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Eyewitness identification procedures for multiple perpetrator crimes: a survey of police in Sweden, Belgium, and the Netherlands

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ABSTRACT

A considerable proportion of crimes involve multiple perpetrators. Yet, little is known about how police officers construct, administer, and record eyewitness identification procedures for multiple suspects. An online survey of law enforcement agents in Sweden, Belgium, and the Netherlands ($N = 51$) was conducted to obtain an initial understanding of police perceptions of prevalence and characteristics of multiple perpetrator crimes, and to examine identification procedure practices given the little to no guidance provided for police. Practice converged when it came to the use of sequential, photographic lineups, but diverged between and within countries on whether or not suspects of multiple perpetrator crimes should be placed in separate lineups. Results specifically highlight contextual cuing as one critical area for future research in identification for multiple perpetrator crimes (i.e. placing multiple suspects in the same lineup or asking eyewitnesses to look for a specific suspect).

Multiple perpetrator crimes are prevalent worldwide, and differences between single versus multiple perpetrator crimes affect the investigation, prosecution and sentencing of suspects (Hobson, Wilcock, & Valentine, 2012; Juodis, Woodworth, Porter, & Ten Brinke, 2009; Statistics Canada, 2016). To aid the prosecution of suspects, an eyewitness must not only recognize a suspect from a lineup as one of the perpetrators, but also discriminate which perpetrator (i.e. *the one with the red shirt*), and which actions (i.e. *stole my wallet*) relates to the identified suspect. An eyewitness' ability to do so accurately is vulnerable to any choices made by police in constructing and administering lineups. While this is true for any crime, multiple perpetrator crimes – involving multiple suspects, and multiple lineups – inevitably entail additional measures for lineup construction, presentation, and recording identification decisions.

Indeed, nearly two-thirds of surveyed U.K. police report difficulties for administrators and confusion for eyewitnesses during multiple suspect identification procedures (Hobson et al., 2012).

Despite the extensive collection of evidence-based recommendations for identification procedures in general (National Research Council, 2014; Wells et al., 1998), there is currently little guidance on how police should conduct lineups specifically in the context of multiple perpetrator crimes. This is unsurprising given the lack of research to support evidence-based recommendations for multiple suspect identifications. Although some research has attempted to alter traditional lineup formats to compensate for impaired identification performance by eyewitnesses to multiple perpetrator crimes, there is little evidence that such formats are particularly beneficial (e.g. Hobson & Wilcock, 2011; Wells & Pozzulo, 2006). Knowledge of current police practice for such identification procedures could not only inspire new research ideas relevant for policy, but also help researchers to define the control groups against which these new methodologies can be tested. However, because surveys on police practice typically have not distinguished between single and multiple perpetrator crimes (but see Hobson et al., 2012), little is known about how police conduct such identification procedures in practice. We attempt to fill this gap by means of an exploratory survey of police practice for identifications in the context of multiple perpetrator crimes in three European countries: Sweden, Belgium, and the Netherlands.

Multiple suspect identification in the U.K.

What we do know about the administration of lineups for multiple perpetrator crimes comes from Hobson et al.'s (2012) survey of U.K. police. The U.K.'s Police and Criminal Evidence Act (PACE, 1984), specifies that multiple suspects of a single perpetrator crime should appear in separate lineups (Code D, p. 181). For crimes with multiple perpetrators, two suspects of similar appearance can appear in the same lineup. In the case of multiple lineups, an eyewitness should make a decision on the first lineup before viewing any subsequent one. According to Hobson et al.'s survey, all 29 responding law enforcement agencies in England, Wales, and Northern Ireland create individual lineups for each suspect of a multiple perpetrator crime. However, officers also frequently reported difficulties in implementing such lineups, including having to adapt instructions and receiving complaints of 'blindness' from eyewitnesses viewing too many faces. Officers also reported that eyewitnesses sometimes identified multiple individuals from a lineup in which there was only one suspect. When this happened, some officers insisted that the eyewitness could no longer view the following lineups, but most reported that they would proceed with presenting the remaining lineups. Neither current police protocols nor research have addressed this concern.

Although this survey was an important first step to understanding police practice for multiple perpetrator identifications, its results are limited to the U.K. Furthermore, the survey did not address some of the concerns that are unique to multiple perpetrator identification procedures. For example, if and when should multiple identification procedures be employed – as suspects become available, or all at the same time? Who constructs multiple lineups – the same or different administrators? And how do officers perceive witnesses who can identify some, but not all, of the presented suspects?

Multiple suspect identification in Sweden, Belgium, and the Netherlands

For the current survey, we added new items to Hobson et al.'s survey to address the hitherto unanswered questions outlined above and distributed it to police agencies in Sweden, Belgium, and the Netherlands. Below, we briefly outline existing identification policies in these countries.

Sweden

A report of updated guidelines (*Vittneskonfrontation*), published by the Swedish National Police board (Rikspolisstyrelsen, 2005), outlines recommended procedures for photographic, live, and video confrontations. For example, lineups should include one suspect with six to 10 fillers matching the perpetrator description. Additionally, sequential lineup presentation is preferred over simultaneous presentation; eyewitnesses should be instructed that the perpetrator may not be present in the lineup and reminded that they can reject the lineup; they should view all lineup members, even when the eyewitness had already made an identification decision. If the eyewitness does not make a decision after viewing each lineup member twice, the identification procedure is terminated. Specifically for multiple suspects, the report notes: 'If there is more than one suspect, it should be arranged so that there is one confrontation-group for each suspect', (Section 11.3.3, p. 17).

Belgium

We found no national regulations for Belgium. Circular letters and informal guidelines specific to police forces are not publically available.

The Netherlands

Dutch police that want to conduct identification procedures are trained in a certification program. A lineup manual (van Amelsvoort, 2018) provides detailed explanations to support the construction and administration of showups and live, photographic, and video lineups. Police officers generally use a centralized national computer program on which they can construct photographic lineups, administer a sequential lineup with automatically-randomized positions, provide standardized instructions, and record all decisions. Lineups must have one suspect with five to 11 fillers and witnesses view each lineup member once. For multiple perpetrator crimes, the manual contains contradictory recommendations depending upon the chosen presentation format. Specifically, multiple suspects in live lineups should be presented in separate lineups (p. 173, 189), while photographic and video lineups should combine and mix the lineups so that witnesses view only one lineup (p. 251, 221).

The current survey

Given the minimal instructions provided to police in the event of multiple suspect identifications, we were interested in how police perceive the logistics and quality of identification decisions in cases with multiple suspect identification procedures. We aimed to (1) understand police perception of prevalence and characteristics of multiple perpetrator crimes, (2) discern how lineup administrators conduct identification procedures for multiple perpetrator crimes, and (3) learn how administrators and

eyewitnesses experience multiple suspect identifications. It was not the intent to represent how each country, as a whole, conducts multiple suspect lineups. Rather, these data should provide an initial image of current practice among a sample of police officers and elucidate important unresolved issues or questions for future research and practice.

Methods

Survey and survey development

We retained eight of Hobson et al.'s (2012) survey items in their original format, adapted two items to form open questions, and added 11 items. The survey was translated to Swedish and Dutch and distributed in three countries accessible to the authors through police contacts: Sweden, Belgium, and the Netherlands. In a pilot phase, police in the three target countries received the English and translated version of the survey and provided feedback on ease of understanding, the accuracy of terminology in the translations, and the appropriateness and relevance of the procedures described.

The complete survey can be found in Table 1. The items covered five main sections were: (1) *General Information* (demographics); (2) *Criminal Offenses* (percentage and characteristics of multiple perpetrator crimes encountered in the last 12 months); (3) *Current Procedures for Multiple Identifications* (known guidelines and implementation of identification procedures for multiple perpetrators); (4) *Problems with Current Practice* (difficulties encountered during multiple suspect identification procedures); (5) *Perceived Utility of Eyewitnesses of Multiple Perpetrator Crimes* (police perceptions of the performance of eyewitnesses of multiple perpetrator crimes). Finally, there was space at the end for respondents' comments on current procedures.

Recruitment

We used the snowball sampling method of recruitment: Initial police contacts in each country recruited colleagues and distributed the online survey link (Qualtrics, Provo, UT, 2016) in a way that best suited the structure of police forces in that country. Police officers received the survey link via an e-mail, which included a short explanation of the purpose and contents of the survey. Respondents to the survey provided informed consent, and completed the survey questions in their native language.[1] Responses were translated to English for analyses.

Results

We sought to describe the practices of the sampled identification administrators within and across countries, but did not conduct statistical comparisons between countries. Due to attrition and omission of questions, numbers of respondents differ. The number of respondents (*n*) are reported along with descriptives and all percentages represent the proportion responses who answered the question (vs. all respondents). A supplementary table provides an overview of responses overall and by country.

Table 1. Questions for police on multiple perpetrator crimes and eyewitness identification procedures.

1. General Information*
   1. Gender (male/female/other)
   2. Age?
   3. How many years of experience in conducting eyewitness identification procedures do you have?
   4. What is your job role?
   5. Jurisdiction?
2. The Criminal Offences*
   1. Of the crimes have you dealt in the last 12 months, what proportion involved multiple suspect showings? (0–100%)
   2. How many suspects are typically involved in the multiple perpetrator cases you have dealt with? (Please select the box for the category that applies most often) (2–10)
   3. In the past 12 months, what types of crimes have you dealt with that typically involve multiple perpetrators? (robbery/burglary/assault/sexual assault/homicide/other)
3. Current Procedures
*Scenario 1***
   4a. Choose the option that resembles what you would do in this case (A1 or A2/A1 and A2 separately/A1 and A2 together)
   4b. In your work with multiple perpetrator crimes, Scenario 1 occurs: (never/sometimes/often/always)
*Scenario 2***
   5a. Choose the option that resembles what you would do in this case (A or B/A and B separately/A and B together)
   5b. In your work with multiple perpetrator crimes, Scenario 2 occurs: (never/sometimes/often/always)
   6. In what manner do you present the parades to witnesses in a multiple suspect identification? Select all the options that apply: (Lineups: live/photo/video; Format: simultaneous/sequential/other; Show-ups: live/photo/video)
   7. Are there any procedural requirements or guidelines in place for multiple suspect identifications?
   8. How do you organize the identification presentations for eyewitnesses in the case of a multiple-perpetrator crime? (witness views when: all lineups available/as lineups become available/other)
   9*. What instructions do you give to a witness for multiple perpetrator identifications?
   10*. Do you ask the witness to look for a specific suspect?
   11*. Do you ask the witness to describe the role of the suspect they are identifying?
   12. Do you record all eyewitness identification decisions in a crime with multiple perpetrators?
   13. Do you record confidence for all suspect identifications for multiple suspect identifications?
   14. Who is responsible for constructing the lineups? Is the same person responsible for all suspect lineups in a given case involving multiple perpetrators?
4. Issues with Current Practice*
   15. Do you, as someone who administers identifications, experience any problems with multiple suspect identifications?
   16. Do you think witnesses experience any problems with multiple suspect identifications?
5. Perceptions of Eyewitnesses
   17. How do you think eyewitnesses of a multiple perpetrator crime perform in identifications compared to eyewitnesses of a single perpetrator crime? Generally eyewitnesses to crimes committed by multiple perpetrators are _____ compared with eyewitnesses to crimes committed by a single perpetrator: (worse/as good as/better)
   18. In your opinion, how useful is a witness for you if they identify one, but not all of the suspects presented?
Your suggestions*
   19. Do you have any ideas about how multiple suspect identifications could be improved from the point of view of the police?

*Indicates original survey question from Hobson et al. (2012).
**See Figure 3 for a graphic illustration of the scenarios.

General information

We received responses from 71 police officers; however, 21 did not continue past the general information section and were excluded from all analyses. This left us with an initial sample of 50 respondents from Sweden ($n = 17$), Belgium ($n = 20$), and the Netherlands ($n = 13$) with experience administering identification procedures.[2] Survey respondents provided general information about age, experience administering lineups, job role, gender, and jurisdiction of police work. While a majority of respondents across countries reported being an investigator, other job roles included identification officer, detective, analyst, and intelligence officer. Table 2 displays the descriptives for gender, age and experience in identification administration.[3]

Table 2. Range of age and job experience (mean) and status of the certification requirement for police respondents on multiple perpetrator identification survey.

	Gender	Age	Lineup experience (years)
Sweden	12 men, 4 women	27–61 ($M = 38.64$)	1–25 ($M = 6.47$)
Belgium	16 men, 4 women	27–55 ($M = 42.65$)	0.5–30 ($M = 15.05$)
Netherlands	3 men, 10 women	36–61 ($M = 45.50$)	1–30 ($M = 7.50$)

Note: $n = 50$.

The criminal offences

Across countries, respondents on average estimated that 34% of cases encountered in the last 12 months involved multiple perpetrators, with estimates varying between 0% and 90% (see Figure 1). Respondents (94%, $n = 48$) overwhelmingly indicated that such crimes typically involved 2–3 perpetrators. Figure 2 shows estimated frequencies of cases by crime category. The most common multiple perpetrator crime was burglary, followed by assault, and robbery. *Other* responses included theft, attempted murder, cannabis plantation cultivation, public violence, and trafficking.
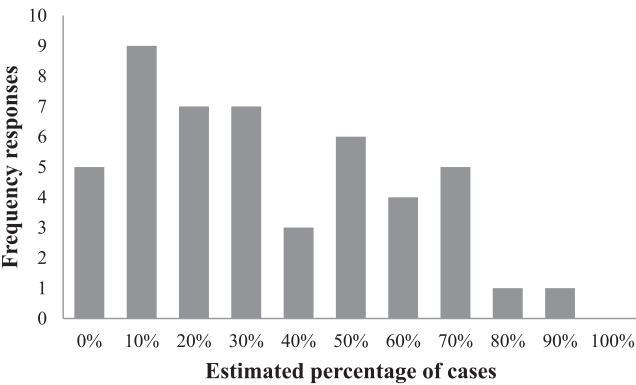

Figure 1. Estimated percentage of cases that included identification procedures with multiple suspects in the past 12 months ($n = 48$).

Figure 2. Estimated number of multiple perpetrator crime cases by category in the last 12 months ($n = 48$ respondents, total number of estimated crimes is 825).

Current procedures for multiple identifications

Respondents were prompted to describe current procedures for constructing, administering, and recording eyewitness identification decisions for multiple perpetrator crimes. Many of these were open questions (see Table 1), and many officers provided information about lineup practice in general. These responses are included when relevant to the current research and quantitative responses are available in supplementary materials.

Guidelines for administration

Of 28 respondents, nine provided references to the specific guidelines (i.e. Rikspolisstyrelsen, 2005; van Amelsvoort, 2018). Fifteen respondents provided answers that demonstrated knowledge of lineup construction and administration rules (e.g. number of fillers, suspect placement, blind administration), though only five of these mentioned rules specific to multiple suspect identification. One Belgian respondent reported there are no procedural guidelines for multiple suspect identifications, while another specified that there were no legal requirements, but that lineups were retrospectively assessed for probative value by a fact-judge. One Swedish respondent noted that guidelines were 'constantly updated and it is unclear what applies'.

Lineup construction

While Dutch respondents unanimously reported that the same person was responsible for all lineups, Swedish and Belgian respondents reported diverging answers. For example, one Swedish officer stated that it was preferred for the same person to administer all confrontations, but another reported that there were not clear guidelines on this.

Although there were no open questions specifically about the nominal size of lineups, one Swedish respondent reported that a lineup required seven fillers, thus the same would apply for multiple suspects. One Dutch respondent similarly specified that the lineup for each suspect should use five to 11 fillers (in accordance with their manual). Another Dutch respondent qualified that, in the case of three suspects, the minimum number of fillers (five) should be used in order to reduce the number of faces viewed by the witness.

Lineup presentation

Several respondents spontaneously provided information on whether multiple suspects should appear in separate or combined lineups. Consistent with Swedish guidelines, two Swedish and one Belgian respondent reported that suspects should never appear in the same lineup. By contrast, and consistent with Dutch guidelines, one Belgian and two Dutch respondents reported that multiple suspects should not appear in the same *live* lineup, but should be presented together in the *photographic* lineups.

Scenarios for multiple suspect lineups. To distinguish between situations in which there are multiple suspects for a single perpetrator vs. multiple suspects related to multiple perpetrators, the survey included two scenarios (see Figure 3 for illustration). The scenarios were described as follows:
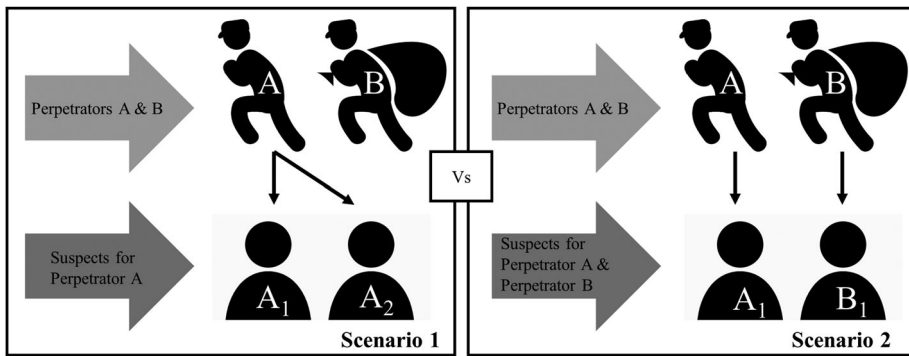
Figure 3. Illustration depicting Scenario 1 in which there is one perpetrator with multiple suspects and Scenario 2 in which there are multiple perpetrators with corresponding individual suspects. Scenarios are as follows. Scenario 1: *Two men (A and B) robbed a bank. An employee witnessed the robbery. Two suspects are arrested, both suspected for being perpetrator A. The suspects are called suspect A1 and suspect A2. You are preparing an identification lineup. Choose the option that resembles what you would do in this case.* Scenario 2: *Two men (A and B) robbed a bank. An employee witnessed the robbery. Two suspects are arrested, one suspect for perpetrator A and one suspect for perpetrator B. The suspects are called suspect A1 and suspect B1. You are preparing an identification lineup. Choose the option that resembles what you would do in this case.*

> Scenario 1: Two men (A and B) robbed a bank. An employee witnessed the robbery. Two sus-pects are arrested, both suspected for being perpetrator A. The suspects are called suspect A1 and suspect A2. You are preparing an identification lineup.

> Scenario 2: Two men (A and B) robbed a bank. An employee witnessed the robbery. Two sus-pects are arrested, one suspect for perpetrator A and one suspect for perpetrator B. The sus-pects are called suspect A1 and suspect B1. You are preparing an identification lineup.

In both cases, officers were asked how they would construct lineups for multiple sus-pects with respect to three options[4]:

> Option i: Eyewitness sees one line up, only for Suspect 1 or only for Suspect 2, <u>not</u> both.

> Option ii: Eyewitness sees two lineups, one for Suspect 1 and one for Suspect 2

> Option iii: Eyewitness sees one lineup, with both Suspects 1 and 2 in the same lineup

For Scenario 1, a majority of respondents (54%, $n = 48$) chose option *ii*, indicating that two suspects for the same perpetrator would be placed in separate lineups (see Figure 4). Forty percent ($n = 48$) chose option *iii*, that two suspects for the same perpetrator would appear in the same lineup. Asked on the frequency of such a scenario, officers indicated that this situation occurred *never* or *sometimes* (Figure 4).

For Scenario 2, a majority of respondents (65%, $n = 48$) also chose option *ii*, indicating that suspects of the two perpetrators would appear in separate lineups (Figure 4). Thirty-one percent chose option *iii*, that both suspects for the two perpetrators would appear in the same lineup. Scenario 2 was more likely to occur than Scenario 1 (Figure 4).

When do witnesses see (a) lineup(s)?. Officers were asked whether eyewitnesses saw the lineups for multiple suspects as they became available, when all lineups were ready, or
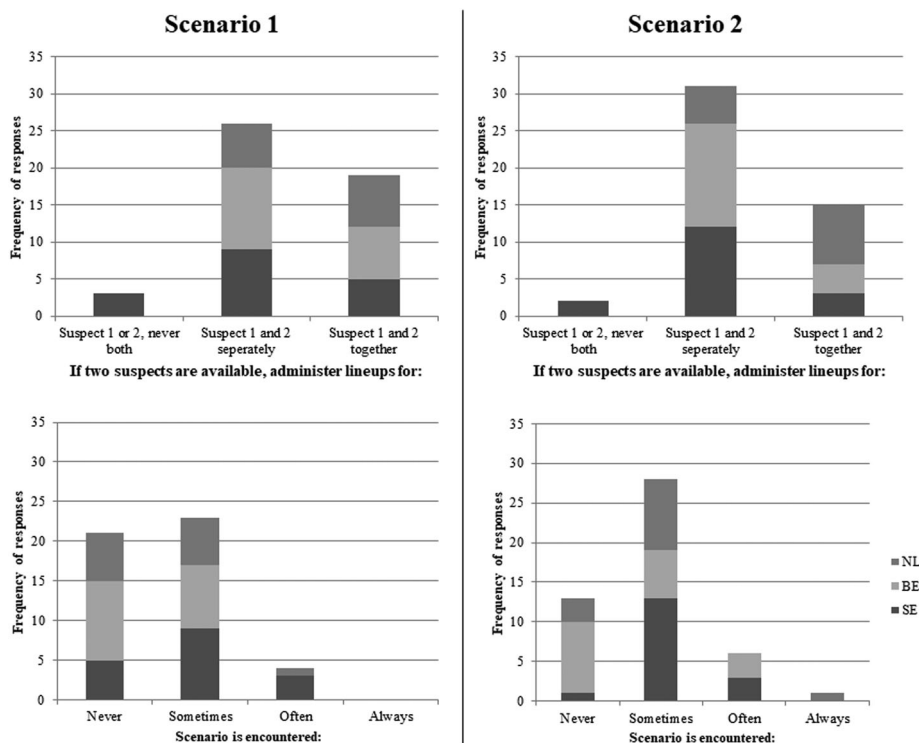
Figure 4. Police were presented with two scenarios in which they had two suspects. Top panels display responses related to Scenario 1 (single perpetrator with multiple suspects) and Scenario 2 (multiple perpetrators each with one suspect). For each scenario, respondents reported whether they would administrate lineups so that eyewitnesses see (i) Suspect 1 or 2 but not both, (ii) Suspect 1 and 2 but in separate lineups, or (iii) Suspects 1 and 2 in the same lineup. Bottom panels display how often police encounter this situation in administering lineups for Scenario 1 and Scenario 2.

other. Most respondents (55%, $n = 42$) reported that witnesses were presented with lineups as they became available. Thirty-three percent reported that witnesses were presented with lineups when all lineups were available. Swedish and Dutch respondents that answered *other* generally indicated that both were possible, depending on the case.

Instructions to eyewitnesses. Only two Swedish respondents reported instructions that were adapted to multiple suspects. One noted that instructions specifically mentioned that multiple suspects would not be in the same lineup. Another wrote that they would instruct eyewitnesses that it was possible that none of the suspects were present among the pictures, but that they would also falsely instruct that several suspects could be present in the same lineup. Dutch respondents reported standardized witness instructions presented to eyewitnesses before and during lineup administration. While one officer stated that instructions for multiple versus single suspects differed, another reported the instructions were the same regardless of number of suspects.

The question: '*Do you ask the witness to look for a specific suspect (e.g. identify the one who was driving the car)?*' was intended to examine whether respondents informed the eyewitness which lineup was for which perpetrator before any

identification decision was made. However, most respondents who answered *yes* subsequently explained that they only did this following positive identifications. Although this question did not elicit the responses expected, qualitative responses suggest officers do not generally instruct eyewitnesses to look for specific suspects. Ninety percent (*n* = 40) of respondents indicated that role in the crime was only elicited after the identification procedure.

Recording decisions. A majority of respondents (90%; *n* = 39), reported that they recorded all identification decisions, whether or not the eyewitness chose the suspect. One Swedish officer wrote that it would be considered wrong, if not criminal, to not report all decisions. Of the four respondents who reported they did not record all decisions, one explained that they only record positive identifications.

Problems with current practice

Reported difficulties with lineup procedures (58% of respondents, *n* = 33) generally fell into two categories. The first was logistics related to materials. More specifically, respondents experienced difficulty in finding fillers for a lineup of several suspects or were concerned about the quality of photos available, because outdated photos resulted in non-identifications. The second category of difficulties concerned the construction of appropriate lineups. For example, one respondent expressed difficulties in following all lineup recommendations at once, while another wrote that, because there was not one assigned person who constructed all lineups, their quality varied. Another respondent wrote that so many factors of lineup construction can influence eyewitness memory that it was unlikely to obtain a suspect identification. Notably, only one Dutch respondent reported problems with administering multiple suspect lineups, specifically the increased cost of making multiple lineups. Overall, Dutch respondents reported lineup administration to be well organized.

Responses regarding eyewitness difficulties (55%, *n* = 33) generally concerned general memory issues non-specific to multiple perpetrator crime and the tendency to mix-up perpetrators or their roles. One respondent noted that it could be particularly difficult for eyewitnesses to separate memories for perpetrators when it was dark during the crime and perpetrators looked similar (i.e. gang members).

Perceived utility of eyewitnesses of multiple perpetrator crimes

Respondents reported that eyewitnesses of multiple perpetrator crimes perform *worse than* (55%, *n* = 39) or *as good as* (46%) eyewitnesses of single perpetrator crimes, but never *better*. Asked on the investigative or probative value of eyewitnesses that identified one, but not all suspects, most respondents (87%; *n* = 39) reported that any identification was useful. This was because an identification could provide new leads and because one identification was better than none. Some respondents acknowledged that a witness may have a good memory for one, but not other, perpetrators (e.g. the eyewitness had longer exposure to the perpetrator they identified, or that perpetrator was more distinctive). The remaining officers reported that the usefulness depended on other evidence or the circumstances of the crime.

Discussion

We sought to determine how police in three European countries experience the logistics and quality of identification decisions in cases with multiple perpetrators. We distributed an online survey to police in Sweden, Belgium, and the Netherlands, with questions about the characteristics of encountered multiple perpetrator crimes, current guidelines, practice, and issues regarding multiple suspect lineups. This survey extended previous research (Hobson et al., 2012) by including scenarios distinguishing between multiple suspects of a single perpetrator vs. multiple perpetrator crime, and adding questions on when during the investigation lineups are conducted, who is responsible for constructing multiple lineups, and perceptions about the performance of eyewitnesses in cases with one vs. multiple perpetrators.

Practice converges when it comes to the collection of role information (i.e. attributing specific actions to specific suspects). Specifically, respondents reported that role is only elicited after a positive identification of a suspect. Practice diverges between and within countries on whether suspects of multiple perpetrator crimes should be placed in separate lineups, whether the same officer is responsible for all the lineups in a single case, and whether to administer lineups as suspects become available or only once all suspects are available. This highlights the need to understand how providing context to the eyewitness during the identification procedure may impact eyewitness memory and decision-making. Specifically, research should explore the potential benefits or harms of placing multiple suspects in the same lineup (i.e. recreating the context of seeing both perpetrators at the crimes scene) or asking eyewitnesses to look for a specific suspect (i.e. providing the context of the perpetrator's role before viewing the lineup).

Collapsed across countries, approximately one-third of respondents' cases in the last 12 months involved multiple perpetrator crimes. The average of our sample reflects the high-end of results with U.K. police, who generally reported that between 10% and 30% of their caseload included multiple perpetrator crimes (Hobson et al., 2012). It is possible that this difference is a result of different methods of measurement (i.e. our sample rated percent of multiple perpetrator crimes on an 11-point scale vs. Hobson et al.'s 7-point scale), or reflects the greater range in responses (i.e. 0–90% in our sample vs. <10% to 50–60% in the U.K.). Our estimates are also slightly higher than reported statistics on violent multiple perpetrator crimes of homicides in the Netherlands, Sweden, and Norway (13–17%; Liem et al., 2013) and homicides in Canada (up to 33%; Statistics Canada, 2016). However, available statistics report violent multiple perpetrator crimes (i.e. homicides,) but do not include the non-violent incidents reported here. This is particularly noteworthy given that the most common multiple perpetrator crime reported here was burglary. Other non-violent crimes included theft, cannabis cultivation, and trafficking. In line with the U.K. survey, our respondents were most likely to encounter multiple perpetrator crimes with 2–3 perpetrators that concerned burglary, robbery, or assault.

Nearly all police demonstrated some knowledge of evidence-based guidelines for identification procedures, yet, only a few mentioned guidelines specific to *multiple* suspect identification procedures. Responses do provide some clear trends. First, respondents overwhelmingly reported using sequential, photographic lineups. This is in line with national guidelines for Sweden and the Netherlands (Rikspolisstyrelsen, 2005; van Amelsvoort, 2018), which are based on previous research endorsing sequential presentation (i.e.

Steblay, Dysart, & Wells, 2011).[5] Second, nine in 10 respondents insisted they would ask the eyewitness to designate a suspect's role in a crime only after an identification. This is contrary to the U.K. survey that reported that administrators would generally inform eyewitnesses of the perpetrator for which the lineup was intended (e.g. the person that was holding the gun). While neither scientific recommendations nor national guidelines specifically address this topic, the decision to collect role assignment following the identification decisions does fit with the pattern of scientific guidelines aimed to prevent biasing identification decisions. More specifically, asking eyewitnesses to look for the man holding the gun may bias to select the lineup member who looks most like they would have a gun, or to not select a lineup member who was present in the lineup, but had a different role in the crime. Meanwhile, more than one in six officers surveyed here reported that eyewitnesses were likely to mix-up the perpetrators and the roles of the crime. Even if an eyewitness were to correctly identify each perpetrator in the group, the confusion of roles during the crime (as a result of a source-monitoring error) would lead to concerns about the eyewitness' reliability and have implications for future sentencing of suspects later convicted. However, providing contextual information like suspected role may be beneficial for witnesses as they attempt to retrieve and appropriately distinguish between memories for perpetrators (see Davies, 1988, for a review).

Questions on multiple lineup construction produced divergent result patterns between countries. For example, while Dutch respondents unanimously reported the same person was responsible for constructing the multiple lineups in a multiple perpetrator case, Swedish and Belgian respondents reported no clear rules designating officers to this task. This may be because the requirement for certification to conduct identification procedures limits the number of Dutch police available, whereas this does not apply in Sweden and Belgium. Responses on the point in time of lineup administration varied regardless of country. For example, officers were divided on whether to wait for all suspects to administer lineups or to administer them as they became available throughout the investigation. Again, there are no apparent guidelines addressing this issue and empirical research provides conflicting concerns to balance. While memory degrades as a function of delay (Deffenbacher, Bornstein, McGorty, & Penrod, 2008), context aids recognition and recall (Davies, 1988). Thus, it is crucial to administer a lineup as soon as possible to ensure a stronger memory trace. Yet, because memory degrades at an exponential rate, context cues might be beneficial in providing memory support after the greatest drop in memory strength has already occurred. According to some calculations (Deffenbacher et al., 2008), an eyewitness may have no more than a 50% chance of accurately identifying a perpetrator from a lineup after a week delay. If a lineup is already delayed, it could be useful to further delay an identification procedure to use other suspects as a form of context reinstatement. Future research could examine the tradeoff between memory degradation and contextual cues for multiple suspect identification.

Other notable findings come from the scenarios creating a lineup for multiple suspects for a single vs. multiple perpetrator crime. Across three countries, respondents generally treated the two scenarios as equivalent; most often, officers reported separating the two suspects into individual lineups, but many chose to present them in the same lineup. Although the eyewitness identification literature consistently warns administrators to separate multiple suspects of a single perpetrator crime (e.g. Wells et al., 1998), research has not satisfyingly addressed whether to separate or group multiple suspects of a

multiple perpetrator crime during identification procedures (see for initial tests: Kask & Bull, 2009; Tupper, Sauer, Sauerland, Fu, & Hope, 2018a; Wells & Pozzulo, 2006). Moreover, regulations within and across countries vary: police are instructed to separate suspects unless two suspects look similar in the U.K., to separate suspects for live lineups, but not photographic lineups, in the Netherlands, and to always separate suspects in Sweden. If an eyewitness is asked to make multiple identification decisions for multiple suspects, they may either make multiple identification decisions in succession, or make multiple identification decisions from the same lineup. For the former, research so far suggests that making multiple identification decisions is at least not harmful to eyewitness memory (Mansour, Beaudry, & Lindsay, 2017; Tupper et al., 2018b). Indeed, the most important benefit of the single suspect lineup – the reduction in the probability that a suspect will be identified by chance – remains. However, although research using contextual cuing recognition paradigms typically reveals an increase in correct recognition, this may also be paired with an increase in false-identifications (Davies, 1988).

It is noteworthy that Dutch respondents reported very few issues – for themselves or for eyewitnesses – in administering lineups. They also notably reported a lack of guidelines in only one of the questions posed (i.e. whether to provide lineups as suspects become available or once all suspects are available). This occurs in a country where a detailed, evidence-based manual is coupled with a certification program to conduct identification procedures. While it is possible respondents chose not to report issues, it is also likely that this system is useful in standardizing procedures across the country. This not only appears to support the police in making decisions about lineups, but confirms the utility of psychological insight into lineup construction and administration (Sauerland, Krix, & Merckelbach, 2016).

Lastly, this survey elicited subjective perceptions of eyewitnesses of multiple vs. single perpetrator crimes. Notably, half of the respondents viewed eyewitnesses of multiple perpetrator crimes to be *as good as* witnesses of single perpetrator crimes. This was unexpected because research demonstrates that viewing multiple perpetrators consistently reduces identification performance (Clifford & Hollin, 1981; Megreya & Burton, 2006). Yet in the lab, researchers may manipulate the number of perpetrators while controlling for all other encoding and retention variables. By contrast, an eyewitness called in for a lineup may have encountered any combination of variables known to influence identification accuracy. It may be that police do not experience this difference consistently because they encounter eyewitnesses of single perpetrator crimes whose memory is equivalently impacted by other variables (cf. Krix, Sauerland, Lorei, & Rispens, 2015). This concerns an area of divergence between police perception and science that might be addressed in future research.

Limitations

One limitation of this research concerns the relatively small sample size. The Netherlands restricts the number of police officers who conduct identification procedures by requiring additional professional certification. The current survey was completed by 13 of the 16 officers in the Netherlands who had conducted multiple perpetrator identification procedures in the 12 months prior to the survey. Thus, the small sample size reflects almost the entirety of the small population of police officers conducting multiple

perpetrator identifications. However, Sweden and Belgium do not have professional qualification requirements for police officers authorized to conduct identifications procedures and, as a result, we could not confirm how many such procedures had taken place in the months prior to the survey. It is likely that more officers than those surveyed here have conducted multiple perpetrator identifications, but it is not possible to determine the population accurately.

With respect to recruitment to the survey, we used the snowball method of sampling, relying on police contacts to distribute the survey among colleagues who might be willing to participate. This approach has proved an effective way to access similar police samples in these jurisdictions previously, and in the case of the current research was selected in order to access the target population of lineup administrators. However, this method of sampling resulted in many of the Swedish and Belgian responses being geographically clustered in the southern and northeastern jurisdictions, respectively. Thus, results may reflect these regions of the countries rather than the countries as a whole.

These limitations in sample size and selection necessitate cautious interpretation of the results. The responses cannot be deemed representative of how each country, as a whole, conducts identification procedures for multiple suspects. However, we consider this an initial examination of how police officers within these countries conduct identification procedures with multiple suspects. Given that we have identified only one published survey on multiple perpetrator identification procedures (Hobson et al., 2012), the current data obtained provide further insight into current practice. Furthermore, these data provide us with valuable information for future research and a context in which to place results on multiple perpetrator recognition and identification.

Conclusions

This survey provides an initial understanding of police practice that can inform experimental research by identifying important, but under-researched, practical issues. For example, researchers may consider the inconsistent practice of separating suspects into separate lineups. This survey also serves to highlight one area in which there is clearly need for more research: contextual memory cues in multiple perpetrator identification. The extent to which different contextual cues enhance or undermine memory for multiple perpetrators is particularly relevant when considering whether to (1) indicate the alleged role of a suspect before an identification decision, (2) delay lineup administration until all suspects are available, and (3) present multiple suspects in the same lineup.

Notes

1. We only targeted recruitment from Belgian regions that are primarily Dutch-speaking.
2. The Netherlands records all identification procedures electronically in a national database, enabling us to ascertain that at the time of the survey, 16 officers in the Netherlands had conducted identification procedures for multiple perpetrator crimes in the past 12 months (personal communication, van Amelsvoort, 2018). However, this information was not available for the countries of Sweden and Belgium (personal communication, police contacts in Sweden and Belgium, 2018).

3. Job role and jurisdiction are not included in order to retain confidentiality of the sample
4. The responses here have been altered slightly to accommodate both scenarios for illustration purposes.
5. It is worth noting that there is still debate within the field, with researchers questioning the assumed superiority of sequential presentation (i.e. Clark, 2012; Gronlund, Wixted, & Mickes, 2014; Steblay et al., 2011).

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