, & Bull, 2002), a showup (e.g., Godfrey & Clark, 2010; Haw *et al.*, 2007; Valentine *et al.*, 2012), or a lineup (e.g., Hinz & Pezdek, 2001; Pezdek & Blandon-Gitlin, 2005; Steblay, Tix, & Benson, 2013) introduces a confirmatory decision bias to selections from a subsequent lineup. One explanation is that a witness realises they have identified the suspect previously and makes a *commitment* to that decision (see Blunt & McAllister, 2009; for a meta-analysis see Deffenbacher, Bornstein & Penrod, 2006). A commitment may also be made to a selection strategy (i.e. selection vs. no selection), so that the witness fails to identify anyone in both tasks (Goodsell *et al.*, 2009).

Innocent suspects or bystanders present at the scene of the crime are also more likely to be identified in a subsequent lineup than those not present (e.g., Deffenbacher *et al.*, 2006; Memon *et al.*, 2002). Under the *source monitoring framework* (Johnson, Hashtroudi, & Lindsay, 1993), this is caused by a misattribution of the source of familiarity of the suspect's face - the suspect is the only lineup member seen previously. An increased sense of familiarity may induce a witness to select a suspect from a lineup even if previously rejected in a street identification. A misattribution of the source of familiarity and a commitment effect may jointly operate if a witness first identifies an innocent suspect from a street identification – perhaps a consequence of procedural suggestiveness or a superficial similarity of appearance (e.g., clothing matches the actual offender) - and then later from a video lineup. The error may arise from the witness having a better opportunity to view that suspect during the street identification procedure, than when they viewed the perpetrator during the commission of the crime.

Valentine *et al.* (2012) found strong evidence for a commitment effect. Even though clothing differed, most participants, who identified a suspect in a street identification, selected the same person (88%) from a video lineup. However, there was no evidence of source attribution errors, as few participants who rejected the street identification procedure, changed to identify the suspect from a lineup. In other words the context-free familiarity associated with seeing the face earlier did not influence lineup choices. The commitment effect was also found if participants had mistakenly identified the innocent suspect in a street identification - 81% of participants repeated their error with a video lineup.

(iv) Delay

A further issue is that of delay. Where a suspect is arrested following a street identification, some video lineups are conducted the same day, although others may occur

weeks later. Empirical investigations into the influence of delay on *first* identification procedures have produced mixed findings (see Dysart & Lindsay, 2007b for a review). A meta-analysis of 57 studies (Deffenbacher, Bornstein, McGorty, & Penrod, 2008) and some field research has found a negative relationship between delay and suspect identification rates (e.g., Behrman & Davey, 2001; Horry, Memon, Wright, & Milne, 2012; Tollestrup, Turtle, & Yuille, 1994; although see Wright & McDaid, 1996). With respect to delay between *repeated* identification procedures, the commitment effect influences lineup choices for up to a week after photo showups (Godfrey & Clark, 2010), and mugshot identifications (Goodsell *et al.*, 2009); two weeks after a lineup (Stebly *et al.*, 2013) and a month after a live street identification (Valentine *et al.*, 2012). However, Pezdek & Blandon-Gitlin (2005) found that a commitment effect did not persist after one month.

(iv) The current research

The street identification field data reported here are from a sample of four police districts in England. The research had two components. The first focussed on robberies only. For this, case logs were analysed and if an identification procedure had been employed, an officer completed a questionnaire to provide data of street identifications, video lineups and witness viewings of mugshots. The second study collected data of video lineups containing suspects previously identified in a street identification. Both studies evaluated the proportion of suspects identified, and the impact of these procedures on prosecution decisions.

It is difficult to make empirically based predictions as to the outcomes of real identification procedures. Laboratory studies can be strictly controlled, whereas an unknowable number of confounding variables may influence real cases (Horry *et al.*, in press). Nevertheless, based on previous research examining repeated identifications (e.g., Behrman & Davey, 2001; Valentine *et al.*, 2012); our hypothesis was that the use of a video

lineup when the suspect had already been identified in a street identification would produce a commitment effect. It was therefore predicted that witnesses would be more likely to identify the police suspect from a video lineup conducted as a second procedure than as a first.

The procedure selected by the police will be confounded with delay and the quality of any other evidence against the suspect. When the police had no grounds for arrest, street identifications were expected to be conducted shortly after the offence. Longer delays were predicted with video lineups. Nevertheless, it was hypothesised that memory performance would decline over time, and we also predicted a negative relationship between delay and the proportion of witnesses who identified the police suspect from a video lineup.

Study 1

Approximately 80,000 robberies in England and Wales are recorded per annum (Home Office, 2009). Robbery is associated with a high proportion of identification procedures (Pike, Brace & Kynan, 2002) and robbery squads are trained to conduct a street identification if at all possible. If this is unsuccessful, or impractical, a witness may view a computerised album of mugshots using a system known as WADS (Witness Album Display System). An operator enters a cued description of the suspect (e.g., age, gender, ethnicity) and the number of images displayed depends on those in the database that meet the description associated with that crime type in that locality. There is no published field research on mugshot viewings or of the eventual fate of identified suspects in the UK, although the witness may be asked to view a lineup containing a video of that suspect.

Over 80,000 video lineups are conducted in England and Wales per annum (Valentine, Hughes, & Munro, 2009). Witnesses must be given the *unbiased* warning that the suspect may or may not be depicted, before twice viewing moving head and shoulders images of the suspect and (normally) eight foils. Horry *et al.* (2012) collected field data of 1,039

English lineups. Across the five contributing police forces, suspect identification rates ranged from 30% to 49%, roughly similar to a study of 1,718 Scottish procedures (44%; Memon, Havard, Clifford, Gabbert, & Watt, 2011). Identification rates were affected by suspect sex (female = 56%, male = 38%), ethnicity (white = 44%, black = 29%), crime type and delay. Identification was most likely if the video lineup was conducted within two weeks, and least likely after six months. Robbery suspects were least likely to be identified (sexual offences = 46%, violence = 42%; robbery = 29%), possibly due to fleeting contact between witnesses and suspects (see also Pike *et al.*, 2002).

In Study 1, data were collected on the frequency of use of street identifications, mugshot album viewings, and video lineups held as a first or as a repeated identification procedure, as well as the proportion of witnesses who identified the police suspect. The proportion of suspects charged to appear in court, or who accepted a police caution was compared across suspects who had been identified in these procedures, or detected using alternative methods (e.g., DNA). Decisions to charge a suspect are taken by the Crown Prosecution Service (CPS) on the basis of whether conviction is a realistic prospect. Cautions may be given for less serious offences, but only if the offence is admitted.

Method

Police contributors to both Study 1 and 2 were recruited via the two video lineup user groups². Contributions were received from five districts within three police forces (two boroughs in one force contributed). One district provided brief unreported pilot data only. A second supplied data for Study 2. The data collection time periods for the Study 1 districts were District 1: 3 months; District 2: 3 months; District 3: 7 months.

² Two databases each comprising more than 20,000 images, are maintained by two entities; West Yorkshire Police, which operates a system known as VIPER (Video Identification Parade Electronic Recording), and a commercial organisation, Promat Envision International, which operates a system known as PROMAT.

Questionnaire

A 20-point questionnaire containing multiple-choice, closed- and open-ended questions included space for the police crime number; offence date and time; and details of witnesses and suspects (age, gender, ethnicity); whether CCTV footage had been collected (yes/no); whether the witness had attempted a street identification (yes/no), if so, the time; whether the suspect(s) was identified and arrested (yes/no); whether the witness claimed prior familiarity (yes/no); whether prior suspect description(s) had been collected (yes/no), and if not, why not. Mugshot album viewings were recorded (yes/no); if so, the date, the number of images; and the identification outcome (yes/no). Video lineups were recorded, their date and outcome (suspect ID, foil ID, no ID), and procedure requester (police, suspect, CPS). Final questions asked whether suspect(s) were charged or cautioned (yes/no), and, if known, the sentence. Contacts also provided information they believed might be of interest, including suspect descriptions; whether the procedure was a drive-by, or a planned confrontation; whether it violated Code D; whether a facial composite was constructed; and why a case was discontinued, despite evidence of suspect guilt.

Procedure

The first author met police contacts prior to, during and approximately six months after the data collection period, to collect case log extracts. These form the basis of national recorded crime data (Home Office, 2009) and catalogue the crime number, date, time, location, an incident description and the initial police response. Any theft involving actual or threatened violence is recorded as robbery, although this can be re-evaluated. If any suspects were charged or cautioned records were highlighted. Designated police contacts examined

these records to identify cases of interest. If an identification procedure was conducted, contacts completed the questionnaire, with the assistance of the investigating officer.³

Results

Data of 696 offences were collected (District 1: 473; District 2: 171; District 3: 52). Following 219 offences (31.5%) at least one identification procedure was attempted, resulting in the identification of 52 individuals suspected of 41 different offences (6% of total). Table 1 displays the overall number of cases and the percentage in which an identification procedure was conducted, sub-divided into street identification attempts, mugshot album and video lineup viewings. Those resulting in the identification of at least one suspect are also listed. As some cases included multiple suspects, the total number of suspects identified is listed. Video lineups containing the same or different suspects could be viewed by multiple witnesses as a first (no previous street identification or mugshot viewing), or a second procedure (repeated identification). Therefore, the total number of lineup viewings and the percentage resulting in a suspect identification is listed, separated into first or second identification procedures.

Street identifications: It was often not possible to tell whether a drive-by or a planned confrontation had been attempted. A drive-by may have been initiated as other officers had located a suspect meeting the description. That witness would be driven to view the suspect in a planned confrontation. Nevertheless, most street identification attempts in which no suspect was identified were failed drive-bys. In contrast, *all* procedures in which at least one suspect was identified were planned confrontations held within 2 hours of the offence.

³ Some data could not be collected. These included mugshot album viewing times (these could be estimated to within 2 days). Rejected video lineups and foil selections were listed as 'no identifications'. Witness and suspect descriptions were also incomplete and are not reported. Explanations were collected as to why Code D was violated, why street identifications had not been attempted, who requested a video lineup, and why cases were discontinued. These data will be reported separately, although if relevant they are referred to in the discussion.

Mugshot viewings: One-hundred and one witnesses to 78 different offences viewed a mugshot album within 21 days of the offence (Mean = 130 mugshots per witness). The seven suspect identifications all occurred within 15 days. Cases were too few for analyses of delay.

Video lineups conducted as a first procedure: Thirty-seven video lineups, viewed by witnesses to 24 offences, were conducted as a first identification procedure. Eight (21.6%) were conducted within 24 hours. The longest delay was 94 days (median = 14 days, mean = 25, SD = 27). A point-biserial correlation found a significant negative relationship between suspect identification (suspect ID = 1, no ID = 0) and delay, $r(37) = -.38, p = .022$. A 2 (suspect ID, no ID) x 2 (< 1 week, > 1 week) chi-square test, $\chi^2(1, n = 37) = 3.98, p = .046, \Phi = .328$, also found that suspects were significantly more likely to be identified from lineups conducted within 7 days ($n = 12$, Mean days = 1.2, suspects identified = 75.0%), in comparison to those conducted more than 7 days after the offence ($n = 25$, $M = 36.2$, suspects identified = 40.0%).

Repeated identification procedures: Seven additional video lineups included suspects identified previously by the same witness. Whereas the video lineups of those previously identified in street identifications ($n = 5$) were viewed within three days, those identified in mugshots were viewed more than 30 days later ($n = 2$). There was no significant difference, $\chi^2(1, n = 44) = 0.96, p = .29, \Phi = .147$ (Fisher's Exact) in lineup suspect identification rates between those who had ($n = 7$, 71.4%), and had not ($n = 37$, 51.4%) been identified in a previous procedure by the same witness. However, a similar analysis, $\chi^2(1, n = 42) = 4.26, p = .050, \Phi = .318$ (Fisher's Exact), omitting the mugshot suspects, found that identification rates were significantly higher amongst those who had been identified in a previous street identification by the same witness (100%; $n = 5$), than those who had not (51.4%, $n = 37$).

Overall between-procedure identification rates: A 2 (suspect ID, no ID) x 3 (video lineup, street ID, mugshot viewing) chi-squared analysis conducted on the overall identification rates by-procedure listed in Table 1 was significant, $\chi^2(2, \underline{n} = 308) = 45.74, p < .001, \Phi = .385$. The proportion of suspects identified was significantly higher for video lineups ($\underline{n} = 44$ procedures, 54.5%) than for street identifications ($\underline{n} = 163$, 16.7%) and mugshot viewings ($\underline{n} = 101$, 6.9%).

Prosecution decisions: Table 2 lists the number of suspects identified in an identification procedure ($\underline{n} = 52$), and whether they were prosecuted ($\underline{n} = 31$), or their cases discontinued. All suspects ($n = 5$; 100%) identified in both a street identification and in a video lineup were charged. No suspect identified from a mug shot was prosecuted.

Over half of suspects (52.2%) identified in a street identification alone were charged. When a video lineup was run as the first procedure, 82.4% of identified suspects were charged. A chi-squared test comparing the prosecution outcomes (charged = 1; no charge = 0) of suspects identified in street identifications or video lineups, when these were conducted as the only identification procedure was not significant $\chi^2(1, \underline{n} = 45) = 2.31, p = .128, \Phi = .227$.

Analyses also compared prosecution rates by offence as a consequence of different detection methods. District 1 only supplied such data for the final two out of three data collection months ($\underline{n} = 322$ offences). Of the 544 offences across the three districts for which *full* data were available, one or more suspects ($\underline{n} = 69$) accused of 57 offences (10.5% of the total) were prosecuted. Table 3 lists the number of offences and the percentage in which at least one suspect was prosecuted, if identified in a street identification alone, a video lineup alone, in both procedures, or when detected without any visual identification procedure.

Frequencies were too low to conduct meaningful analyses on those cases in which suspects had been identified in two identification procedures and charged ($n = 5$). A 2

(prosecution, no prosecution) x 3 chi-squared test comparing the remaining three conditions found a significant effect on prosecution rates, $\chi^2(2, n = 542) = 107.22, p < .001, \Phi = .445$. A prosecution was most likely following a suspect identification from a video lineup (77%), followed by a street identification (53%), and was least likely if detection was based on alternative evidence (7%).

In 7 of the 35 (20%) offences for which a suspect(s) was prosecuted and there was no identification procedure, the case evidence was not recorded. Of the remaining 28 offences, suspects were arrested at the scene of the crime ($n = 6$), found in possession of stolen goods ($n = 5$), named by a witness or victim claiming familiarity ($n = 5$), identified by police officers from CCTV images of the crime scene ($n = 5$), traced by DNA ($n = 4$), or from a vehicle registration plate number ($n = 3$). All of the 10 suspects named by a familiar witness, or identified from CCTV additionally admitted guilt during police interview⁴.

Discussion

Study 1 systematically surveyed police use of street identifications, mugshot viewings and video lineups to compare their frequency and outcomes in robbery cases. Attempts to conduct a street identification were most the frequent (23% of all offences), followed by mugshot viewings (11%) and video lineups (4%). The proportion of suspects identified was highest in video lineups (55%), followed by street identifications (17%) and mugshot viewings (7%). These street identification rates are far lower than in previous US field research (Behrman & Davey, 2001: 76%; Gonzalez *et al.*, 1993: 56%). Delay cannot account for this as the vast majority of street identifications were conducted within an hour. However,

⁴ For the entire dataset of 696 offences, CCTV evidence was collected for 21 offences, although the quality of footage was unknown. Eight suspects were identified by police officers viewing these images. Five (62.5%) admitted guilt during interview. The other three were included in video lineups for viewing by the original witnesses. One was identified and charged. The other two were not identified by the witness and their cases were discontinued. The remaining offences in which CCTV evidence was collected were discontinued. Witnesses also created 5 facial composites, none of which were identified.

in the USA a suspect may be arrested and included in a showup and a clear record can be collected. In contrast, a street identification can only be conducted if there is no evidence to arrest a suspect. In the current research, it was not possible to separate unsuccessful drive-bys from 'no identifications' in planned confrontations. A drive-by may have been unsuccessful simply because the culprit had left the area by the time the police attended, and it is therefore not possible to estimate how often the actual culprit was viewed but not identified.

All street identifications in which suspects were identified were planned confrontations. Police contacts noted that some were group procedures in which the suspect(s) and often acquaintances were stopped by the police on the basis of their descriptions. Each effectively acts as an ad-hoc foil in an impromptu all-suspect lineup. Such lineups increase misidentification likelihood (Wells & Turtle, 1986). Data of group planned confrontations were collected in Study 2 and these issues are discussed later.

This was the first research examining computer-displayed mugshot viewings in the UK, and in terms of detection the results were disappointing. No suspect identified from a mugshot album was prosecuted. It is not possible to estimate how often the actual culprit was depicted, but not identified, or to estimate whether an image of the culprit was actually included in the database. Each witness viewed an average of 130 unfamiliar faces meeting pre-specified description criteria. Distinguishing between unfamiliar faces can be difficult with no memory requirements (Bruce, Henderson, Greenwood *et al.*, 1999). However, most mugshot searches were held more than a week after the offence, and police contacts also reported that the databases were infrequently updated. Some suspect images could be years old. Witnesses may therefore have been told the suspect's appearance might have changed. Such instructions induce a liberal response criterion (Charman & Wells, 2007). They would also know that a more contemporary video lineup could be viewed later.

Following a delay of more than a month, two mugshot identified suspects were included in video lineups but not identified. In contrast, all five suspects identified in a street identification and shown to the same witness in a video lineup within three days were identified and charged. These data are consistent with previous research finding a commitment effect from one identification decision to another (e.g., Deffenbacher *et al.*, 2006). However, there were few cases, and Study 2 was primarily designed to identify more.

The majority of robbery suspects (55%) included in a video lineup were identified. This value is higher than reported in previous field research for all crimes (e.g., Memon *et al.*, 2011: 44%), or for robberies (Horry *et al.*, 2012; 29%). However, Horry *et al.* reported that identification rates varied across police districts and can be dependent on many factors (e.g., suspect and witness characteristics). Nevertheless, as expected, there was also a negative relationship between delay and the likelihood of the suspect being identified, consistent with theoretical models of the effect of decay of memory.

A further aim of the project was to examine prosecution rates for robberies in relation to the different types of evidence. Suspects were prosecuted in just over 10% cases. Effect sizes were strong and the likelihood of a suspect being charged or cautioned was far higher if they had been identified in a street identification and a video lineup (100%), in comparison to being identified in a video lineup only (77%), a street identification only (53%) or if no identification procedure had been conducted (7%).

Study 2

For Study 2, data of all video lineups were collected from one city centre identification suite for one year and separated into cases in which suspects had previously been identified in a street identification or not. Data was also collected as to whether the street identification had been conducted with the suspect alone (solo) or in a group.

Method

Questionnaire

The questionnaire employed in Study 1 was adapted, removing references to facial composites and mugshot albums. Two additional questions requested: - details of offence type, and street identification type (solo drive by - witness pointed out suspect to police; solo confrontation - witness chose from one person; or group confrontation - witness pointed out suspect from a group of at least three persons).

Procedure

The questionnaire was completed whenever a suspect had been identified in a street identification prior to video lineup preparation. To identify cases, a tick box was added to the police 'Notice to Suspect' form, which lists legal rights, and the crime number. Completed by investigating officers, copies are provided to the suspect, and the identification suite.

Four sets of quarterly data listing *all* video lineup preparations were also supplied to the researchers. Preparation does not infer viewing. Suspects may admit guilt, and witnesses may decline to assist the police, or state they would not recognise the offender. These data listed the actual number of lineups shown, suspect identifications and the mean delay between video preparation and the viewing date. No data were supplied of offence dates, and foil identifications and lineup rejections were listed as 'no identifications'. No prosecution data were available of cases in which no street identification had been conducted.

Results

Summary data of all video lineups prepared for viewing were collected ($n = 550$ suspects). 365 (66.4%) were eventually viewed. As multiple witnesses often viewed the same suspect(s), there were 558 procedures. Some lineups were viewed on the day of the offence. The longest delay was 116 days ($M = 15.9$ days).

A subset of these suspects ($n = 77/550$: 14%) accused of 59 different offences had previously been identified in a street identification⁵. Suspects were identified in solo ($n = 49$, 62.7%), or group confrontations ($n = 28$, 37.3%). None was identified in a drive-by.

Thirty-two lineups (6.1% of 558) were viewed by a witness who had identified the same suspect in a previous street identification⁶. For 16 offences (21 suspects), it had been a solo confrontation. Group confrontations were used for six offences (8 suspects).

Identifications of the suspect: Of the 558 video lineup procedures, 280 (50.2%) resulted in a suspect identification. A 2 (suspect ID, no ID) x 2 (previous street ID, no street ID) chi-squared analysis, $\chi^2(1, n = 558) = 13.11, p < .001, \Phi = .147$ found that the proportion of suspects identified from a video lineup by witnesses who had previously identified that suspect in a street identification was significantly higher ($n = 32$; 81.3%), than those who had not ($n = 526$; 48.3%). However, video lineup suspect identification rates did not significantly differ if the original street identification had been a solo (79.2%) or a group confrontation (87.5%), $p = .524, \Phi = .09$ (Fisher's Exact).

Delay between identification procedures: For the subset of 32 repeated identification suspects, 44% of video lineups were conducted within 24 hours, and 66% within a week of the offence (median delay = 2 days; mean = 22.6 days). The longest delay was 112 days for four suspects all accused of the same crime and all identified in both a street identification and a video lineup by a single witness. A Fisher's Exact test comparing suspects identified when the delay was less than one week ($n = 21$, mean delay = 2 days, suspect ID rate =

⁵ Offences included assault (49.4%), criminal damage (15.6%), sexual offences (13.0%: sexual assault, 6.5%, indecency, 5.2%, rape, 1.3%), robbery (9.1%), theft (9.1%), and burglary (2.6%).

⁶ These 32 lineups were of 29 individuals suspected of 21 different crimes. In violation of Code D, which recommends that once one witness has identified a suspect, any others should view the suspect in a video lineup; one suspect was simultaneously identified by three child witnesses in a street identification. All three witnesses also later identified the suspect in a video lineup. A further suspect was simultaneously identified by two adult witnesses in a street identification, but neither identified that suspect from a subsequent video lineup.

76.2%) with more than a week ($n = 11$, mean delay = 62 days, suspect ID rate = 80.8%) was not significant, $\chi^2(1, n = 32) = 1.03, p > .2, \Phi = .179$. A point-biserial correlation between delay and outcome (suspect ID = 1, no ID = 0), was also not significant, $r(32) = .18, p > .2$.

Prosecution decisions: All 24 suspects (100%) identified in both a street identification and video lineup by the same witness were charged. Two further suspects identified in a street identification by one witness, and from a video lineup by a second were also charged. The cases of all suspects identified in a street identification, but not identified by the same witness in a subsequent video lineup were discontinued ($n = 5$). Nineteen of the 46 remaining suspects (41.3%) identified in a street identification, but whose video lineups were not viewed were charged. Another six accepted a police caution (13.0%). The remaining cases were discontinued ($n = 21$).

In total, 51 out of the 77 suspects (66.2%) identified in a street identification were prosecuted. A chi-squared test examined the influence that additional video lineup identifications had on case outcomes. Significantly more suspects were charged or cautioned if they had been identified in both a street identification and a video lineup (100%; including those in which one witness had viewed a street identification, and a different witness viewed the video lineup, $n = 2$), than if they had been identified in a street identification alone (54.3%), $\chi^2(1, n = 77) = 20.01, p < .001, \Phi = .51$. The proportion of suspects prosecuted if identified in a group (67.8%) or a solo (65.3%) planned confrontation was virtually equal.

Discussion

Consistent with Study 1, and empirical research (e.g., Deffenbacher *et al.*, 2006; Valentine *et al.* 2012), in Study 2 more suspects were identified in video lineups following previous identification by the same witnesses in a street identification (81%) than when held as a first procedure (50%), providing further evidence of a commitment effect. However, in

contrast to Study 1 and Valentine *et al.*, there was no evidence of a negative relationship between the proportion of suspects identified and delay between procedures. In Study 2, this may have been due to identification rates being close to ceiling, and the relatively brief delay (44% of the video lineups were conducted within 24 hours). However, many other variables may co-vary with delay and influence identification performance (see Horry *et al.*, 2012).

The outcomes of these procedures had a strong influence on decisions by the prosecuting authorities as to whether to charge suspects or not. Two-thirds (66.2%) identified in a street identification were eventually charged or cautioned. As with Study 1, *all* suspects identified in both a street identification and in a video lineup were charged. In contrast, no suspects were prosecuted if the witness failed to identify them in a video lineup.

Over a third of street identifications were described as group confrontations whose members would often have been acquaintances. This high proportion may be attributable to many of the crimes being assaults, occurring inside, or close to city centre bars late at night. Although only one may have committed an offence, all members may be viewed by the police as suspects. These procedures would be analogous to an all-suspect lineup. These can increase misidentifications (Wells & Turtle, 1986). However, regardless of whether a group or solo street identification procedure had been conducted, there was no impact on the outcomes of a subsequent video lineup, or on prosecution rates.

Some questionnaires described witnesses (more than 10%) as being under the influence of alcohol when participating in a street identification. The police inspector who liaised with the researchers suggested that this was a low estimate, due to the city location and the late night timing. Most witnesses, when sober, subsequently viewed the same suspect in a video lineup. Although research has investigated the influence of alcohol on

identification performance (e.g., Dysart, Lindsay, MacDonald & Wicke, 2002), there has been a worrying absence of research on the influence of alcohol on repeated identifications.

General Discussion

The research reported here provides the first data of street identifications in England. Street identification *attempts* are common (22% of robbery cases), although less than one in five (17%) result in a suspect identification - this may be a consequence of many being drive-bys that fail to locate any suspect. Nevertheless, a street identification has a very strong influence on the fate of the suspect, as 61% of identified robbery suspects (Study 1) and 66.7% from all crime types (Study 2) were charged or cautioned. In contrast, only 7% of suspects in robbery cases were prosecuted if there was no identification evidence.

A street identification does not provide an innocent suspect with the same protection as a lineup, because it affords *no* possibility of demonstrating a mistaken identification as occurs when a witness identifies a foil. Mistaken identifications in a street identification *can only* be of the police suspect. Nevertheless, in empirical research, Valentine *et al.* (2012) found no consistent differences in outcomes of video lineups and street identifications. This suggests there is no additional disadvantage to an innocent suspect of being the subject of a street identification. However, in that research, all participants were warned that the suspect may or may not have been present. This unbiased warning reduces the number of innocent suspect and foil identifications from lineups (Clark, 2005; Malpass & Devine, 1981) but many participants (25% viewing street identifications; 15% video lineups) did not remember hearing this warning even a few minutes later. The warning is written into Code D, and with the witness seated in the calm of the police station it *should* have been followed prior to all police video lineups. In the heat of the moment, a similar warning is unlikely to be provided

to witnesses prior to a street identification. Thus, the rate of innocent suspect identifications in real police cases may be higher than is suggested from empirical research.

Implications for policy

A street identification may be conducted if a suspect meets the description provided by a witness. Empirical research shows that witnesses often make mistaken identifications from street identifications conducted in ideal viewing conditions within a few minutes of an acted event (e.g., Valentine *et al.*, 2012). Procedural law in England and Wales imposes on the police a duty to conduct a video lineup where a suspect has been identified in a street identification and continues to dispute identity (*R v Forbes* (HL), 2001). Such repeated identification procedures may be common in other jurisdictions.

In the current research, approximately 58% of suspects identified in a street identification were subsequently viewed in a video lineup by the same witness. An innocent suspect may hope that the witness will be unable to identify them from a video lineup, and this will provide exculpatory evidence. This belief has some foundation as in the research reported here no suspect identified in a street identification, but not in a video lineup, was charged. Nevertheless, most witnesses (84%) identified the same suspect in both procedures, consistent with the field (73%; Behrman & Davey, 2001) and the empirical literature, even when the same innocent suspect is present in both procedures (81%; Valentine *et al.*, 2012). In the current research, *all* suspects who were identified in repeated identification procedures were subsequently charged, suggesting that the prosecuting authorities believed there would be a good chance of conviction. As such, the actions of an innocent suspect who believes that their innocence will shine through may inadvertently strengthen the evidence against them. Sentencing data were unavailable, but it would be harder to argue in court against the safety of a video lineup identification in comparison to a street identification. Therefore, an innocent

suspect's interests may not be served by participation in a second identification procedure. However, refusal to cooperate with the police may not assist their case in court.

Based on this research; some policy recommendations can be made. Firstly, it is essential that the street identification procedure should be conducted in a manner designed to maximise fairness in case an innocent suspect is under suspicion. In both studies reported here, all street identifications in which a suspect(s) was identified were planned confrontations. Such a procedure in which a suspect is detained by police officers will inevitably be suggestive. A witness will often be the victim, and be motivated to identify the offender. The witness may incorrectly infer that the police have 'information' pointing towards the suspect's guilt. If the police do have enough evidence to arrest, PACE Code D prohibits the use of a street identification—the witness should view a video lineup instead. There will often however, be a 'grey area' as to whether sufficient evidence exists, particularly when rapid policing decisions are required. Nevertheless, the current research suggests that the interests of a detained suspect pleading innocence might best be served by being included in a video lineup as a first identification procedure rather than a street identification. Indeed, many identification suites in England provide an arrested suspect alternative clothing, so that identifications cannot be made on this basis. One policy recommendation would therefore be that, despite the inevitable delay, if at all possible the suspect should be *offered* such an opportunity, even if they have not been arrested.

Currently, PACE Code D requires that the offender's description *should* be collected prior to an identification procedure. This may provide exculpatory evidence in court if it does not match with the defendant's appearance. In the current research, police officers sometimes reported that due to circumstances beyond anyone's control, no description *could* be collected. In other cases, description collection was possible, but not carried out. From the

data provided, it is unknown whether witnesses were warned that the detained suspect may or may not be the actual culprit. A second recommendation would therefore be that police officer training emphasizes the importance of firstly, collecting a description of the offender, and secondly, providing the witness with the unbiased warning.

Some of the street identification procedures were described as group confrontations, in that members of the group effectively act as foils in a live lineup. However, the group are not foils, if they are in fact all suspects. The inherent suggestiveness of a planned confrontation may be enhanced when the witness is confronted with a choice of suspects, thus increasing misidentification likelihood. Further empirical research is required to examine the safety of this procedure. However, a third recommendation would be that, if possible, group confrontations should be avoided, and the suspects should be separated.

Some jurisdictions have a policy that repeated identification procedures should be avoided (e.g., Attorney General of the State of Wisconsin, 2005). A fourth recommendation is for these guidelines to be adopted elsewhere. The second procedure is, in most cases, unlikely to provide an additional test of the witnesses' memory of the crime. Instead, it is likely to result in a commitment to the original identification decision. Indeed, the presence of a suspect in a video lineup may be interpreted as additional evidence of guilt. Nevertheless, if a second procedure is unavoidable, it is incumbent on the prosecuting authorities, as well as the court, to closely review the circumstances of the first. The first identification will often be the most reliable, as it will be untainted by subsequent events or potential feedback, and will mostly occur shortly after the crime. It is important to determine if for instance, the street identification was suggestive, and weight should be given to whether the recommendations listed in this policy review were applied in a diligent manner.

In summary, the field data described in this paper demonstrate that street identifications are common. Many street identified suspects are subsequently identified by the same witness from a video lineup. We agree with the concerns expressed by other authors as to the inherent suggestiveness of a street identification procedure. Indeed, the empirical literature and data of exonerations demonstrates that witnesses do mistakenly identify suspects in this type of procedure. Nevertheless, we do accept that it is an essential method for the police to use for the successful investigation of many crimes. We have made a number of recommendations as to best practice but we also accept that in the heat of the moment a police officer may not have time to follow these. Therefore, it is of paramount importance that steps are taken to mitigate suggestiveness, and that all details are fully recorded. This will allow the safety of the original suspect identification from a street identification to be fully scrutinised later by those involved in the administration of criminal justice.

References

- Attorney General of the State of Wisconsin (2005). Model policy and procedure for eyewitness identification. Retrieved August 25th, 2013, from <http://www.doj.state.wi.us/sites/default/files/2009-news/eyewitness-public-20091105.pdf>
- Behrman, B.W., & Davey, S.L. (2001). Eyewitness identification in actual criminal cases: An archival analysis. *Law and Human Behavior*, 25, 475-491.
- Blunt, M.R., & McAllister, H.A. (2009). Mug shot exposure effects: Does size matter? *Law and Human Behavior*, 33, 175-182.
- Bogan, P., & Roberts, A. (2011). *Identification: Investigation, Trial and Scientific Evidence*. Bristol: Jordan.

- Brown, E., Deffenbacher, K., & Sturgill, W. (1977). Memory for faces and the circumstances of encounter. *Journal of Applied Psychology*, *62*, 311–318.
- Bruce, V., Henderson, Z., Greenwood, K., Hancock, P., Burton, A. M., & Miller, P. (1999). Verification of face identities from images captured on video. *Journal of Experimental Psychology: Applied*, *5*, 339-360.
- Charman, S.D., & Wells, G.L. (2007). Eyewitness lineups: Is the appearance-change instruction a good idea? *Law and Human Behavior*, *31*, 3-22.
- Clark, S.E. (2005). A re-examination of the effects of biased lineup instructions in eyewitness identification. *Law and Human Behavior*, *29*, 395-424.
- Deffenbacher, K.A., Bornstein, B.H., McGorty, E.K., & Penrod, S.D. (2008). Forgetting the once-seen face: Estimating the strength of an eyewitness's memory representation. *Journal of Experimental Psychology: Applied*, *14*, 139–150.
- Deffenbacher, K.A., Bornstein, B.H., & Penrod, S.D. (2006). Mugshot exposure effects: Retroactive interference, mugshot commitment, source confusion, and unconscious transference. *Law and Human Behavior*, *30*, 287-307.
- Dysart, J.E., & Lindsay, R.C.L. (2007a). Show-up identifications: Suggestive technique or reliable method? In R.C.L. Lindsay, D.R. Ross, J.D. Read and M.P. Toglia (Eds.), *The handbook of eyewitness psychology, Vol. II, Memory for people* (pp. 137–153). Mahwah, NJ: Lawrence Erlbaum.
- Dysart, J.E., & Lindsay, R.C.L. (2007b). The effect of delay on eyewitness identification accuracy: Should we be concerned? In R.C.L. Lindsay, D.R. Ross, J.D. Read and M.P. Toglia (Eds.), *The handbook of eyewitness psychology, Vol. II, Memory for people* (pp. 361–376). Mahwah, NJ: Lawrence Erlbaum.

- Dysart, J., Lindsay, R.C.L., & Dupuis, P.R. (2006). Show-ups: The critical issue of clothing bias. *Applied Cognitive Psychology, 20*, 1009–1023.
- Dysart, J.E., Lindsay, R.C.L., Hammond, R., & Dupuis, P. (2001). Mug shot exposure prior to lineup identification: Interference, transference, and commitment effects. *Journal of Applied Psychology, 86*, 1280–1284.
- Dysart, J., Lindsay, R., MacDonald, T., & Wicke, C. (2002). The intoxicated witness: Effects of alcohol on identification accuracy from show-ups. *Journal of Applied Psychology, 87*, 170-175.
- Flowe, H.D., Mehta, A., & Ebbesen, E.B. (2011). The role of eyewitness identification evidence in felony case processing. *Psychology, Public Policy and Law, 17*, 140-159.
- Garrett, B.L. (2011). *Convicting the Innocent: Where Criminal Prosecutions Go Wrong*. Harvard University Press.
- Godfrey, R.D., & Clark, S.E. (2010). Repeated eyewitness identification procedures: Memory, decision making and probative value. *Law and Human Behavior, 34*, 241–258.
- Gonzales, R., Ellsworth, P., & Pembroke, M. (1993). Response biases in lineups and showups. *Journal of Personality and Social Psychology, 64*, 525-537.
- Goodsell, C.A., Neuschatz, J.S., & Gronlund, S.D. (2009). Effects of mugshot commitment on lineup performance in young and older adults. *Applied Cognitive Psychology, 23*, 788-803.
- Gorenstein, G.W., & Ellsworth, P.C. (1980). Effect of choosing an incorrect photograph on a later identification by an eyewitness. *Journal of Applied Psychology, 65*, 616–622.
- Haw, R.M., Dickinson, J.J., & Meissner, C.A. (2007). The phenomenology of carryover effects between show-up and line-up identification. *Memory, 15(1)*, 117-127.

- Hinz, T., & Pezdek, K. (2001). The effect of exposure to multiple lineups on face identification accuracy. *Law and Human Behavior, 25*, 185–198.
- Home Office (2009). Crime in England and Wales 2008/09, Home Office Statistical Bulletin 11/09. Retrieved April 10th, 2010, from <http://www.homeoffice.gov.uk/rds/pdfs09/hosb1109vol1.pdf>
- Horry, R., Halford, P., Brewer, N., Milne, R., & Bull, R. (in press). Archival analyses of eyewitness identification test outcomes: What can they tell us about eyewitness memory? *Law and Human Behavior*,
- Horry, R., Memon, A., Wright, D.B., & Milne, R. (2012). Predictors of eyewitness identification decisions from video lineups in England: A field study. *Law and Human Behavior, 36*, 257-265.
- Johnson, M.K., Hashtroudi, J., & Lindsay, D.S. (1993). Source Monitoring. *Psychological Bulletin, 114*, 3-28.
- Lindsay, R.C.L., Wallbridge, H., & Drennan, D. (1987). Do the clothes make the man? An exploration of the effect of lineup attire on eyewitness identification accuracy. *Canadian Journal of Behavioural Science, 19*, 463–478.
- Malpass, R.S., & Devine, P.G. (1981). Eyewitness identification: Lineup instructions and the absence of the offender. *Journal of Applied Psychology, 66*, 482-489.
- Memon, A., Havard, C., Clifford, B., Gabbert, F., & Watt, M. (2011). A field evaluation of the VIPER system: A new technique for eliciting eyewitness identification evidence. *Psychology, Crime, & Law, 17*, 711-729.
- Memon, A., Hope, L., Bartlett, J., & Bull, R. (2002). Eyewitness recognition errors: The effects of mugshot viewing and choosing in young and old adults. *Memory & Cognition, 30*, 1219-1227.

- Pezdek, K., & Blandon-Gitlin, I. (2005). When is an intervening line-up most likely to affect eyewitness identification accuracy? *Legal & Criminological Psychology, 10*, 247–263.
- Pike, G., Brace, N., & Kynan, S. (2002). The visual identification of suspects: Procedures and practice. Briefing Note 2/02, London: Home Office. Retrieved April 10th, 2010, from www.homeoffice.gov.uk/rds/pdfs2/brf202.pdf
- Police and Criminal Evidence Act (1984) Codes of Practice, Code D (2011). Retrieved September 5th, 2012, from: <http://www.homeoffice.gov.uk/publications/police/operational-policing/pace-codes/pace-code-d-2011>
- R v Forbes (HL)* (2001). 1 All ER 686.
- Rattner, A. (1988). Convicted but innocent: Wrongful conviction and the criminal justice system. *Law and Human Behavior, 12*, 283–293.
- Stebly, N., Dysart, J., Fulero, S., & Lindsay, R.C.L. (2003). Eyewitness accuracy rates in police showup and lineup presentations: A meta-analytic comparison. *Law and Human Behavior, 27*, 523-540.
- Stebly, N.K., Tix, R.W., & Benson, S.L. (2013). Double exposure: The effects of repeated identification lineups on eyewitness accuracy. *Applied Cognitive Psychology*,
- Tollestrup, P.A., Turtle, J.W., & Yuille, J.C. (1994). Actual victim and witnesses to robbery and fraud: An archival analysis. In D.F. Ross, J.D. Read, and M.P. Toglia (Eds.), *Adult eyewitness testimony: Current trends and developments* (pp. 144 – 160). Cambridge: Cambridge University Press.
- Valentine, T., Davis, J.P., Memon, A., & Roberts, A.J. (2012). Live showups and their influence on a subsequent video lineup. *Applied Cognitive Psychology, 26*, 1-23.

- Valentine, T., Hughes, C., & Munro, R. (2009). Recent developments in eyewitness identification procedures in the United Kingdom. In R. Bull, T. Valentine and T. Williamson (Eds.), *The handbook of psychology of investigative interviewing* (pp. 221-240.) Chichester: Wiley.
- Wells, G.L., Memon, A., & Penrod, S.D. (2006). Eyewitness evidence: Improving its probative value. *Psychological Science in the Public Interest*, 7, 45-75.
- Wells, G.L., Olson, E., & Charman, S. (2002). Eyewitness identification confidence. *Current Directions in Psychological Science*, 11, 151–154
- Wells, G.L., Small, M., Penrod, S., Malpass, R.S., Fulero, S.M., & Brinacombe, C.A.E. (1998). Eyewitness identification procedures: Recommendations for lineups and photospreads. *Law and Human Behavior*, 22, 603-647.
- Wells, G.L., & Turtle, J.W. (1986). Eyewitness identification: The importance of lineup models. *Psychological Bulletin*, 99, 320-329.
- Wolchover, D., & Heaton-Armstrong, A. (2004). Ending the farce of staged street identifications. *Archbold News*, 3, 5-7.
- Wright, D.B., & McDaid, A.T. (1996). Comparing system and estimator variables using data from real lineups. *Applied Cognitive Psychology*, 10, 75-84.
- Yarmey, A.D., Yarmey, M.J., & Yarmey, A.L. (1996). Accuracy of eyewitness identification in showups and lineups. *Law and Human Behavior*, 20, 459–477.

Table 1: The total number of reported offences in Study 1, the number and the percentage of street identifications, mugshot viewings and video lineups conducted per offence, as well as the number and percentage of each procedure resulting in an identification of one or more suspects. The total number of each identification procedure exceeds offence number as multiple witnesses may have participated.

	Total	% of Total Offences	% of Procedures
Total offences reported	696		
Offences for which at least one ID procedure was attempted	219	31.5%	
Street identifications			
Offences for which at least one street ID procedure was attempted	158	22.7%	
Offences for which at least one suspect was identified	23	3.3%	14.6%
Total street identification procedures	163		
Total suspects ID	27		16.6%
Mugshot viewings			
Offences for which at least one mugshot viewing was conducted	78	11.2%	
Offences for which at least one suspect was identified	5	0.7%	6.4%
Total mugshot viewings	101		
Total suspects ID	7		6.9%

Video lineups conducted as a first identification procedure			
Offences for which at least one video lineup was conducted	24	3.4%	
Offences for which at least one suspect was identified	13	1.9%	54.2%
Total video lineups conducted	37		
Total suspects ID	19		51.4%
Video lineups conducted as a second identification procedure			
Offences for which at least one video lineup was conducted	5	0.7%	
Offences for which at least one suspect was identified	3	0.4%	60.0%
Total video lineups conducted	7		
Total suspects ID	5		71.4%
Total suspects identified	52		

Note: The values within Table 1 do not necessarily sum to the overall totals as some suspects were suspected of multiple offences, multiple suspects were suspected for the same offences, and some suspects were identified in multiple procedures by the same or different witnesses (but not necessarily by all witnesses). Five suspects (3 offences) identified in a street identification and two suspects (2 offences) identified from mugshot albums were included in video lineups conducted as a second identification procedure.

Table 2: Final case prosecutions of visually identified suspects in Study 1

	Suspects	% of suspects	Offences	% of offences
Total identified in a street identification only	23		20	
Suspects charged or cautioned	12	52.2%	10	50.0%
Total identified from mugshot viewing only	7		5	
Suspects charged or cautioned	0	0%	0	0%
Total identified from video lineup only	17		13	
Suspects charged or cautioned	14	82.4%	11	86.7%
Total identified from street ID and video lineup	5		3	
Suspects charged or cautioned	5	100%	3	100%
Grand total	52		41	
Suspects charged or cautioned	31	59.6%	24	58.6%

Note: The values within Table 2 do not necessarily sum to the overall totals as a consequence of some suspects being suspected of multiple offences, multiple suspects being suspected for the same offences, some of whom were identified in multiple procedures by the same or

different witnesses. All cases in which a suspect was not charged or cautioned were discontinued.

Table 3: Prosecution rates for the subset of 544 offences in Study 1 as a function of whether at least one suspect was identified in a street identification, a video lineup, both a street identification and a video lineup, or if no suspect had been visually identified.

	Street ID		Video lineup		Street ID and video lineup		No ID procedure		Total cases	
Offences	19		13		2		510		544	
Prosecutions	10	52.6%	10	76.9%	2	100%	35	6.9%	57	10.5%

Prosecutions (charged suspects and those accepting cautions or reprimands). Note: More than one suspect was charged for a number of offences.