

How Police Officers Construct Lineups: A National Survey

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ABSTRACT

In criminal investigations, considerable weight is given to eyewitness identification evidence. In some cases, like assault and robbery, this evidence may be the only kind available. Over the last two decades, considerable research has been aimed at the factors that cause identification errors. However, virtually all of this work has involved undergraduates and naive lay persons as subjects. There is little known on what police officers do in the course of their work. The present research investigates the procedures that police investigators employ when they construct live and photographic lineups. Surveys were sent to 500 U.S. police jurisdictions along with a cover letter requesting that it be completed by the person most experienced in constructing lineups; 220 were returned. On average, the respondents had 12 years experience as police officers and had constructed a mean of 329 lineups (89 live, 240 photographic). For many items, the results were consistent with those of previous laboratory research. For example, the police officers reported giving more attention to upper face features (e.g., hair) in selecting non-suspect lineup members (foils) which is consistent with research on feature saliency. However, other results indicate that the police use different procedures than those recommended in the research literature. For example, the police officers report using similarity as the major basis for selecting the nonsuspects (foils), whereas, research shows that selection of foils based exclusively on suspect appearance can produce biased lineups. In addition, there is considerable research showing that sequential lineups are more fair than simultaneous lineups, yet only 40% of the police investigators reported having used the sequential technique. These and other findings provide direction and implications for research opportunities. It is concluded that systematic investigation of actual police procedures is a more direct approach of studying ways to decrease identification errors.

INTRODUCTION

In criminal investigations and court proceedings, considerable weight is given to eyewitness identification evidence. In some cases, like assault and robbery, it may be the only evidence available. During the last two decades, a substantial amount of research has been directed at determining the factors that can cause identification errors, including the influence of viewing conditions, intervening events, facial attributes, and witness characteristics (e.g., see Laughery and Wogalter, 1989, for a review). While there has been some research on the behaviors and strategies of persons in composing and carrying out identification procedures (e.g., instructions given to witnesses), most of the research is based on applications of theory derived from social psychology and human memory research, case law rulings, and researchers' intuitions. In addition, virtually all of the research has involved undergraduate students and naive lay persons as subjects. Very little research has been directed at the persons whose work involves real crimes, real witnesses, and real suspects, namely, police investigators. These individuals, and the methods they use in criminal investigations, could affect impact the lives of many people. Therefore, it is important to know what the police do in performing eyewitness identification procedures and how they relate to laboratory research findings on the topic.

The present research addresses one aspect of eyewitness identification investigations, in particular, the procedures that U.S. police investigators employ when they construct live (corporeal) and photographic lineups. The study provides a description of the strategies and the behavior of professionals involved in actual eyewitness identification tasks.

METHOD

Survey Instrument and Procedure

A three-page survey was developed and aimed to police officers who carry out lineup identification procedures.

The survey contained questions on the methods that they use in constructing lineups and presenting them to eyewitnesses, as well as, items assessing the extent of their experience using various lineup-related procedures. Many of the survey items were worded as open-ended questions to avoid suggesting or influencing respondents' answers.

Participants

Surveys were sent by mail to the highest ranking police officer (e.g., chief of police) of 500 U.S. jurisdictions using an address list from the National Police Chiefs and Sheriffs Information Bureau (1991). Distribution of the survey was based, in part, on population size of municipal districts according to the census lists of a 1990 Almanac. More specifically, the number of surveys distributed, the jurisdiction category, and number returned were: 100 to the police departments in the most populated cities in the U.S. (76 returned); 175 to the police departments in a random sample of U.S. cities and towns with populations from rank 101 to a population of 1,000 (43 returned); 100 to the police departments of the most populated U.S. counties (50 returned); 75 to police departments in a random sample of all U.S. counties beyond rank 100 (20 returned); and 50 to all U.S. state police departments (31 returned). An enclosed cover letter asked the recipient to forward the survey to the most experienced officer in constructing lineups within the jurisdiction. The officer was requested to complete the survey and to return it to the first author in an accompanying envelope.

RESULTS

A total of 220 police officers of different jurisdictions returned the survey. The most populated jurisdictions produced the greatest return rates. For most items, the responses did not differ between jurisdictions. Therefore, only those items that showed statistically reliable differences

among jurisdictional categories (according to between-groups analyses of variance) are described with a specific breakdown by police jurisdiction.

Experience

The responding investigators had an average of 12 years experience as police officers. They reported that in their total experience they had constructed an average of 329 lineups (89 live, 240 photographic), and in the last 12 months, had constructed 48 lineups (9 live, 39 photographic). While most of the lineups reported by the police officers are photographic, those from the large-population cities constructed more live lineups (in absolute number and proportionately) in the last 12 months (21 live, 66 photographic) than did the police officers from the other jurisdictions: random city (1 live, 10 photographic), big county (8 live, 55 photographic), random county (1 live, 9 photographic), and state police (0 live, 11 photographic).

The officers reported that they learned to construct lineups from: another officer in their station or precinct (74%), court rulings and case law (54%), course work or professional instruction (42%), general written recommendations or guidelines (31%), specific rules and regulations (18%), and other sources (15%).

Stimulus Sources

Asked where they find the individuals to serve as the non-suspect members (i.e., foils) of live lineups, across all jurisdictions the responses were: jail (79%), other police officers (60%), other police personnel (32%), and public citizens (37%). Among the different jurisdictions, the officers from the state, random city, and random county police departments more frequently reported using public citizens than the police officers from the large cities and counties. Moreover, the state police were the least likely to report that they used persons from jail as a source of non-suspects. However, as indicated in the previous section, the use of live lineups (at least in the last 12 months) by the state, random city and random county police was relatively infrequent.

Asked from what sources they obtain non-suspect pictures for photographic lineups, the overall responses were: bureau files (95%), driver licenses (24%), yearbooks (12%) and as well as other sources (44%). Photographs of police suspects were taken from similar origins.

Lineup Formation and Presentation

In forming photographic lineups, the police officers report looking through an average of 106 faces from which they select the non-suspects. The mean size of the photographic lineups is slightly larger (6.5) than that of live lineups (6.1). A comparison using the data of police officers who construct both kinds of lineups showed that the lineup size difference is statistically significant, $t(138) = 2.73$, $p < .01$. Most police officers report that they usually place the suspect in the middle of both live (87%) and photographic lineups (81%), but approximately one-half (47%) of those who construct live lineups said that they allow suspects to choose their location. Most (80%) report that they use a two-row layout of pictures in photographic lineups.

Forty percent of respondents report having used sequential lineups—a procedure in which photographs are

presented one at a time rather than simultaneously. The average number of sequential lineups reported (total experience as a police officer) is 32.7, which is slightly less than 10% of all lineups they reported in an earlier question (i.e., 90% of all lineups involve simultaneous presentation). Only 16% percent say they have used video lineups, with large city and large county police officers more often stating that they have used video than those from the other jurisdictions.

In an open-ended question, police officers were asked how they decide which live individuals or photographs to use as foils. Eighty-three percent stated that they base the decision on similarity to the suspect. Only 9% report that they based the selection on the verbal description given by the eyewitness. The most frequent face/body characteristics mentioned as affecting their decisions of which foils to include were (in order from most frequently reported): hair (50%), race/ethnic group (37%), age (37%), height/weight/build (33%), facial hair (29%), skin complexion (27%), photographic quality (19%), general facial features (18%), eyes (9%), eye glasses (9%), face shape (6%), and clothing (6%). Items mentioned less than one percent (or not at all) included: forehead, eyebrows, nose, cheeks, lips, chin, neck, pose, and eye-gaze.

Another item on the survey explicitly requested a series of 22 9-point ratings of various face characteristics based on how much they use them when assembling lineups. The scale ranged from 0 ("I do not use this characteristic at all in selecting faces") to 8 ("I select faces based entirely on this characteristic") with the middle anchor (4) labeled to a moderate degree on this dimension. The highest mean ratings were: race/ethnic group (7.6), facial hair (7.0), hair color (6.5), photographic quality (6.4), eye glasses (6.4), orientation/pose (6.0), hair length (5.9), hair type/style (5.8), skin complexion (5.7), and overall shape of face (5.1). Other face features that generally characterize the lower parts of the faces received lower ratings: nose (4.4), lips (4.2), chin (4.0), eyes (4.0), cheeks (3.8), forehead (3.7), hair part (3.7), eyebrows (3.4), neck (3.4), and clothing (2.8).

When asked what procedures they use (if any) when the suspect has distinctive facial markings (e.g., scars or birthmarks), 77% reported that they try to match the marks to other lineup members, 23% said that they try to add similar marks to other lineup members, and 18% said that they try to cover up the marks. Thirty percent said that they ignore the marks entirely and do not do anything with regard to facial markings.

Fairness Evaluations

When asked how they know that a lineup that they have made is fair, 94% say that they use their own judgment, 77% say that they get an opinion from a fellow officer, 51% say they ask a prosecuting attorney, and only 15% say they ask a defense attorney. Twenty-two percent say that they find out whether the lineups are fair during preliminary hearings or depositions, and 23% find out at trial.

Asked how often the suspect's (defense) attorney is present during the procedures associated with live lineups, 36% say when the lineups are formed and 61% say when witnesses examine them. However, only 4% and 8% report that the defense attorney is present when photographic lineups are formed and when the witnesses examine them, respectively. Forty-nine percent say that the suspect's

attorney is usually not present at any part of the lineup formation and witness selection procedures.

Instructions to Witnesses

For an open-ended question asking what instructions they give to witnesses before or during the time the lineup is presented, 52% report that they tell the witness that they do not have to pick anyone, and 26% tell the witness to select someone only if they are sure, 20% warn that some of the facial features may change over time, and 14% admonish that photographs may have quality problems. Two percent ask the witness to pick the closest person to the assailant (if they do not initially choose someone as the culprit). In another question related to witness instructions, the police officers were specifically asked whether they give witnesses the option of not selecting any face from the lineup, and 95% reported that they do. Eighty-six percent said that they ask for a level of confidence from witnesses (regardless of whether or not they make a choice).

Historical Records

After lineup are used to test eyewitnesses, 98% of the police officers said that a file or record is kept of it. Seventy-three percent said that a photographic account of the lineup is kept with the record. Sixty-seven percent say that the file includes a written report.

Finally, officers were asked if any of their lineups have ever been challenged in court or in preliminary hearings. Fifty-two percent responded affirmatively. In an open-ended question, they were asked what happened in these cases. Twenty-five percent reported that the challenge was based on similarity issues. Thirty-five percent said that their lineups have survived defense challenges by being ruled fair.

DISCUSSION

The present study surveyed the methods that highly experienced police officers use in constructing lineups and testing eyewitnesses. Prior to this study, there has been little descriptive research on the techniques used by these authorities. Instead, most research on lineups has been laboratory-based experiments using individuals relatively naive on the topic, mainly college undergraduates and laypersons. Hence, the present study begins to fill a gap in the research literature on eyewitness identification, centering its focus mainly on lineup-related procedures.

Most of the findings are purely descriptive, and we do not attempt to discuss them all in this section. Rather, we mainly discuss those results that relate to a large bodies of research on eyewitness identification.

Forty-four percent of the surveys sent to police departments of various U.S. jurisdictions were returned. We requested that it be completed by the police investigator most experienced in constructing and administering lineups to eyewitnesses. The experience levels of the individuals who returned the survey indicate that our request was fulfilled. The respondents were highly experienced in terms of years on the job and the number of lineups constructed.

Proportionately, most of the lineups constructed are photographic as opposed to live lineups. This finding is not entirely unexpected because it is much more convenient in

terms of costs (effort, time, and possibly money) to make photographic lineups that it is to make live lineups. For live lineups, greater costs are involved in finding and assembling an adequate group of live non-suspect foils. Furthermore, the exhibition of live lineups is much less controlled and can be biased by the subtle exhibited behaviors of its members (Koehnken, Malpass, and Wogalter, in press). However, photographic lineups often lack that image veracity of live lineups (e.g., Egan, Pittner, and Goldstein, 1977; Shepherd, Ellis, and Davies, 1982). Video lineups is another method that could alleviate some of these problems (Cutler and Fisher, 1990). With video, the fidelity of live lineups can be maintained and the potentially biasing behaviors of live lineup members can be edited. Nevertheless, the data collected in this study indicates that relatively few police official currently use video lineups. Over the last several years, quality low-cost video has become readily available. We encourage police officers and the courts to make greater use of this technology as it has several advantages over the two more conventional methods.

In addition, over the past decade another lineup technique has been promulgated in the research literature that has not found substantial use by police departments. A considerable body of research has accumulated indicating that sequential lineups are more fair than simultaneous lineups (Lindsay and Wells, 1985; Koehnken et al., in press). In sequential lineups, each individual member is shown one at a time as opposed to a simultaneous array. Increased fairness of the sequential method has been attributed primarily to better control of false positive responses by witnesses. Thus, while there is considerable research support for the fairness of sequential lineups, its use in applied settings has not been overwhelming—it is mostly being used by police from the larger-population jurisdictions. The relatively slow incorporation of this method by police may in part be due to costs of training police on newly developed methodologies, the high likelihood that most police do not review the academic literature on the subject, and an uncertainty that the courts might not accept a different technique. However, by combining sequential lineups and video media, we suggest that current methods of presenting lineups to witnesses would be improved compared to the more conventional methods.

The survey showed other differences between police-reported procedures and the methods advocated in the research literature. One of these points of departure concerns the decision criteria for selecting foils for inclusion into lineups. Conventional wisdom has been that foil selection should be based on similarity to the suspect to prevent the suspect from unduly standing out in the lineup. The police officers' reports reflected this belief. The vast majority of the respondents stated that they make their lineup-inclusion decisions based on suspect-to-foil similarity. However, recent scholarly reports on lineup formation indicate that there are problems with the similarity criterion. Some of the difficulties have been articulated by Luus and Wells (1991), and they suggest that selection of non-suspects for lineups should be based on witness' verbal descriptions of the assailant rather than foil-to-suspect similarity. This latter suggestion has been questioned (e.g., Wogalter, Marwitz, and Leonard, 1992; Navon, 1990), in part, because witness' verbal descriptions tend to be incomplete and general (e.g., Laughery, Duval, and Wogalter, 1986; Pigott, Brigham, and Bothwell, 1990). Exclusive use of verbal descriptions to select foils could lead to situations where the suspect is highly salient in the lineup even though the non-suspect

members generally fit the verbal description. Nevertheless, Luus and Wells' (1991) recommendation stems from at least two flaws in the similarity criterion. One is, how much similarity is adequate? The other is, does greater similarity produce fairer lineups? These issues are discussed in more detail elsewhere (e.g., Koehnken et al., in press; Luus and Wells, 1991; Navon, 1992), but in short, the second question has been addressed in recent research by Wogalter et al. (1992) and Wogalter, Van't Slot and Kalsher (1991) which indicates that selection of foils based exclusively around the appearance of the suspect can create a form of lineup bias. This and other research (Laughery, Jensen, and Wogalter, 1988; Marwitz and Wogalter, 1988; Wogalter and Jensen, 1986) suggests that extreme levels of foil-to-target similarity makes the suspect stand out from the lineup because the suspect has more features in common than any of the foils have to each other. The degree of similarity can serve as a cue to the witness who the police suspect is. The implication is that by using suspect-to-foil similarity in forming lineups, police officers may be constructing lineups that are less fair than they think they are. This brings up the other issue mentioned above: how much similarity is adequate? The answer to this question has not yet been determined by empirical research, but it appears that neither minimal or maximal levels of similarity are sufficient. One possible approach is to use a combination of similarity and witness' verbal description to form the lineups. At this point, we recommend that police investigators become aware of these issues.

The results also indicate that most of the decision making about fairness is made by the officer constructing the lineup itself. This is not a problem if the officer is indeed accurate in determining the lineup's fairness. After seeing their previously-constructed lineups be judged adequate in court, the officer is likely to have a high degree of confidence about the quality of their lineups. Recent research by Brigham and Brandt (1992) indicates that police officers' judgments of lineup fairness do relate to other measures of fairness. However, without additional input, such as judgments from other persons, the officer can not be certain about the fairness of a particular lineup they have constructed. The major problem is those instances where a witness is shown a lineup that is later determined to be unfair. That earlier presentation of an unfair lineup not only could invalidate any accurate identification the witness may have made, but also could adversely affect the witness's memory and increase the likelihood that they will make a biased judgment in any subsequent (better-constructed) lineup. Thus, whether police investigators can accurately assess the quality of their own lineups is an empirical question that is only beginning to be addressed (e.g., Wogalter et al., 1991; Brigham and Brandt, 1992). However, it is likely that the police, like most people, will be overconfident of the quality of their work, and thus, their judgments of lineup fairness may not be indicative of actual fairness.

While many officers report that they do get opinions about the fairness of their lineups from fellow officers and prosecuting attorneys, these individuals are not necessarily impartial. A better set of evaluations would come from opposing (e.g., defense attorneys) or neutral parties (e.g., mock witnesses). The methods of employing mock witnesses to evaluate the qualities of lineups are described elsewhere (e.g., Brigham and Brandt, 1992; Brigham, Ready, and Spier, 1990; Doob and Kirschenbaum, 1973; Malpass, 1981; Malpass and Devine, 1983; Wells, Leippe,

and Ostrom, 1979). The point is that an error in determining fairness could have pernicious effects on many individuals, as well as, the case itself. Therefore, it makes sense to take steps to ensure that the first lineup that a witness sees is fair, since it is often too late to find out this information at trial.

While the survey points out several inconsistencies between the findings of empirical laboratory research and the methods used by police, there were also several consistencies. One of these is that the police officers tend to pay greater attention to overall shape and top of the head features (e.g., hair) in selecting faces to be used as non-suspect (foils). The use of these features as opposed to those generally ascribed to the lower parts of faces is consistent with a large body of research on feature salience (e.g., see Shepherd, Davies, and Ellis, 1981, for a review).

In addition, research (e.g., Paley and Geiselman, 1989; Malpass and Devine, 1981) shows that the form of the instructions given to witnesses can unduly influence them to choose someone. The research literature advocates that witnesses be given the option of not choosing to decrease the likelihood of false positive responses. In accord with this, most of the officers report that they give witnesses the option of not making a choice. At the same time, few police officers report that they tell witnesses that the facial features may change over time, or that photographic quality may be a problem. Research has shown that relatively small changes in appearance from first viewing and subsequent testing can dramatically decrease recognition performance in laboratory based experiments (e.g., Bruce, 1982; Laughery and Wogalter, 1989; Wogalter and Laughery, 1987; Wogalter, Cayard, and Jarrard, 1992). These latter effects do not appear to be adequately addressed in witness instructions:

The findings of the present study provide direction for future forensic Human Factors research. A whole host of additional data on lineups as well as other procedures that police officers use in eyewitness identification investigations could be collected in subsequent research. Another possible opportunity is training. Human Factors Specialists are intimately involved in the specialized education of high technology skills (e.g., pilots, nuclear power operators, and computer users). The survey indicates that most police officers who perform lineup-related activities do not receive formal training, and as discussed above, many are not making use of certain procedures that are likely to be better than conventional police methods. Effective training and communication of these methods could improve existing lineup construction practices.

Because the data collected in this study originated from a survey, readers should be reminded of this technique's limitation. The major limitation is that data are self-reports. This means that the results may or may not reflect the behaviors and decision-making that occurs when lineups are formed and presented to witnesses. In other words, we did not directly observe police officers in precinct stations to measure what they were doing. However, from interest expressed by the police officers completing the survey, we believe that the officers responded to the questions with care and veracity.

Lastly, it is important to reiterate that there are only a few eyewitness identification studies in the research literature that have studied police officers. These individuals regularly work with real crimes, witnesses, and suspects. The lack of

research on police-performed identification procedures points to a major gap in the empirical literature. Systematic research of actual police procedures is a more direct approach to improving identification procedures, and could make the line from research to application shorter.

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