RELEVANCE

Eyewitness research, and by extension this thesis, is relevant because eyewitness evidence remains an important source of evidence in the legal system. Indeed, thousands of identification lineups and showups are conducted around the world each year, and are used for the investigation and prosecution of suspected perpetrators. Because incidents involving multiple perpetrators make up a substantial proportion of all crime, many of these lineups and showups are conducted in cases of multiple perpetrator crimes. However, guidance for procedures is currently lacking and the procedures that do exist are not evidence-based. This is not surprising given that the research needed to provide guidance for evidence-based procedures is itself lacking. This thesis is relevant because it begins to fill the gap in our knowledge on the recognition of multiple faces and the decisions to identify those faces or not; Thus it is the first step towards crafting evidence-based identification procedures in cases with multiple perpetrators.

TARGET POPULATION AND PRODUCTS

In using science to shape public policy, it is crucial to realistically judge the state of our knowledge so that we can respect the limits of our capacity to make evidence-based recommendations. In this vein, this thesis is not an end-product; this thesis is a beginning of investigation on multiple perpetrator identification that will eventually be integrated into the general scientific consensus. This consensus can eventually be used by experts to teach juries, lawyers, and police about memory for multiple perpetrator crimes, by lawyers to defend their clients, and by judges to regulate appropriate evidence to be submitted to the court and to evaluate its probative value. It can also be used to shape police protocols that are specifically designed to support eyewitness memory and prevent the contamination of eyewitness identification decisions in multiple perpetrator crimes. This in turn enhances the probability of obtaining valuable eyewitness identifications in this context. Such protocols could be used in police training and police manuals in those states or countries that are amenable to adopting evidence-based practice. All of these uses serve the ever-present goal in eyewitness research: to increase the number of perpetrators that are rightfully convicted for their crimes, to reduce the number of innocent suspects serving time for a crime they did not commit, and thus to prevent miscarriages of justice.
INNOVATION

The aim of this thesis was to examine memory and eyewitness identification decisions in cases where there were multiple perpetrators. The possibility of multiple perpetrators being present at a crime, or the possible consequences of that presence, is oft-forgotten or perhaps oft-ignored within the otherwise prolific research field of eyewitness identification. To date, only a few studies have addressed the topic of eyewitness identifications of multiple perpetrator crimes, and this thesis seeks to contribute to that knowledge.

Chapter 2 presents an initial picture of the state of police practice for constructing, administering, recording, and evaluating eyewitness identification decisions when multiple suspects are involved. In fact, this is the second of only two surveys that exist on the issue. The current survey is also unique in that it was the first to do so outside of the U.K. This international perspective on police practice allows researchers to examine current protocols, test new solutions, and hopefully improve police and eyewitness experience with multiple perpetrator identifications. Officers reported a lack of regulations regarding multiple perpetrator identification, and thus generally intuitive decisions on withhold the context for the eyewitness identification (i.e., this lineup is for the man you said was holding the gun) and whether or not to place suspects in separate or the same lineups. They also emphasized difficulties for eyewitnesses to distinguish between multiple perpetrators.

Chapters 3 and 4 investigate factors that are both unique and inherent to multiple perpetrator crimes — factors that we can and should consider when adapting identification protocols. In particular, Chapter 3 presents the first known experiments testing for relationships between multiple, ostensibly-independent identification decisions related to the different perpetrators of a multiple perpetrator crime. Within eyewitness identification research on single perpetrator crimes, it is widely accepted that suspects should always be placed in separate lineups in order to decrease the probability of a misidentification. These lineups are inevitably related because the multiple suspects always refer to the same perpetrator. In the case of a multiple perpetrator crime, multiple suspects may be related to different perpetrators, and identification decisions for the suspect(s) regarding one perpetrator should not impact the identification decision(s) for another. This independence between decisions is important, for example, for prosecuting the different co-perpetrators of the crime. That these decisions can be independent from each other has implications for recommendations for police protocols. For example, we can ask whether an eyewitness should be allowed to make multiple identification decisions on the same day.

Another decision on lineup administration include the golden rule of lineup construction: that suspects should always be placed in separate lineups. This rule implicitly refers to the suspects of a single perpetrator crime. In the case of multiple perpetrator
crimes, police manuals (e.g., the U.K. and the Netherlands, see Chapter 2) are allowing multiple suspects to be placed in the same lineup under certain conditions (i.e., when presented in photographic lineups vs. live lineups). It is important for us to understand if this is an appropriate decision and, if so, under what conditions. Thus, Chapter 4 presents experiments examining the possibility of a memory advantage when intentionally violating the independence between multiple recognition decisions. These experiments include new developments in methodology and statistics. They are innovative in that they include groups of more than two faces in the encoding and recognition phases. We found that recognition decisions using other faces as cues reduced the rate of false recognition and may be a useful tool in the future for identification procedures.

IMPLEMENTATION AND KNOWLEDGE DISSEMINATION

The articles comprising this thesis have all been presented at international conferences on psychology and law or applied cognition and are under review to be published in academic journals. Publication is not only important to communicate new psychological findings to researchers who may conduct experiments related to multiple perpetrator identification or multiple face recognition, but also to remind researchers to be cognizant of the importance of multiple vs. single perpetrator distinctions in their own research. For example, it would be useful to the field of multiple perpetrator identification if researchers conducting police surveys include questions about multiple perpetrator crimes; it would be useful if researchers conducting archival studies documented multiple perpetrator crimes with details on police decisions; lastly, it would be useful if researchers using multiple perpetrators in their stimulus videos consistently test for relationships between the identification decisions. The main findings of this dissertation and the ideas for future research have also been mentioned in lectures to an international body of students, who may be future researchers, lawyers, police, judges, or even jury members around the world.