The Importance of Knowing How a Person Became the Suspect in a Lineup: Multiple Eyewitness Identification Procedures Increase the Risk of Wrongful Conviction

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ABSTRACT

   The proportion of times that suspects in lineups are factually guilty can be referred to as the "base rate" of guilt. How a person came to be a suspect in a criminal investigation strongly impacts the base rate of culprit presence in identification procedures, yet this issue has received little consideration from either researchers or the criminal justice system. We argue that consideration of base rates is crucial. In cases where the culprit is not previously known to the witness, the base rate of culprit presence in any identification procedure may be low, and thus, the probability that an identified suspect is guilty should be questioned more than when the suspect was known to the witness prior to the crime. Using the existing body

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of literature, we (briefly) discuss (1) the role of eyewitness error in wrongful convictions, (2) the issue of base rates, (3) the dangers of using identification procedures such as showups or mug searches prior to a lineup procedure, (4) the likelihood that showups and mug searches will lead to high rates of police apprehending the actual criminal, and (5) how errors made at this stage are more likely when witnesses view multiple suspects prior to lineups. We conclude that identifications obtained in such situations should be treated with caution and require substantial independent evidence of guilt to justify conviction. Lastly, we provide practical considerations for those working within the criminal justice system.

Keywords: *eyewitnesses, lineups, showups, mugshots, base rates, police, Crown, judges, wrongful convictions, probative value.*

I. INTRODUCTION

The thesis we shall develop is that certain common, inevitable, and necessary police practices of generating suspects will lead to surprisingly low base rates of suspect guilt (i.e., the proportion of times that a suspect in a lineup is factually guilty) in eyewitness identification procedures[1] raising concern over the rate with which innocent suspects might be identified.[2] Critically, these suspect-generating practices that are likely associated with low base rates cannot be avoided and are likely necessary for many investigations. However, variations in how persons become suspects are associated with differences in the likely guilt of those persons, and thus knowing how a person became a suspect is

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[1]   In fact, in a recent field experiment involving eyewitnesses to real crimes under investigation by officers in the Robbery Division of the Houston Police Department, the statistically-predicted base rate of suspect guilt was 35%. In other words, only 35% of lineups included a guilty suspect and 65% included an innocent suspect. See John T Wixted et al, "Estimating the reliability of eyewitness identifications from police lineups" (2016) 113:2 Proceedings of the National Academy of Sciences of the United States of America 304.

[2]   To be clear, the authors are psychologists, not lawyers. Prior experience indicates that lawyers often insist that guilt only exists after a court finding. We will use the terms guilt and guilty in the sense of "factual guilt"; i.e., whether or not the person in question actually committed the crime independent of whether or not a court ever rules regarding guilt or innocence.

important.[3] We argue that, when assessing the likely guilt of an identified suspect, the Courts need to carefully consider how that person became a suspect in the first place and revise their guilt belief in light of this information. Finally, we also discuss how this low base rate problem is exacerbated by putting suspects identified from low reliability identification methods (e.g., showups and mugbook searches) in more 'pristine' identification procedures (e.g., lineups) and treating an identification from the more pristine procedure as independent and untainted evidence that the suspect is guilty.

Before addressing our primary thesis we very briefly outline the role of eyewitness error in the wrongful conviction of innocent persons. We then briefly outline the general status of eyewitness identification accuracy as reflected by psychological research. Extensive reviews of eyewitness identification issues in the literature can be found in the *Handbook of Eyewitness Psychology*[4] and the more recent reflections of Chief Justice Rabner of the New Jersey Supreme Court.[5] Despite the high volume of research in the area, we will limit our discussion to the specific studies relevant to our thesis.

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[3]   A piece of evidence is probative to the extent that it makes a fact more or less probable than that fact would be without the piece of evidence (See *R v Watson,* 30 OR (3d) 161 at para 33, [1996] OJ No 2695). But, even if the evidence is probative, the probability that the suspect is the culprit may still be low. This results from the fact that the base rate of suspect guilt greatly constrains the probability that the suspect is guilty. For example, if an eyewitness identifies a suspect from an identification procedure, that identification is probative because it increases the probability that the suspect is the culprit. But, if the probability that the suspect was the culprit before the identification procedure was only 10%, that identification might only increase the probability that the suspect is guilty to 20% (there would still be an 80% chance that the suspect is innocent).

[4]   Michael P Toglia et al, eds, *The Handbook of Eyewitness Psychology: Volume I: Memory of Events* (Psychology Press, 2006); see also Roderick C L Lindsay et al, eds, *The Handbook of Eyewitness Psychology: Vol II Memory for People* (Mahwah, NJ: Erlbaum, 2007).

[5]   The Honorable Stuart Rabner, "Evaluating Eyewitness Identification Evidence in the 21st Century" (2012) 87:5 NYUL Rev 1249.

II. THE ROLE OF EYEWITNESS ERROR IN WRONGFUL CONVICTIONS

Exonerations occur when evidence not presented during the original trial or appellate process establishes the innocence of a previously convicted person. Although several types of evidence might be used to establish the innocence of a convicted person, two common antecedents to exoneration include the discovery of exonerating DNA-based evidence and the recantation of witness testimony.[6]

Eyewitness identification has never been presumed infallible – it has long been known that eyewitnesses can and do make mistakes.[7] In the last 25 years, cases of exoneration have drawn attention to the fallibility of eyewitnesses. Of the first 1600 exonerations in the U.S. (DNA and non-DNA based), 34% involved a mistaken eyewitness identification.[8] In Canada, eyewitness error was involved in 36.4% of the first 45 cases of exoneration[9] (e.g., Thomas Sophonow, who was wrongfully convicted of the 1984 murder of Barbara Stoppel in Winnipeg, Manitoba[10]).

The problem with eyewitness identifications—at least from a wrongful conviction standpoint—is that such identifications are highly convincing evidence; i.e., they are believed by the triers of fact. Differentiating between correct and incorrect identifications based on witness testimony can be quite difficult.[11] Yet, eyewitness testimony is compelling. To illustrate the

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[6]   The National Registry of Exonerations, *The First 1600 Exonerations* (2015), online: <https://www.law.umich.edu/special/exoneration/Documents/1600_Exonerations.p df> [The National Registry].

[7]   See e.g. Edwin M Borchard, *Convicting the Innocent: Errors of Criminal Justice* (New Haven: Yale University Press, 1932).

[8]   The National Registry, *supra* note 6.

[9]   Andrew M Smith & Brian L Cutler, "Introduction: Identification Procedures and Conviction of the Innocent" in Brian L Cutler, ed, *Reform of Eyewitness Identification Procedures* (Washington, DC: APA, 2013) 3.

[10]   See e.g. "Thomas Sophonow was wrongfully convicted in the death of 16-year-old Barbara Stoppel", *CBC News* (12, October 2016), online: <http://www.cbc.ca/news/canada/manitoba/thomas-sophonow-was-wrongfully-convicted-in-the-death-of-16-year-old-barbara-stoppel-1.3802001>.

[11]   Melissa Boyce, Jennifer L Beaudry, & Roderick C L Lindsay, "Belief of Eyewitness Identification Evidence" in Roderick C L Lindsay et al, eds, *The Handbook of Eyewitness Psychology: Vol II Memory for People* (Mahwah, NJ: Erlbaum, 2007) 179 [Boyce, Beaudry & Lindsay]; compare Kristy A. Martire & Richard I Kemp, "The Impact of Eyewitness

influence of eyewitness evidence, consider the findings of the Devlin Committee who examined 2116 lineups administered in England and Wales in 1973. In 169 cases, the only evidence against the accused was the testimony of a single eyewitness. In another 178 cases, multiple eyewitnesses identified the accused, but there was no additional evidence of guilt. It is crucial to note that in these combined 347 cases, 74.35% of accused persons were found guilty based solely on the identification evidence.[12]

We conclude that a problem of identification error leading to wrongful conviction is clearly established. We have deliberately kept this part of the discussion brief because few, if any, readers were likely to have doubted the accuracy of this conclusion.

III. BASE RATES AND WRONGFUL CONVICTIONS

While many factors that lead to eyewitness identification errors have been identified and studied (e.g., poor memory of the culprit, poor police procedure) we contend that the base rate of culprit presence in identification procedures is a crucial, yet often overlooked, factor.[13] If the base rate is high (i.e., the identification procedure almost always contains the culprit), then selections of suspects most often will lead to convictions of guilty people. Conversely, if the base rate is low (i.e., the identification procedure rarely contains the culprit), selections of suspects will all too often lead to convictions of innocent people.

While there certainly exists an overall base rate for all identification procedures conducted—and this is a typical way to discuss the concept; as if

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Expert Evidence and Judicial Instruction on Juror Ability to Evaluate Eyewitness Testimony" (2009) 33:3 Law & Hum Behav 225.

[12] See Table 1 of UK, *Report to The Secretary of State for the Home Department of the Departmental Committee on Evidence of Identification in Criminal Cases*, Rt. Hon. Lord Devlin (London, England: Her Majesty's Stationery Office, 1976) [Devlin]. Note that the author only provided the combined rate of convictions and did not separate out convictions based on single or multiple witnesses. Also, there is no way of knowing how many of the convictions were appropriate; however, the Devlin Commission was examining issues leading to wrongful conviction after several exonerations at the time.

[13] See Gary L Wells, Yueran Yang, & Laura Smalarz, "Eyewitness Identification: Bayesian Information Gain, Base-Rate Effect Equivalency Curves, and Reasonable Suspicion" (2015) 39:2 Law & Hum Behav 99 [Wells, Yang & Smalarz], for one example of discussion regarding the importance of base rates.

there is one base rate—we argue that 'base rate' should be conceptualized not in the singular, but as 'base rates,' plural.[14] Different identification procedures will have different base rates, and base rates for procedures will differ depending on how suspects are found.[15] We discuss how base rates are likely to vary among identification procedures and consider how this variation in base rates is likely to impact the reliability of eyewitness testimony.

IV. BACKGROUND ON EYEWITNESS IDENTIFICATION PROCEDURES

Witnesses provide crucial information that helps police to find culprits of crimes. Verbal descriptions of the crime (e.g., location, sequence of events) and culprit (e.g., what they looked like, what was said, what they were wearing) are important sources of information, and suspects are found, at least in part, based on descriptions. However, verbal descriptions provide limited information, and descriptions of a culprit's appearance are rarely detailed or distinctive enough to conclusively distinguish among individuals.[16] Further, witnesses often describe features that can easily be altered, such as clothing and accessories.[17]

Because it is limiting to rely solely on verbal descriptions, police will frequently employ a variety of visual recognition-based identification techniques to aid in identifying culprits. When administering an identification technique, police will present witnesses with one or more

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[14]   *Ibid.* In Wells, Yang & Smalarz, one of their main points is that base rates vary dramatically from jurisdiction to jurisdiction, division to division, and even officer to officer. In this paper we address systematic variance as it relates to the different base rates associated with different identification/investigative procedures.

[15]   Certainly, different crimes will have different base rates as well but this will not be of concern for the current discussion.

[16]   See *e.g.* Lowell Kuehn, "Looking Down a Gun Barrel: Person Perception and Violent Crime" (1974) 39:3 Perceptual & Motor Skills 1158; Christian Meissner, Sigfried Sporer & Jonathan Schooler, "Person Descriptions as Eyewitness Evidence" in Roderick C L Lindsay et al, eds, *The Handbook of Eyewitness Psychology: Vol II Memory for People* (Mahwah, NJ: Erlbaum, 2007) 3.

[17]   See *e.g.* Joanna D Pozzulo et al, "The Relationship Between Recalling a Person and Recognizing That Person" (2009) 27 American J of Forensic Psychology 19.

individuals, either in person or via photo or video, and ask the witness to indicate whether (one of) the individual(s) presented is the culprit.[18]

There are three common identification procedures that we will review in the present paper: lineups, showups, and mug-book searches. Police use lineups and showups to test their hypothesis that a given suspect perpetrated some crime. With over 600 published papers on the topic in the psychological literature, the most widely studied identification procedure is the lineup, a procedure in which a suspect is embedded amongst some number of known-innocent persons, called fillers. Unlike a lineup, a showup does not include fillers. Rather, showups involve presenting a lone suspect to the eyewitness for an identification attempt. In both procedures, the correct decision when a suspect is guilty is to identify that person. Rejecting an identification procedure when the suspect is guilty is an error. When the suspect is not guilty, the correct decision is to reject the identification procedure (indicate that the culprit is "not there"). Identifying the suspect from an identification procedure when that person is innocent is an error. In a lineup an eyewitness can also err by identifying a known-innocent filler.[19] It is well documented that lineups produce better applied outcomes than showups. Indeed, lineups decrease innocent suspect identifications with little or no loss in culprit identifications.[20] Lineups

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[18]   Our discussion is not dependent on whether identification procedures are conducted with photos, videos, or live persons, so we do not further distinguish among these media.

[19]   Known-innocent filler identifications are not as dangerous as innocent suspect identifications because these known-innocent persons are not at risk of arrest and conviction (police knew they were innocent before the lineup procedure). Yet, filler identifications are still extremely costly in that they impeach eyewitnesses who might have been useful later in the case if police found the actual culprit. See Gary Wells, Nancy Steblay & Jennifer Dysart, "Eyewitness Identification Reforms: Are Suggestiveness-Induced Hits and Guesses True Hits?" (2012) 7 Perspectives on Psychological Science 264.

[20]   Lineups decrease innocent suspect identifications without (or with only a minimal) decreasing culprit identifications. See Nancy Steblay et al, "Eyewitness Accuracy Rates in Police Showup and Lineup Presentations: A Meta-Analytic Comparison" (2003) 27:5 Law & Hum Behav 523 [Steblay]; see also Steven Clark, "Costs and Benefits of Eyewitness Identification Reform: Psychological Science and Public Policy" (2012) 7:3 Perspectives on Psychological Science 238. Gary L Wells, Laura Smalarz & Andrew Smith, "ROC analysis of lineups does not measure underlying discriminability and has limited value" (2015) 4:4 J of Applied Research in Memory & Cognition 313.

produce better applied outcomes than showups, because fillers draw (or "siphon") many false-positive responses away from the innocent suspect, but fewer true-positive responses away from the guilty suspect.[21]

Despite the fact that showups are less reliable than lineups, it is not the case that showups can simply be disavowed. Showups are generally used in situations in which lineups are not feasible, such as when police locate an individual near the scene of the crime in both time and space but lack probable cause for arrest. So, while policy recommendations in both Canada and the United States suggest restricting the use of showup procedures,[22] both countries allow for the use of showups in exigent circumstances. Indeed, in a recent survey of U.S. police departments, 37.1% had recommendations that their officers not conduct showups after a certain amount of time (the mean amount of time recommended was 2.3 hours[23]), and the Canadian best-practice recommendation is that "[s]howups should only be used in rare circumstances, such as when the suspect is apprehended near the crime scene shortly after the event".[24] How often do police officers encounter the exigent circumstances that justify the use of showups? Some research suggests that showups represent 30%[25] to almost 80%[26] of all identification procedures.

A mug-book search presents large numbers of photos of previously arrested people to the witness hoping that the culprit is in the set of photos and will be recognized by the witness. Mug-book searches tend to be used under different circumstances than lineups or showups. Police tend to use

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[22]   US Department of Justice, Office of Justice Programs, & National Institute of Justice. *Eyewitness Evidence: A Guide for Law Enforcement* (Washington, DC: 1999), online <http://www.nij.gov/pubs-sum/178240.htm>; Canada, FPT Heads of Prosecutions Committee, *The Path to Justice: Preventing Wrongful Convictions* (2011) at 57: online < http://www.ppsc-sppc.gc.ca/eng/pub/ptj-spj/ptj-spj-eng.pdf>[Prosecutions Committee].

[23]   US, Police Executive Research Forum, *A National Survey of Eyewitness Identification Procedures in Law Enforcement Agencies* (Washington, DC: 2013) at 58.

[24]   Prosecutions Committee, *supra* note 22.

[25]   Dawn McQuiston & Roy Malpass, *Eyewitness identifications in criminal cases: An archival study* (2001) [unpublished, paper presented at the fourth biennial meeting of the Society for Applied Research in Memory and Cognition, Kingston, Ontario, Canada] [McQuiston & Malpass].

[26]   Robert Gonzalez, Phoebe Ellsworth & Maceo Pembroke, "Response Biases in Lineups and Showups" (1993) 64:4 J of Personality & Social Psychology 525.

mug-book searches when they have not yet narrowed in on a given suspect. Given the large number of photos available, the presence of innocent individuals who resemble the true culprit is likely in many–perhaps most–cases. The literature concerning mug-book searches is smaller than that for lineups or showups but clearly reflects a high risk of false identification with most witnesses unable to resist identifying someone as the number of photos examined increases. For example, Lindsay and colleagues found that approximately 95% of witnesses to a mock crime incorrectly identified at least one innocent person from a set of several hundred photos.[27] Many selected more than one person with the overall ratio being approximately 8 innocent selections for each selection of the actual "criminal".[28]

No matter the identification procedure, it is clear that identifying the culprit is only possible if the culprit is present in the identification procedure shown to the witness(es). If the culprit is not present, then a suspect identification is a false identification and an innocent person is at risk of arrest and wrongful conviction. The probability that a particular suspect is the culprit prior to an identification procedure is referred to as the *prior probability*[29] and the overall proportion of the time that suspects in lineups are the culprits can be referred to as the *base rate* of suspect guilt. If an eyewitness identifies a suspect, police and courts generally believe that this suggests that the suspect was guilty. There is no doubt that when an eyewitness identifies a suspect, this increases the *posterior probability* that the suspect is the culprit (i.e., the probability that a suspect is guilty after an identification procedure). But, whether police officers and the courts should infer from an identification that the suspect is guilty depends, in part, on how that individual became a suspect in the first place.

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[27]   See Roderick C L Lindsay et al, "Using Mug Shots to Find Suspects" (1994) 79:1 J of Applied Psychology 121.

[28]   *Ibid.*

[29]   Mathematically, prior probability can range from 0 (*a priori* certainty that the suspect is innocent) to 1 (*a priori* certainty that the suspect is guilty). Prior probabilities near zero are unlikely because the person is unlikely to be a suspect. Prior probabilities near one could occur due to evidence such as DNA. See e.g, Gary L Wells & Roderick C. L. Lindsay, "On Estimating the Diagnosticity of Eyewitness Nonidentifications" (1980) 88:3 Psychological Bulletin 776; see also Andrew M Smith, Roderick C L Lindsay & Gary L Wells, "A Bayesian Analysis on the (Dis)Utility of Iterative-Showup Procedures: The Moderating Impact of Prior Probabilities" (2016) 40:5 Law & Hum Behav 503.

V. THERE IS VALUE IN KNOWING HOW SOMEONE BECAME A SUSPECT

The literature on lineups has generally focused on which factors influence witness accuracy at the time an identification is made.[30] The focus of this paper, however, is regarding critical points missing from most discussions of eyewitness identification accuracy: How does a suspect come to be in the lineup in the first place? How does the way in which a suspect came to be in the lineup impact base rates? And, how do base rates impact the posterior probability that an identified suspect is guilty? We will argue that a failure to consider the impact of each of these factors contribute to miscarriages of justice that are due to mistaken eyewitness identification.

The base rate of culprit presence in identification procedures is obviously important. If for every 100 lineups, 90 contained the culprit, most suspects identified would be the true culprits. Conversely, if for every 100 lineups, only 10 contained the culprit, suspect selections often may not be the true culprits. Knowledge of factors that influence the base rate of suspect guilt are critical to the evaluation of identification evidence by police and the courts.[31] Consideration of such factors will permit police and the courts to evaluate the strength of identification evidence more accurately and potentially influence subsequent decisions. Police or the Crown may decide that additional evidence is required before charging a suspect. Defense attorneys may seek to have identification evidence excluded due to a high risk of false identification. Judges may accept such defense arguments if the identification evidence is deemed unreasonably dubious.

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[30]   For an exception to this general statement, see Gary L Wells, Yueran Yang & Laura Smalarz, "Eyewitness Identification: Bayesian Information Gain, Base-Rate Effect-Equivalency Curves, and Reasonable Suspicion (2015) 39:2 Law & Hum Behav 99.

[31]   Even in the case that suspect identifications are extremely diagnostic, the posterior probability that an identified suspect is guilty is greatly constrained by the prior probability that the suspect is the culprit. For example, assume that under some set of conditions, the suspect is identified 90% of the time when guilty and only 10% of the time when innocent. In this instance, suspect identifications are extremely diagnostic of guilt (far more diagnostic than what is typically observed in the lab). And yet, if only 10 out of 100 lineups leading to suspect identification contain the guilty suspect, there will be 9 correct identifications (90% of 10) and 9 false identifications (10% of 90) leading to only a 50% chance that a suspect who is identified is guilty. When the base rate is low, identification evidence will always be dangerous!

VI. WHY IS KNOWING HOW AN INDIVIDUAL BECAME A SUSPECT IMPORTANT?

Consider two hypothetical situations, N and U. In situation N (named suspect), an eyewitness tells law enforcement that she has known the man who committed a crime for about 10 years, but she only knows him as "Chaz." Police are familiar with a man named Chester Brown who is called Chaz and frequents the eyewitness' neighbourhood. They decide to conduct an identification procedure to confirm that they have the right "Chaz." They place a photo of Chester Brown within an array of photos of similar-looking men and ask the eyewitness to indicate whether or not any of the men is the culprit. In this instance there is a reasonably high probability that this photo array contains the actual culprit because the eyewitness was able to name the culprit and steer police in a clear direction.[32]

Compare this to situation U (unnamed suspect), where an eyewitness tells police that her assailant—who is not known to her—shoved her over and stole her purse. The eyewitness describes her assailant as a white male with brown hair and of average height and weight. Shortly after the crime occurs, police find an individual fitting this description near the scene and decide to present the suspect to the eyewitness immediately for an identification attempt (showup). In this instance, law enforcement personnel have come to suspect an individual based on his fit to the very general description provided by the eyewitness and his presence near the scene of the crime, both factors that could easily be attributable to chance rather than to the fact that the suspect is the culprit. The (prior) probability that the suspect is the culprit is much higher in situation N than in situation U; i.e., before the identification procedure, the suspect in situation N is more likely to be guilty than is the suspect in situation U. Thus, how an individual came to be a suspect provides insight into the likely guilt of that person and therefore has probative value.

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[32]   Additional and frequently occurring factors that can lead to named suspects include forensic evidence such as fingerprints and DNA, informants, unusual characteristics of crimes associated with previous occurrences (the cliché M.O.), etc. In some cases prior knowledge of the criminal may be so clear as to preclude the need for identification procedures (e.g., spousal abuse). "N" cases are expected to be more likely than "U" cases to lead to confessions, plea bargains, etc. and less likely to lead to identification procedures.

Situations N and U – and hence the base rate of culprit presence – are directly related to the visual identification techniques used by police officers: lineups, showups, and mug shots. Lineups involve presenting a suspect and some number of known-innocent fillers to the eyewitness. Hence, to conduct a lineup, one must first have a suspect. This makes lineups the likely identification procedure for cases in which police officers already have a suspect (such as in situation N or other circumstances for which the evidence prior to the identification procedure is highly suggestive of guilt). As mentioned earlier, showups tend to be used when law enforcement personnel locate a suspect near the scene of the crime, shortly after it occurred.[33] Match-to-a-general description and mere proximity to a crime scene are not probable cause for arrest, but are cause for a brief investigatory detention.[34] The brevity of an investigatory detention influences how an identification procedure must be conducted as there will likely be insufficient time to construct and administer a proper lineup procedure.[35] Because showups can be conducted much more rapidly than lineups, they appear to fill a gap in criminal investigations in that they can be used in contexts in which lineups are not feasible. Given this context in which showups are used (viz. when police lack the probable cause required to make an arrest and carry out a lineup or when a suspect was not named by an eyewitness), we think it is quite logical to infer that showups would also tend to be associated with lower rates of suspect guilt than are lineup procedures. Moreover, given that mug-book searches tend to be used when police have few (if any) leads and have not narrowed in on a particular suspect, we find it quite likely that a given individual in a mug-book would be even less likely to be guilty than a suspect in a showup procedure. Hence, both how an individual came to be a suspect and the first identification procedure used by police are informative of the likely guilt of the suspect.

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[33]   Showups also may be used long after a crime when police have few leads and insufficient evidence to justify conducting a lineup. Suspects may be "run by" the witness just to see if further investigation of the individual is justified. See Steblay, *supra* note 20.

[34]   *R v Mann*, 2004 SCC 52, [2004] 3 SCR 59 [*Mann*].

[35]   Miko Wilford & Gary Wells, "Eyewitness System Variables" in Brian L Cutler , ed, *Reform of Eyewitness Identification Procedures* (Washington, DC: American Psychological Association, 2013) 23.

VII. BASE RATES IN LINEUPS

An obvious question at this point is: how can the base rate be established? This is important information, but because the ground truth of a suspect's guilt or innocence cannot be determined with absolute certainty, establishing an exact base rate is not possible. Theoretically, the base rate could be 100% with all lineups containing the actual culprit, though in practice, this is clearly not the case. Yet there are a few approaches that may provide a rough idea as to whether the base rate would be high, low, or somewhere in between.

One of these approaches is to determine the maximum base rate possible for lineups. The maximum base rate can be established simply by looking at the number of lineups—each containing a different suspect—that are administered in a case. We discuss the issues assuming each case involves only a single culprit, though the logic extends to cases involving multiple culprits as well.

Many people think that investigations follow a fairly linear pattern: police follow leads, find a suspect, conduct a lineup, get an identification, and the case goes to court. Certainly this happens. However, it may also happen that police find a suspect and conduct an identification procedure, but the evidence leads them to conclude that they have the wrong person; e.g., an identification is not made, the suspect has an alibi, there is a lack of physical evidence, etc. Of course, the police do not stop investigating just because their first (or second, or third, etc.) suspect turned out to be innocent. They seek another suspect—as they should—and the process may repeat itself, with the new suspect being placed in an identification procedure and shown to the same witness.

However, in such cases, every time police present a new lineup with a new suspect to a witness for identification, the maximum possible base-rate of culprit presence in the lineups for that case decreases. In situation U that we described earlier, where a woman's purse was stolen by a single culprit, if she was shown two different lineups that each contain a different suspect, the maximum culprit-present base rate possible for that case is 50%. That is, if only one culprit committed the crime but the witness views two lineups that each contain a different suspect, one of these suspects must be innocent (though it is also possible that both are). Therefore, for a single-culprit crime, the maximum base rate is $1/n$, where n represents the number of lineups (or other ID procedures) conducted in the case, each with a different

suspect. As such, knowing how many lineups, each with a different suspect, officers showed to witnesses in a particular case allows for calculation of the maximum possible base rate for that case. Combining this information across many officers and many cases allows for calculation of the maximum culprit-present base rate for a particular sample. Of course, it would be useful to know how often police use multiple identification procedures when searching for a single culprit.

A survey of 117 Canadian police officers who conducted lineups between 2009 and 2012 was used to estimate the maximum culprit-present base rate in the sample.[36] Officers were asked 1) how many lineups they had administered in the 12 months preceding the survey, and 2) to indicate the largest number of separate lineups, each with a different suspect, they had shown to a single witness for a single-culprit crime. Regarding the first question, the officers in the sample conducted a total of 803 lineups. Regarding the second question, forty-nine of the 117 officers in the survey (41.9%) had, on at least one occasion in the previous 12 months, shown a witness more than one lineup, each with a different suspect. Breaking this down by the maximum number of suspects officers presented to the same eyewitness, 58.1% of officers had only ever shown 1 lineup to a witness, 20.5% of officers reported a maximum of 2, 12.0% reported 3, 3.4% reported 4, 2.6% reported 5, 1.0% reported 6, and 3.4% reported 10. The data showed that officers do not generally go beyond two or three lineups, but that would put the maximum base rate for such cases at 50% and 33.3% (respectively). Moreover, 10.4% of officers reported using 4 or more lineups with the same eyewitness; in other words, these eyewitnesses were given at least three opportunities to identify an innocent suspect and some were given as many as nine or even 10 opportunities to identify an innocent suspect.

This type of information can provide important context in an individual case. For example, suppose a defence lawyer queries how many different suspects and lineups were shown to a witness before their client was identified, and they find out that the witness was shown 10 lineups, each with a different suspect, and their client was identified from the tenth. This would lead to the point that the maximum base rate for that case was 10% and they could ask many relevant questions, e.g., How did police come

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[36] Michelle I Bertrand, *A Survey of Police Eyewitness Identification Procedures* (Doctoral Dissertation, Queen's University, 2014) [unpublished] [Bertrand]. Data from American officers also was collected and produced similar patterns and conclusions.

to suspect their client after the first nine non-identifications? Was there other evidence pointing to the guilt of any of the other nine? What evidence other than the identification points to their client's guilt?

Employing the logic described above, where maximum base rate is equal to $1/n$, and where n represents the number of lineups, Bertrand[37] calculated that 108 out of the 803 lineups conducted by the officers in the sample necessarily had to be absent the culprit. Therefore, at most, 695 of the 803 lineups could have contained the culprit, resulting in a maximum culprit-present base rate of 86.6%.[38] However, we want to make it clear in no uncertain terms that this number does not, and cannot, equal the actual base rate. Aside from a multitude of other factors that can decrease the base rate (e.g., the number of these cases in which witnesses viewed showups with different suspects before the lineups, that used mugbook searches, where there were multiple suspects but police leaned more towards a given suspect who was identified from the first procedure), the calculation relies on the faulty assumption that the guilty party had to have been in one of the lineups. The assumption of perfect police accuracy cannot be true (evidenced by wrongful convictions based on identification errors), so the actual base rate has to be somewhat lower. The base rate in this sample drops quite quickly as soon as the assumptions are adjusted downward in some manner. For example, let the assumption be that there is an 80% chance that one of the suspects in a police investigation is the culprit. This still weighs in favour of police accuracy, yet would drop the maximum culprit-present base rate to 69.3%. In a recent field experiment comparing different lineup procedures in the field, John Wixted and colleagues estimated that only 35% of lineups included the culprit.[39] If there were only a 35% chance that one of the suspects in a police investigation is the culprit, this figure would drop the maximum culprit-present base rate to 30.3% in Bertrand's sample![40]

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37   *Ibid.*

38   *Ibid.* Officers were asked both how many lineups they had administered in the preceding 12 months, and what was the maximum number of lineups they had administered, each with a different suspect, in a case with a single culprit (within the same time frame).

39   *Supra* note 1.

40   Clearly this entire section requires numerous assumptions that need not be correct or precise. The point is simply that many factors will lead to low base rates of suspect guilt and one is the presence of more suspects than culprits in the identification procedures

VIII. HOW ARE SUSPECTS FOR LINEUPS FOUND?

The discussion of base rates in lineups leads to a critical question that has received little attention to date: how did the suspect end up in the lineup in the first place, and what is the *a priori* likelihood that the suspect in a lineup is guilty? That is, are the ways in which police find suspects likely to lead them to find guilty suspects or innocent ones?

Police find suspects in a multitude of ways. Sometimes information from witnesses, informants, and/or forensics points to a specific person. Or, a culprit whose image is captured on Closed-Circuit Television (CCTV) may be recognized by police, parole officers, prison case-workers, or the general public.[41] From a police point of view, regardless of how the name comes up, it is relatively easy to go from the name to the lineup. These methods result in determining named suspects and appear to be associated with a desirable situation in that there is a reasonable suspicion that the suspect is the culprit.[42]

But what happens if there is no information pointing to a specific person? How do police find suspects for lineups in the absence of any information specific to individuals (other than descriptions)? One manner in which law enforcement might come to suspect an individual is if the individual matches the description of the culprit and is near the scene of the crime shortly after its occurrence. Under such conditions, they might use a showup. We now turn our discussion to showups and their impact on base rates.

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employed in a case. This particular factor is of interest because it can be established within a given case by questioning witnesses and police regarding the repeated presentation of identification procedures to witnesses.

[41]   In situations like these where a suspect is named, there is less danger of an innocent suspect identification from the lineup. Rather, the danger of an innocent suspect identification occurs at the time of perception. For example, if the witness thinks the culprit they are viewing is their neighbour but because of a combination of bad lighting, distance from the culprit, expectancies, etc., the culprit is not actually their neighbor, this could lead to a mistaken identification despite prior knowledge of the suspect. Similarly, if a police officer looks at CCTV footage and mistakenly names an individual with whom they have had previous contact, this also could lead to mistaken identification and wrongful conviction. Thus, situation N is not immune from identification error, just less likely to lead to such errors.

[42]   Wells, Yang & Smalarz, *supra* note 13.

IX. SHOWUPS

When law enforcement personnel locate an individual fitting the general description of the culprit near the scene of the crime in both time and space, this is not probable cause for arrest[43] – but it might be cause for including the suspect in a showup procedure (presenting only the suspect to the eyewitness for an identification attempt). An identification from a showup would likely give probable cause for an arrest. Showups fill a void in the criminal justice system because they can be used very efficiently in the field in instances in which law enforcement personnel would not be able to construct a proper lineup.[44] Without being able to use a showup procedure, police would be forced to release potentially guilty suspects back into the community. Showups are an important investigative tool but they are more likely to lead to innocent suspect identifications and produce less reliable evidence than lineups.[45]

X. HOW DO POLICE RESPOND TO SHOWUP DECISION-MAKING?

If the eyewitness identifies the person shown, police will follow some continuation that could include further investigation, appearance in lineups, arrest, charges, etc. This is a completely reasonable and expected course of action.

But how do police respond if the witness does not identify the suspect? One possibility is that they search for another suspect. Similar to why police may show a witness more than one lineup, they cannot abandon the investigation just because the evidence suggests that the first suspect was innocent. For example, consider the sexual assault case of *Neil v Biggers* that went all the way to the United States Supreme Court. In this case, Neil identified Biggers as her assailant from a showup approximately 7 months after being victimized.[46] Over that 7-month period, Neil was presented with numerous lineups and showups, and 30 to 40 photographs of suspects (maximum base rate of 3.33% [30 suspects] to 2.5% [40 suspects]). It seems

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[43]   *Mann, supra* note 34; *Washington v Lambert*, 98 F (3d) 1181 (9th Cir, 1996).

[44]   *Supra* note 19.

[45]   Nancy Steblay et al, "Eyewitness Accuracy Rates in Police Showup and Lineup Presentations: A Meta-Analytic Comparison" (2003) 27:5 Law & Hum Behav 523.

[46]   *Neil v Biggers*, 409 US 188, 93 S Ct 375 (1972) [*Neil*].

reasonable to assume that on some occasions police will use multiple identification procedures if eyewitnesses reject suspects. Indeed, as previously mentioned, over half of the officers in one survey sample had shown a witness two or more lineups, each with a different suspect, for a single-culprit crime on at least one occasion in the 12 months preceding the survey.[47]

Repeated showup (or other) procedures can be seen as an iterative loop: police find a suspect, present the suspect in a showup (or lineup), and if an identification is obtained, stop presenting showups. If an identification is not obtained, police loop back to the first step—find a suspect, conduct a showup (or lineup)—and continue the process of finding suspects and running identification procedures until they get an identification (at which point they investigate the identified suspect further). Of course, they may stop because they run out of suspects but as in the *Neil v Biggers* case[48] there is no reason to believe that additional suspects will not be presented later. Smith et al[49] provided data on showup usage (from the aforementioned police survey by Bertrand[50]) which established that Canadian officers use multiple showups,[51] with most reporting using a maximum of two showups in an individual case. Note that the fact that a given officer presented no more than two showups to a given witness in a case does not preclude the possibility that other officers presented other showups with different suspects to the same witness.

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47 Bertrand, *supra* note 36.

48 *Neil*, *supra* note 46.

49 Andrew M Smith et al, "The Impact of Multiple Show-Ups on Eyewitness Decision-Making and Innocence Risk" (2014) 20:3 J of Experimental Psychology: Applied 247 [Smith et al].

50 Bertrand, *supra* note 36.

51 Note that because of the small number of Canadian officers we do not make definitive claims regarding Canadian procedure. However, data was also collected from American officers and demonstrated they used multiple showups as well. Most reported using a maximum of 2 (54%) or 3 (24%) showups in an individual case, 12% reported a maximum of 4 – 6 showups, and 7% reported a maximum of more than 7 showups, with the highest being 100 showups in a single-culprit case. It is unclear whether American officers simply use showups more than Canadian officers or if the small sample missed Canadian officers who repeatedly use showups at a rate similar to American officers.

XI. WHAT IS THE IMPACT OF REPEATED SHOWUPS ON ACCURACY AND BASE RATES?

The aforementioned paper by Smith et al examined questions regarding the potential impact of repeated showups.[52] After establishing via the survey data that officers did use multiple showups in practice, Smith et al experimentally examined the impact of repeated showups on correct and false identification rates. The data showed that if the culprit was in the first showup, most participants correctly identified the culprit, but when the culprit was absent, large proportions of participants identified the innocent suspect. Exacerbating the already high innocent-suspect identification rate, innocent suspect identifications cumulated with each additional showup, while culprit identifications steadily decreased.

All individuals presented in showups are suspects, so any identification that is not of the culprit is going to be an innocent-suspect identification (i.e., unlike a lineup, it cannot be a filler identification). False identifications of innocent suspects occurred frequently for the first showup in Smith et al's study. [53] The problem with iterative-showup procedures is that the probability of an innocent-suspect identification cumulates with each additional showup. For example, if there is a 30% chance of an innocent suspect identification on the first showup and a 15% chance of an innocent-suspect identification on the second showup, then the total risk of an innocent-suspect identification is 45% across two showups when neither included the culprit. Making matters worse, culprit identifications do not cumulate with the use of additional showups, because there is only one culprit. Even a sequence of two showups resulted in more false than correct identifications in these studies.[54] In Smith et al, if the sequence reached as many as 6 showups false identifications were approximately nine times as likely as correct identifications.[55] Yet it was rare for participants to see that many showups as most would make a selection prior to that point. Indeed, the reason officers may rarely exceed two or three showups is that witnesses

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[52]   Smith et al, *supra* note 49.

[53]   *Ibid.*

[54]   *Ibid.* Alternative analyses included in the Smith paper lead to the conclusion that two showups can produce equal rates of correct and false identifications. But all analyses indicate that accuracy, as indicated by the proportion of identifications that are correct, declines with the number of showups a witness is exposed to.

[55]   *Ibid.*

often will have made an identification, correctly or incorrectly, by the time they have seen three showups.

XII. MUGSHOTS

If the evidence in a case does not point to a specific person, and if showups cannot be used because no one fitting the culprit's description is found near the scene of the crime (or all showups are rejected), police may turn to another visual identification technique to find a suspect: mugshots. Mugshots are photos the police have on file of people who were previously arrested. Police may ask a witness to look through a mugbook (collection of mugshots either as pictures in albums or more commonly now on computers) to see if they recognize anyone in the mugbook as the culprit. If the culprit has been arrested before, their picture may be on file, and perhaps the witness will recognize the culprit from the mugshot. An English field study reported that in 11.2% of offences, there was at least one mugbook viewing for witnesses and that the accused robbers were more than three times as likely to have been selected from a mugbook first rather than directly from a lineup.[56]

If the witness identifies someone from a mugbook, the identified individual is a viable suspect and the witness who selected the suspect (and/or other witnesses) may later be asked to view a lineup containing the suspect. But, the same question we posed earlier regarding showups applies here: what is the likelihood that someone selected from a mugbook is going to be the culprit?

Research has demonstrated that if a culprit is in a mugbook (a presumption that may not be true), and if the culprit is in a relatively early position (such that the witness does not have to wade through too many pictures of others before encountering the culprit's picture), then witnesses are often able to identify the culprit.[57] On the other hand, few people are able to resist choosing from mug books, probably because such large collections of photos will normally include many persons who resemble the

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56 Josh P Davis et al, "Identification on the Street: A Field Comparison of Police Street Identifications and Video Line-ups in England" (2015) 21:1 Psychology, Crime & Law 9 [Davis et al].

57 Roderick C L Lindsay et al, "Using Mug Shots to Find Suspects" (1994) 79:1 J of Applied Psychology 121 [Lindsay, "Mug Shots"].

culprit. For example, Stewart and McAllister found that about 35% of people correctly identified a culprit from a staged crime out of 216 mugshots, but on average, participants selected approximately two innocent people as well.[58] Lindsay et al found that less than 5% of their sample were able to examine a set of 727 photos without making at least one false identification and most made multiple false selections.[59] Given that laboratory photo collections (maximum about 1200) contain dramatically fewer photos than real world mugshot collections (many thousands in large cities and over 1.5 million in at least one set that the authors are aware of), it is likely that the research both overestimates correct identification rates and underestimates false identification rates from mugshots.[60] Also keep in mind that, as with showups, all people selected from mugshots are suspects. Unlike lineups, there are no fillers in mugbooks.

XIII. REPEATED IDENTIFICATIONS OF THE SAME SUSPECT BY THE SAME EYEWITNESS

An important point to keep in mind is that identification procedures are not used in exclusion of each other—oftentimes they are used in conjunction with each other. Below, we outline the effect on the accuracy of eyewitness decisions of using multiple identification procedures with the same witnesses.

Showups, mugbooks, and lineups can be used in a single case, sometimes multiple times, and too often with the same witnesses. For example, if a suspect is identified from a showup, police may later show a lineup that contains the suspect to one or more witnesses including the

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[58]   Heather A Stewart & Hunter A McAllister, "One-at-a-Time Versus Grouped Presentation of Mug Book Pictures: Some Surprising Results" (2001) 86:6 J of Applied Psychology 1300.

[59]   Lindsay, "Mug Shots", *supra* note 57.

[60]   Research indicates that sorting mugshots can increase the chances that a culprit's photo will appear much earlier than would occur using random searching. However, none of the systems tested to date will consistently reduce the number of photos to be examined sufficiently to eliminate high rates of false positive choices from extremely large sets of photos. Also, sorting creates a homogenous pool all resembling the culprit. This will generate numerous false identifications even if smaller numbers of photos are examined (*supra* note 57). Furthermore, sorting techniques can eliminate the culprit if, for example, there is a serious error in the description provided by the witness.

witness(es) who identified the suspect from the showup. Data from the previously mentioned English field study supports this assertion and paints an even more unsettling picture regarding the probative value of visual identification techniques.[61] The authors examined 696 robbery cases, which are perhaps the epitome of stranger identification crimes. The data indicated that lineups rarely were the first identification procedure used. Initial identifications were made 6.67 times more often from showups than lineups and 3.29 times more often from mugshots than lineups, though a lineup was frequently conducted after a showup or mugshot identification. When this was done, 84% of witnesses repeated their identification, i.e., they identified the same person from both the showup or mugshot and lineup. What we do not know from the Davis et al research is whether the showups reported were the first showups the witness saw; all we know is that more than 60% of the suspects arrested were first identified from showups (and many others from mugbooks).[62] However, taken in conjunction with the survey data reported in Smith et al, it is almost certain that some proportion of these showups were not the first ones witnesses saw.[63]

Obviously, it is reasonable to assume some proportion of these identifications were correct, but if a false identification is made from a showup or mugshot, will the same witness later shown the same suspect in a lineup be likely to identify that same person regardless of whether or not the suspect is guilty?[64] Experimental studies support the pattern that once witnesses have identified a person from one procedure, they often repeat the identification from subsequent procedures even when the initial identification was mistaken. For example, across two studies Dysart et al exposed participants to a staged crime followed by a mugbook search and then by a lineup.[65] The culprit was not included in the mugbook. Correct

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[61]   Davis et al, *supra* note 56.

[62]   *Ibid.*

[63]   Smith et al, *supra* note 49.

[64]   See e.g. Tim Valentine et al, "Live Showups and Their Influence on a Subsequent Video Line-up" (2012) 26:1 Applied Cognitive Psychology 1.

[65]   Jennifer E Dysart et al, "Mug Shot Exposure Prior to Lineup Identification: Interference, Transference, and Commitment Effects" (2001) 86:6 J of Applied Psychology 1280; see e.g. John C Brigham & Donna L Cairns, "The Effect of Mugshot Inspections on Eyewitness Identification Accuracy" (1988) 18:16 J of Applied Social Psychology 1394.

identifications (selections of the culprit when present in the lineup) were made by 64% of participants. When the culprit was absent and not previously seen person was in the lineup, 20% of participants falsely identified a lineup member. However, when an innocent person was selected from the mugbook and was included in the subsequent lineup, 61% of participants identified the innocent suspect from the lineup.

In some instances, witnesses are shown multiple lineups—with the same suspect—during the course of an investigation. Sometimes the lineups are presented via different media, such as via a photo lineup and later followed by a live lineup. This is common procedure in New York,[66] and occurred in the well-known North Carolina wrongful conviction of Ronald Cotton in which Jennifer Thompson was a witness.[67] However, research shows that, as happened in the Cotton case where Thompson identified him from both a photo and live lineup (and then later in court), if a witness incorrectly identifies an individual from a first lineup, they are likely to make the same mistaken identification from a second lineup rather than 'correct' the error at the second lineup.[68] Hinz and Pezdek also demonstrated that exposure to an innocent suspect face in a first lineup increased the chances the innocent person would be identified from the second lineup, even if they had not been identified in the first.[69]

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[66] Al Baker & Joseph Goldstein, "New Jersey Ruling on Witnesses May Prod New York to Change", *The New York Times* (26 August 2011) online: <http://www.nytimes.com/2011/08/27/nyregion/new-jersey-ruling-on-witnesses-may-prod-new-york-to-change.html>.

[67] Frontline, "What Jennifer Saw" (25 February 1997), online <http://www.pbs.org/wgbh/pages/frontline/shows/dna/etc/script.html>.

[68] See e.g. Tiffany Hinz & Kathy Pezdek, "The Effect of Exposure to Multiple Lineups on Face Identification Accuracy" (2001) 25:2 Law & Hum Behav 185 [Hinz & Pezdek]; Kathy Pezdek & Iris Blandon-Gitlin, "When is an Intervening Line-up Most Likely to Affect Eyewitness Identification Accuracy?" (2005) 10:2 Legal and Criminological Psychology 247; and Nancy K Steblay, Robert W Tix & Samantha L Benson, "Double Exposure: The Effects of Repeated Identification Lineups on Eyewitness Accuracy" (2013) 27: 5 Applied Cognitive Psychology 644.

[69] Hinz & Pezdek, *supra* note 68.

XIV. GENERAL IMPACT OF MULTIPLE IDENTIFICATION PROCEDURES

The research from all of these areas demonstrates that using repeated identification procedures can increase the dangers of mistaken identification and subsequent wrongful conviction. What may look like strong evidence to the courts—a witness making multiple identifications of the same person—can be problematic as an incorrect decision made in an earlier identification procedure is likely to be made again in later identification procedures. That is, errors are likely to be repeated, not corrected. The probative value of a second identification of the same suspect is exceedingly low and likely does not outweigh its prejudicial effect. Devlin concluded that the only informative identification decision with regard to a particular suspect and witness was the first identification decision.[70]

Similarly, repeated rejections of suspects prior to an eventual identification of the accused may be misinterpreted in court as an indication that the witness is not willing to identify just anyone and thus that the eventual identification is likely to be accurate. However, this pattern will frequently occur simply because witnesses will often choose someone if presented with repeated opportunities to do so, regardless of whether the culprit is ever one of the suspects on offer. There is reason to be concerned about how frequently eyewitness identification errors are made, particularly with repeated identification procedures.

Conversations and consultation with both Police and Crown by the first author indicate that showups and mugshots are viewed as inferior sources of identification evidence by the courts. Perhaps for this reason, often the only identification evidence presented in court is the last identification, a lineup identification. This approach shields the courts from critical information needed to properly assess the weight that a lineup identification ought to be accorded. Similarly, prior identification attempts involving suspects considered prior to the accused are rarely presented in court. Again, this prevents the court from considering the impact such repeated identification procedures have on identification accuracy. Knowledge of how the accused became a suspect, such as via multiple showups, would provide useful context and should lead to caution regarding the lineup identification in relevant circumstances.

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[70]   Devlin, *supra* note 12.

XV. CONCLUSIONS

We have discussed relevant literature on three common identification techniques (lineups, showups, and mugshots) to demonstrate that it is crucial to determine how an individual came to be a suspect in the first place as this informs on the probability that the suspect was the culprit before the identification procedure, and thus the likelihood that police have arrested the true culprit. We now outline more specific conclusions and points of consideration.[71]

1. Identifications From Showups Do Not Provide Strong Evidence of Guilt

Identification from a showup is far from conclusive evidence of guilt because people often are prone to choosing the first person they are presented with in a showup regardless of whether or not the person is the culprit.[72] Though the same can be said of lineups, mistaken identification rates are lower with lineups because fillers "siphon off" mistaken suspect identifications and showups tend to be associated with lower base rates than lineups, which should make us even more skeptical that a suspect identified from a showup is guilty.

2. Repeated Showups Increase the Risk of Mistaken Identification

Identification from any showup other than the first is less useful as evidence of guilt because innocence risk (the probability that an identified person is factually innocent) always increases with repeated identification procedures and thus the identified person is more and more likely to be innocent.[73]

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[71]   While we do provide some examples and recommendations specific to a Canadian context, we contend that the issues we have identified are a concern for all criminal justice systems, and the considerations and recommendations are applicable to most systems.

[72]   Smith et al, *supra* note 49.

[73]   It is worth noting that the increased risk of mistaken identification from repeated identification procedures, and showups in particular, is not due to a change in the accuracy of individual decisions by witnesses. Thus, a witness presented with a fourth showup generally is as likely to identify the culprit if presented as would have been the case from the second or third showup. The problem is that false identifications are cumulative such that all witnesses who identify someone from the first three showups

3. Finding Suspects Via Showups May Lead to Low Base Rates in Lineups

Using showups to find suspects for lineups can lead to low base-rates of culprit-present lineups. The first showups shown to witnesses will lead to many incorrect identifications resulting in low base-rates of suspect guilt for subsequent lineups.[74]

4. Using Repeated Showups is Highly Problematic

Using repeated showups to find suspects for lineups virtually guarantees a low base-rate of suspect guilt in lineups and a high rate of wrongful conviction (unless supported by strong and independent corroborating evidence). As the number of showups increases, the base-rate of target presence in subsequent lineups logically must decrease. Empirically, data suggest catastrophically low target presence in lineups when suspects are obtained after a series of showups shown to witnesses.[75] This just adds to the obvious danger of relying on such procedures for identification evidence or as a source of suspects for lineups, unless the witnesses attempting identifications from the lineups are not the same witnesses who selected the suspects from showups.

To be clear on this last point, if police had multiple witnesses in a case and used one for showup procedures until that witness selected a suspect, that suspect could reasonably be shown to other witnesses provided that the other witnesses had never been exposed to the suspect (or other suspects) as part of the investigation; i.e., the witnesses had not seen any suspect in a previous showup, mugshot search, lineup, or other identification procedure.

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will have been incorrect no matter which person they identified. Furthermore, as more witnesses identify someone from earlier showups, fewer are left to identify the culprit if he is eventually presented. Across cases, this guarantees that innocence risk increases with repeated identification procedures.

[74]   For example, in the Smith et al (*supra* note 49) studies participants made a false identification 41% and 47% of the time from the first presented target-absent showup respectively.

[75]   In the Smith et al (*supra* note 49) studies, participants made a false identification cumulatively 68% of the time from four target-absent showups in the first study and in the second study, false identifications were made 47%, 60%, 73%, and 80% of the time after presentation with 1, 2, 3, and 4 target-absent showups respectively.

5. Using Multiple Identification Procedures Likely Carries Forward Any Errors

Research demonstrates that witnesses will often make the same decision in subsequent lineup procedures as they did in prior procedures. This means that if they misidentified an individual from a showup, mugbook, or earlier lineup they are likely to make the same mistaken identification from a later lineup. Thus, the witness will not self-correct the error. Witnesses testifying in court are often believed, and triers of fact cannot easily differentiate between accurate and inaccurate witnesses.[76]

6. Triers of Fact Need to Know if Multiple Identification Procedures Were Used and Understand the Risks

The courts currently view prior identification attempts as irrelevant so long as they did not involve the accused and/or the witness had not identified someone other than the accused. This is a problem that represents a serious risk of mistaken identification leading to wrongful conviction. If police find lineup suspects via showups or mugshots, and particularly multiple showups—which, based on the evidence seems likely— the base-rate of culprit presence in lineups may be extremely low for those cases. If the witness identified an innocent suspect from a showup, even the best lineup procedures will not protect that innocent suspect from misidentification in a subsequent lineup.

Within Canada, police and the Crown are supposed to provide, via disclosure, "[a]ll inculpatory and exculpatory evidence".[77] This quote is drawn directly from the recommendations made within the FPT Heads of Prosecutions Committee report regarding the best practices Canadian police and prosecutors should be using in order to reduce the chances of wrongful convictions. This statement was also made specifically regarding identification procedures. Clearly, use of weak and particularly repeated identification procedures could be exculpatory (by rendering identification evidence too dangerous to rely on). While showups and mugshot searches certainly are investigative tools, they are clearly also identification procedures and as such, information regarding their usage should be disclosed to provide important context regarding the probative value of any suspect identification. This assertion is supported by another

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[76]   Boyce, Beaudry & Lindsay , *supra* note 11.
[77]   Prosecutions Committee, *supra* note 22 at 57.

recommendation within the FPT report that "[i]t is vitally important that the trier of fact not only be told of the identification but also all the circumstances involved in obtaining it, e.g. the composition of the photo-pack."[78] While the report provides only that single example within the context of a photo-pack (i.e., lineup), we contend that knowledge of how the person came to be a suspect (e.g., via showups or mugshot search) is also an important circumstance in obtaining the identification of which the trier of fact should be aware.

The aforementioned FPT report includes best-practice recommendations for identification procedures, but these are not mandated procedures. Administration of identification procedures varies widely across Canada[79] and there is currently no legislation within Canada regarding how officers should administer identification procedures. However, legislating specific procedures may create other difficulties as this would preclude the possibility of better procedures replacing them in the future (at least without the passing of further legislation).[80]

Given that procedures are not mandated nor uniform across Canada, it is all the more important that triers of fact have full information regarding all identification procedures used in obtaining identifications from witnesses.

XVI. PRACTICAL CONSIDERATIONS FOR ACTORS IN THE CRIMINAL JUSTICE SYSTEM

We assume good faith on the part of the actors in the criminal justice system in that we presume they do want good evidence and they do want to hold the correct person accountable for a crime. As such, there are practical recommendations all levels of the criminal justice system can follow that will demonstrate responsible use of showups, mugshots, lineups, and other identification techniques (e.g., CCTV).

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[78]   *Ibid* at 76.

[79]   McQuiston & Malpass, *supra* note 25; Bertrand, *supra* note 36.

[80]   Implementing a system like the Home Office in England and Wales would provide appropriate flexibility. The Home Office, in consultation with police and experts, issues *Memoranda of Best Practice* that mandate how officers should administer identification procedures. One advantage is that this leads to uniformity in procedures across the country. A second advantage is that this system has a built-in mechanism for revising procedures as better techniques are developed, without having to change legislation.

Police. Police need to consider the source of their suspects in individual cases. Did the witness name the suspect? Did they find a suspect based on a witness-provided description that was relatively unique? Or was the description generic enough to describe many individuals and the suspect was only identified after presenting multiple showups to a witness? Within individual cases, what is their maximum base rate of culprit presence based on the number of different suspects shown to a witness? If their suspect fits a generic description and/or was identified after repeated showups, police should be cautious, especially if they cannot find other evidence connecting the suspect to the crime.

Another practical step is if the witness previously viewed or selected the person from any investigative or identification procedure (e.g., lineup, showup, or mugshot), a subsequent lineup should never be conducted with that witness and suspect. If there were other witnesses to the crime, police should use them for subsequent visual investigative or identification procedures.

Police Departments. Chiefs of police would be wise to consider the cumulative effect of their identification procedures on department-wide base rates of culprit presence in identification procedures. That is, if most suspects are typically initially identified through one or more showups, or through a mugshot search, and then placed in a lineup, they would likely have a fairly low base rate of culprit presence in their lineups. Chiefs could develop departmental guidelines that if suspects are first found through a less reliable identification procedure prior to being placed in a lineup, officers must have evidence aside from an eyewitness identification prior to laying a charge.

Crown. The Crown should ask if repeated identification attempts were made with witnesses—i.e., for information on all identification procedures, regardless of whether or not they involved the same suspect and officers— and what procedures were used. This includes showups and mugshots as they are indeed identification procedures.

Further, the Crown should seriously consider declining prosecution if there is no convincing evidence other than identification from a showup, or if there were multiple identification procedures used with the same witness—especially if they followed one or more showups.

Defence. Defence lawyers should be asking how their client came to be a suspect and whether multiple identification procedures were conducted. They should ask police about usage of showups and/or mugbook searches.

The defence should also ask witnesses if they were ever asked to decide if someone else was the criminal during the investigation of the crime (i.e., shown other suspects). Further, if the witness responds affirmatively, they should ask how many times and whether they were asked more than once if the accused was the culprit (i.e., shown the accused in both a showup or mugshot search followed by a lineup).

Judges. Judges should be open to defense arguments that the use of repeated identification attempts renders the identification evidence of a witness inadmissible because of the high risk of mistaken identification. Higher courts need to support the decisions of lower court judges who reasonably exclude such evidence.[81]

Should Usage of Showups be Banned? In short: no. It may seem tempting to just forbid the use of showups altogether, but this is unrealistic. In cases where culprits are not known to witnesses, police have limited avenues to find criminals and showups will, in at least some cases, be their best chance of doing so. What we argue is that when suspects are found via such methods and no other convincing evidence points towards the suspect as the actual culprit, police and the Crown should be conservative in their arrest and prosecution of such individuals.

Focus on the Witness as Well as the Accused. Combining all of the concerns we have raised suggests the necessity of a broadened focus when considering criminal cases. Generally, early aspects of investigations focus on witnesses (and forensics) in efforts to determine what happened and who was involved. However, once a suspect is identified, the focus shifts to the accused such that the actions and decisions from witnesses are seen in relation to the accused. Does the culprit fit the witness' description? Did the witness identify him? Does he have a criminal record? What can be lost is information about the witness' actions not related to the accused. Did the witness attempt identifications of other suspects? How many such attempts were made? Answers to these questions are not irrelevant. They are directly predictive of the likelihood that the accused is the culprit (base rate) such that the more prior identification attempts the witness made, the less reliable the evidence is that the witness identified the true culprit.

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[81]   We are not suggesting that repeated identification procedures should always lead to exclusion but that the court should be open to the possibility that too many showups preceded the lineup, etc.

To the extent that triers of fact lack this information and guidance interpreting it, identification evidence may be accorded more weight than it deserves and wrongful convictions will result.[82] Guilty pleas also may be inappropriately obtained based on the accused's fear that being identified by an eyewitness will lead to their conviction, even if they are factually innocent.[83]

A Final Point. Showups, mugshots, and lineups are important visual identification procedures and investigative tools which help police identify both potential suspects and likely culprits. Yet, as we have demonstrated, these techniques can be problematic without proper considerations. The answer is not to ban such techniques but rather to use them responsibly, realize their limitations, and act accordingly.

A sergeant with the Ontario Provincial Police explained that he trained his officers and detectives to think of an eyewitness identification as the beginning of the investigation, not the end. The identification made it clear who to focus on. If the suspect was actually the culprit, it should be possible to find additional, convincing evidence that the suspect committed the crime *independent* of the eyewitness identification. If such evidence cannot be found, everyone should question the accuracy of the identification.

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[82]   Of all cases decided in Canada for 2013/2014, convictions were 15.8 times more likely than acquittals. Note that guilt is the most likely outcome in Canadian criminal courts. Given this fact, it is all the more important that the justice system is appropriately weighting the evidence used in determining guilt. See Statistics Canada, *Adult criminal court statistics in Canada, 2013/2014,* by Ashley Maxwell (Ottawa: 28 September 2015).

[83]   US, The National Registry of Exonerations, *Exonerations in 2016* (Irvine, California: University of California Irvine, 2017) at 7. Of the 166 exonerations recorded by the National Registry of Exonerations in 2016, 74 (i.e., 44.6%) had plead guilty.