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PATHWAYS TO SUSPICION: CAUSES AND CONSEQUENCES OF INNOCENT SUSPECTS' ORIGIN OF IMPLICATION

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I. INTRODUCTION

The only trouble Marcus Cardin¹ expected when police stopped his car was for the open container of beer in his cup holder. The driver, his friend, had not been drinking and there was otherwise nothing illegal in the vehicle. Instead of the slap on the wrist Cardin was expecting, this traffic stop ultimately resulted in him being imprisoned for over a

1. Throughout this article, names and other identifying information have been altered in order to preserve defendants' anonymity, a condition of the human subjects' protection plans controlling the dataset of this study. Therefore, pursuant to these protection plans we are unable to provide the underlying documents from which the dataset originated. We would also like to thank James Doyle for providing us with literature relating to checklists.

decade. Several weeks earlier, two men had violently attacked and raped a young woman in a parking lot before taking off in her car. The victim provided investigators with descriptions of the two men, one of whom had short cropped hair and a single stud earring. At the time of the traffic stop, so did Cardin. Based on the officer's suspicion that Cardin matched the description provided by the victim, Cardin's picture was included in a photo array, from which the victim identified him as one of her assailants. Despite the co-perpetrator's sworn statement that Cardin was not involved in the crime, Cardin was ultimately convicted of rape. He was imprisoned for years until DNA evidence identified the real perpetrator, whose right ear was pierced; Cardin's piercing was in his left.

It is likely there were multiple moments throughout the criminal justice process when investigators could have realized that Cardin was, indeed, innocent of the crime in question. The most significant of these moments, however, came early in the investigation when the officer conducting the traffic stop believed that Cardin matched the description provided by the victim. This first spark of suspicion, though appropriate and justified, landed the innocent Cardin in the photo array shown to the victim. Had the officer's original conclusion been different, none of the subsequent events—Cardin's arrest, trial, conviction, and imprisonment—would have occurred.

The misclassification of an innocent person as a suspect is “the first and most consequential error police will make”² and the one element shared by all cases of erroneous convictions. The initial suspicion of an individual is a pivotal point in an investigation. After a suspect has been identified, a police investigation often focuses on building a case against that person, rather than collecting additional information about the crime.³ Thus, the initiation of suspicion is also the first step toward tunnel vision—the tendency for police to investigate one suspect to the

2. Richard A. Leo & Steven A. Drizin, *The Three Errors: Pathways to False Confession and Wrongful Conviction*, in *POLICE INTERROGATIONS AND FALSE CONFESSIONS: CURRENT RESEARCH, PRACTICE, AND POLICY RECOMMENDATIONS* 9, 13 (G. Daniel Lassiter & Christian Meissner eds., 2010).

3. See MARTIN INNES, *INVESTIGATING MURDER: DETECTIVE WORK AND THE POLICE RESPONSE TO CRIMINAL HOMICIDE* 234 (2003); Peter Stelfox & Ken Pease, *Cognition and Detection: Reluctant Bedfellows?*, in *CRIME SCIENCE: NEW APPROACHES TO PREVENTING AND DETECTING CRIME* 191, 195 (M. J. Smith & N. Tilley eds., 2013).

exclusion of all others, even “ignoring or suppressing evidence that points away from guilt.”⁴ The concept of tunnel vision has been extensively discussed as an important factor in understanding how wrongful convictions occur.⁵ The events that trigger tunnel vision in the early stages of a police investigation, however, have received little scholarly attention.⁶

To address this gap in the literature, we previously conducted a quantitative analysis of 460 cases of innocent individuals erroneously identified as suspects in criminal cases.⁷ This analysis of innocent defendants’ *origin of implication*, i.e., the way a defendant became a suspect, centered on creating an origin of implication typology, determining the frequency of each implication type, and establishing which defendant and case characteristics predicted a defendant’s method of implication.⁸ The present paper builds upon the results reported in this previous study by integrating them with both the investigative policing literature and existing wrongful conviction scholarship. In synthesizing these bodies of literature, we provide police investigators with concrete recommendations to reduce instances of false suspicion. Examining the various pathways through which innocent defendants become suspects allows us to identify common pitfalls in the early steps of an investigation, while shedding light on how investigators can mitigate the effects of tunnel vision and prevent the pursuit of an innocent suspect.

4. Dianne L. Martin, *Lessons About Justice from the Laboratory of Wrongful Convictions: Tunnel Vision, the Construction of Guilt and Informer Evidence*, 70 UMKC L. REV. 847, 848 (2001).

5. See D. Kim Rossmo, *Cognitive Biases: Perception, Intuition, and Tunnel Vision*, in CRIMINAL INVESTIGATIVE FAILURES 9 (D. Kim Rossmo ed., 2009); Brent Snook & Richard M. Cullen, *Bounded Rationality and Criminal Investigations: Has Tunnel Vision Been Wrongfully Convicted?*, in CRIMINAL INVESTIGATIVE FAILURES 71 (D. Kim Rossmo ed., 2009); see generally *id.*; Keith A. Findley & Michael S. Scott, *Multiple Dimensions of Tunnel Vision in Criminal Cases*, 2006 WIS. L. REV. 291 (2006).

6. See Marvin Zalman, *The Detective and Wrongful Conviction*, in WRONGFUL CONVICTION AND CRIMINAL JUSTICE REFORM: MAKING JUSTICE 145, 150 (Marvin Zalman & Julia Carrano eds., 2014).

7. Belén Lowrey-Kinberg et al., *Origin of Implication: How do Innocent Individuals Enter the Criminal Justice System?* (2017) (unpublished manuscript) (on file with the California Western Law Review).

8. See generally *id.*

In Part II, we summarize the key quantitative findings of our previous study. In Part III, we discuss the eight origin of implication categories in detail by providing case examples, connections with the literature, and implications for police investigators. In Part IV, we integrate our findings with previous work on tunnel vision and provide recommendations on how to mitigate its effects through the use of an investigatory checklist. Finally, in Part V we offer suggestions for future research.

II. ORIGIN OF IMPLICATION FRAMEWORK

In our first attempt to systematically assess how innocent defendants become suspects in violent felony investigations, we analyzed cases from the dataset of the Preventing Wrongful Convictions Project.⁹ Funded by the National Institute of Justice¹⁰ and directed by one of the co-authors of this paper, the project examined 460 cases of factually innocent defendants; that is, no defendants in the dataset committed the crime for which he or she was charged.¹¹ Due to the small number of female defendants in the dataset, we did not include their cases in the final statistical analysis and frequencies. We supplemented the original dataset with information regarding the ways in which the defendants became suspects, including information gathered from case documents, newspaper articles, and online defendant profiles.¹² Building on patterns in investigative policing practices,¹³ we created a coding scheme to classify the methods by which suspects were first implicated.

9. See Jon B. Gould et al., *Predicting Erroneous Convictions: A Social Science Approach to Miscarriages of Justice*, NAT'L INST. OF JUST. (2013).

10. NAT'L INST. OF JUST., <https://www.nij.gov/about/Pages/welcome.aspx> (last visited Apr. 18, 2018).

11. Jon B. Gould et al., *Predicting Erroneous Convictions*, 99 IOWA L. REV. 471, 483 (2014).

12. See generally Lowrey-Kinberg et al., *supra* note 7.

13. See, e.g., ASS'N OF CHIEF POLICE OFFICERS, MURDER INVESTIGATION MANUAL (Nat'l Ctr. for Policing Excellence 2006) [hereinafter MURDER INVESTIGATION MANUAL].

TABLE 1. ORIGIN OF IMPLICATION CATEGORY
DESCRIPTIONS AND FREQUENCIES

Origin of Implication	Frequency
Victim/eyewitness identification <i>Direct implication or identification using mug book*</i>	96 (21.62%)
Intentional misidentification <i>False identification provided knowingly, either maliciously or non-maliciously**</i>	86 (19.37%)
Civilian identification <i>Third-party identification based on description or composite; anonymous tips</i>	52 (11.71%)
Officer misidentification <i>Identification based on description/composite</i>	44 (9.91%)
Physical proximity <i>Primary suspicion initiated due to being close to the crime scene</i>	27 (6.08%)
Social proximity <i>Primary suspicion initiated due to relationship with victim</i>	35 (7.88%)
Physical evidence <i>Initial suspicion due to forensic evidence or items in possession</i>	29 (6.53%)
Criminal activity <i>Initial suspicion due to previous or concurrent criminal acts</i>	25 (5.63%)
Other <i>Other forms of initial suspicion</i>	21 (4.73%)
Unknown <i>Origin cannot be determined from available information</i>	27 (6.08%)

* Suspects identified in lineups or photospreads excluded, as suspicion must already have been initiated for their inclusion.

** Malicious intentional misidentification includes cases such as false rape allegations, whereas non-malicious intentional misidentification includes cases such as implication of others due to duress. Note: Frequencies are as a percentage of the final 444 male defendants in the dataset. All percentages are rounded to two decimals.

We found that nearly 90 percent of defendants in the dataset became suspects in one of the following eight ways: victim or witness identification, officer identification, citizen identification, intentional misidentification, physical evidence, criminal activity, social proximity, and physical proximity.¹⁴ The remaining 10 percent of suspects either fell into in an “other” category, or the origin of their implication was unknown. Each method of implication, along with its accompanying frequency in our dataset, is outlined in Table 1.¹⁵ All implication types are described in detail in the following section, but it is important to note that when the defendant was directly identified by a victim, witness, officer, or civilian, our typology distinguishes between two categories: unintentionally mistaken identifications and intentional misidentifications. Unintentionally mistaken identifications occurred when a victim, eyewitness, officer, or citizen identified a suspect fully believing in the suspect’s guilt. Conversely, intentional misidentifications were the result of a person knowingly implicating an innocent individual.

In addition to quantifying the investigatory methods that led defendants to become suspects, we tested whether defendant and case characteristics predicted the method of implication. We found that the defendant’s race, the relationship between the defendant and the victim, and whether the victim survived the crime were the most significant factors in determining how a defendant became a suspect. We also found that white defendants were more likely than non-white defendants to be intentionally misidentified as suspects, while non-white defendants were more likely than white defendants to be the subject of honestly mistaken victim and eyewitness identification. When a defendant and a victim knew each other, defendants were more likely to be implicated in the crime due to their social relationship, while they were less likely to become suspects via officer identifications or due to their criminal history. Furthermore, defendants with cognitive or mental impairments were more likely to become suspects due to unintentionally mistaken citizen identifications and were less likely to become suspects due to victim or eyewitness identification or intentional misidentification. Defendants with a criminal history were more likely to come under suspicion concurrently or soon after the

14. Lowrey-Kinberg et al., *supra* note 7, at 8.

15. *See supra* Table 1.

occurrence of the crime under investigation. The age of the defendant was also significant; the older a defendant was, the more likely he was to become a suspect due to social proximity, while the younger he was, the more likely he was to come under suspicion due to intentional misidentification. Finally, in cases with a surviving victim, the defendant was more likely to become a suspect due to unintentionally mistaken victim, eyewitness, or officer identifications and less likely to be implicated via their social relationship. These results are summarized in Table 2.

TABLE 2. DEFENDANT AND CASE CHARACTERISTICS THAT PREDICT THE METHOD OF IMPLICATION

	Victim ID	Officer ID	Citizen ID	Intentional Mis-identification	Criminal Activity	Social Proximity
Age	-	-	-	Decrease		Increase
Defendant white	Decrease	-		Increase	-	-
Criminal history	-	-	-	-	Increase	-
Defendant knew victim	-	Decrease	-	-	Decrease	Increase
Defendant cognitive/mental impairment	Decrease	-	Increase	Decrease		-
Victim survived	Increase	Increase	-	-	-	Decrease

These findings show that innocent defendants' origin of implication can be described by a set of categories developed from the investigative policing literature. Further, certain defendant and case characteristics can predict how an innocent defendant became a suspect. These connections, and what they teach us about best practices in criminal investigations, are outlined in the following section. Additionally, the present paper draws on details from cases in the Predicting Wrongful

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Convictions Project¹⁶ dataset to illustrate how the findings in our quantitative study occur in the context of criminal investigations. In doing so, we demonstrate the various pathways through which tunnel vision can take hold during investigations.

III. ORIGIN OF IMPLICATION CATEGORIES AND THEMES

The quantitative findings reported by Lowrey-Kinberg et al.¹⁷ are an important first step toward understanding how suspects are initially implicated, but the implication processes are better understood by turning more closely to the cases. In this section, we describe the eight primary ways in which innocent defendants were identified as suspects, as well as those cases that were placed in the “other” and “unknown” categories. Within each subsection, we provide themes to show how each theoretical category of implication occurs in practice. We also draw connections with prior research and propose ways in which our findings can inform police practices.

A. *Victim or Eyewitness Identification*

Defendants in the dataset most often became suspects because they were directly identified by a victim or eyewitness to the crime. Implication via victim or eyewitness identification occurred for approximately 21 percent of the defendants in our dataset.¹⁸ In these cases, the identification of the defendant was incorrect (i.e., the defendant was innocent), but the person making the identification did not believe he or she had made a mistaken identification. As such, these are cases of honest misidentifications, in contrast to the intentional misidentifications as described in Subsection D.

When the victim in a case survived an attack, the first link between a defendant and the crime was more likely to be from victim or eyewitness identification than when the victim did not survive.¹⁹

16. See Gould et al., *supra* note 9.

17. See Lowrey-Kinberg et al., *supra* note 7.

18. *Id.* at 34. Note that this is the percentage of cases in which victim or eyewitness identification was the *first* link between the defendant and the crime. As illustrated in Part III, victim or eyewitness identifications were prevalent throughout a large number of cases at subsequent points in the investigation.

19. *Id.* at 17.

Certainly, this makes intuitive sense, but it is also consistent with previous wrongful conviction and police investigation research, which suggests that murder and non-murder cases are investigated differently due to the victim's ability to provide an identification.²⁰ Additionally, when the defendant was non-white, he was more likely to become a suspect through identification by the victim or an eyewitness, a finding that is consistent with the body of literature on the unreliability of cross-race identifications.²¹

Within cases involving victim or eyewitness identification, we examined how the initial stages of the police investigation unfolded. This led us to conclude that honest misidentification by victims and eyewitnesses occurred in several ways, including through direct naming of someone known to the victim, direct implication of a stranger, and photograph identification.

Direct naming of innocent defendants occurred when the victims believed they recognized the perpetrator and identified that person by name, with the honest belief that this person was the perpetrator. For example, a victim in a rape case believed her distant cousin was one of several men who attacked her and directly named him to investigators. In another case, a male defendant's young daughter believed that he had abducted and raped her.

In addition to the identifications based on appearance, mistaken identifications occurred in several cases when victims thought they recognized the voice of the perpetrator as belonging to a person with whom they were previously familiar. Victims' inaccurate voice attributions are in line with the literature surrounding voice identification (also known as *earwitness* identification), which indicates that witnesses have difficulty in accurately identifying

20. See Samuel R. Gross et al., *Exonerations in the United States 1989 Through 2003*, 95 J. OF CRIM. L. & CRIMINOLOGY 523, 542 (2005) ("A murder . . . frequently leaves no surviving eyewitnesses, which forces the police to search for other types of evidence—evidence that is usually more difficult to obtain than eyewitness identifications.").

21. See, e.g., Christian Meissner & John C. Brigham, *Thirty Years of Investigating the Own-Race Bias in Memory for Faces: A Meta-Analytic Review*, 7 PSYCHOL., PUB. POL'Y & L. 3, 3 (2001) (discussing the phenomenon that generally peoples' memory for human faces is better regarding members of their own race as opposed to other, less familiar races).

voices.²² In all earwitness identification cases in our dataset, there is no indication that the victims intentionally implicated an innocent person, despite the fact that the defendant and the victim previously knew each other.

In some cases, the victim directly named the suspect soon after the attack. In others, the victim directly identified a stranger in the weeks or months following the incident. These identifications commonly occurred when victims were in public (e.g., parked at a gas station, shopping at a store, or walking in the neighborhood) and believed they recognized the person who had attacked them. For example, while at school a number of weeks after the attack, a rape victim believed she recognized a worker there as her attacker and identified him to police. Despite the defendant having an alibi, police pushed forward with the investigation and the victim remained steadfast in her identification of him as the rapist. Several other cases followed a similar pattern: the victim spontaneously identified a defendant in the course of her daily activities, with the time lapse between the crime and these spontaneous identifications varying from a few hours up to several months.

Spontaneous identifications with a time delay appear to be particularly problematic for the innocent suspect, a finding also supported by eyewitness identification research.²³ As opposed to immediate identifications, persons making identifications after a time lapse are found to have decreased accuracy²⁴ and increased susceptibility to suggestibility,²⁵ despite the victim's increased confidence in his/her identification.²⁶ These findings were primarily

22. See generally LAWRENCE M. SOLAN & PETER M. TIERSMA, *SPEAKING OF CRIME: THE LANGUAGE OF CRIMINAL JUSTICE* (2010); A. Daniel Yarmey et al., *Commonsense Beliefs and the Identification of Familiar Voices*, 15 *APPLIED COGNITIVE PSYCHOL.* 283 (2001).

23. See, e.g., Brian L. Coulter, *Sources of Contamination in Lineup Identifications*, *THE CHAMPION* 16, 17 (May 2017).

24. David Egan et al., *Eyewitness Identification: Photographs vs. Live Models*, 1 *LAW & HUM. BEHAV.* 199, 204 (1977).

25. Pedro M. Paz-Alonso & Gail S. Goodman, *Trauma and Memory: Effects of Post-Event Misinformation, Retrieval Order, and Retention Interval*, 16 *MEMORY* 58, 71 (2008).

26. Kimberly Mudd & John M. Govern, *Conformity to Misinformation and Time Delay Negatively Affect Eyewitness Confidence and Accuracy*, 6 *N. AM. J. OF PSYCHOL.* 227, 235 (2004); James Sauer et al., *The Effect of Retention Interval on the*

produced in laboratory settings, but the cases in our dataset show a potential effect on actual police investigations as well. Indeed, police investigators should be particularly cautious of identifications made by victims or eyewitnesses after a significant time lapse, as these may be less reliable than more immediate identifications.

Finally, photo-based mistaken identifications of defendants by victims and eyewitnesses were also common within our dataset. In these cases, victims or eyewitnesses did not immediately name defendants and were asked to look through mug books in order to identify a suspect. Often, they examined hundreds of pictures before recognizing a suspect whose photo was present in the mug book.²⁷ Within these cases of mug book identifications, we examined how defendants' pictures came to be in the mug book itself. Although most defendants were present in mug books or lineups due to prior criminal involvement—often for a crime different than the one under investigation—several defendants were merely *fillers*, either pulled from police mug shots already on record or asked to stand in for the lineup in person.

Despite the tendency to conflate mug book identifications and live or photo lineup identifications, there is evidence to suggest that different mechanisms are at play in using mug books as opposed to lineups.²⁸ For instance, while many photo lineups are now conducted sequentially, mug book identification procedures are usually simultaneous due to the large number of pictures to view.²⁹ It could be possible that one of these methods could threaten the accuracy and

Confidence-Accuracy Relationship for Eyewitness Identification, 34 LAW & HUM. BEHAV. 337, 343 (2010).

27. We did not consider these mug book-based identifications to be instances where criminal involvement was the basis for suspicion. As explained in the section on implication via criminal activity, the suspect's involvement in a criminal activity must have been the basis for suspicion. In contrast, in mug book identification cases, the victim or witness recognized the *appearance* of the suspect among those of many other mugshots, none of which were yet suspects.

28. See Hunter A. McAllister, *Mug Books: More Than Just Large Photospreads*, in THE HANDBOOK OF EYEWITNESS PSYCHOLOGY: MEMORY FOR PEOPLE 35 (R.C.L. Lindsay et al. eds., 2014).

29. *Id.*

success of witness identifications, though more research is needed on this issue.³⁰

Unintentional mistaken victim and eyewitness identifications may come about via a wide variety of investigatory mechanisms. In some cases, victims provided investigators with a spontaneous identification. In others, investigators actively engaged with victims to identify suspects via mug book photos. These findings suggest that the investigation in some of our cases may not have been significantly impacted, even had certain eyewitness identification recommendations put forth in the literature been implemented. While lineup or photo array recommendations, such as showing the victim only one suspect at a time, may be implemented by police, it is a considerably greater challenge to guard against a victim's spontaneous identification. Consequently, even if a proper lineup is conducted after the initial spontaneous identification, this first link between the defendant and the crime remains a potential source of bias and tunnel vision for both the victim and investigators.

B. Officer Identification

A portion of the defendants in our dataset (approximately 10 percent) were first named as suspects by on-duty law enforcement officers.³¹ These defendants originally became suspects after police officers saw or heard a description of the perpetrator (produced by the victim or eyewitness) and linked the defendant to the crime. It is important to note that this category does not include cases where we found evidence of officers making an intentional error in their identification of the defendant. Rather, this category only includes cases where it appears that officers honestly misidentified innocent suspects.³²

A defendant was more likely to become a suspect due to officer identification when the victim was alive and the defendant and the

30. See *id.*; Hunter A. McAllister et al., *Presentation Procedures in Lineups and Mug Books: A Direct Comparison*, 22 APPLIED COGNITIVE PSYCHOL. 193 (2008).

31. Lowrey-Kinberg et al., *supra* note 7, at 11.

32. While there were rare cases of officers knowingly casting blame on an innocent person, these were classified under intentional misidentification, discussed in a separate subsection.

victim were strangers.³³ Together, these findings suggest an important investigatory role played by the surviving victim that is consistent with reported investigative policing practices.³⁴ Victims who know their attackers will most likely be able to directly implicate them by name. However, when the victim and the defendant are strangers, investigators will elicit a description of the attacker and, in some cases, develop a composite sketch.³⁵ When subsequently shown to officers, this description or composite can either bring a known offender to mind or provide criteria for officers searching an area.

These patterns are illustrated in a number of cases from our dataset. In some, officers were previously familiar with the defendant due to an unrelated incident. The officer became suspicious after hearing a description of the perpetrator's physical characteristics from a victim or eyewitness or seeing a picture or composite sketch. For example, a victim in a rape case was attacked by an unknown man and provided police with a physical description of her attacker. The victim's description resulted in a sketch posted to bulletin boards at a nearby police department. Within a few weeks, an officer reported that he recognized the sketch and identified the defendant by name. Only after the officer recognized the victim's description was the defendant placed into a lineup and subsequently identified by the victim. Although the victim's description was key to producing the sketch, the officer was ultimately responsible for the defendant being placed in the lineup.

In other cases, police canvassed the vicinity of the crime and found an individual matching the description of the perpetrator in the area. The victim or eyewitness later identified the defendant as being the perpetrator. It appears that in cases in our dataset involving police-canvassing, the cases were investigated correctly and officers unintentionally made mistaken identifications of the defendant. In one such case, a rape victim gave police a description of the attacker,

33. Lowrey-Kinberg et al., *supra* note 7, at 17.

34. See JOHN BURROWS ET AL., UNDERSTANDING THE ATTRITION PROCESS IN VOLUME CRIME INVESTIGATIONS (2005) [hereinafter HOME OFFICE RESEARCH REPORT], <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.617.2638&rep=rep1&type=pdf>; ANDY FEIST ET AL., INVESTIGATING AND DETECTING RECORDED OFFENCES OF RAPE (2007), <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.606.1231&rep=rep1&type=pdf>; INNES, *supra* note 3.

35. Dawn McQuiston-Surrett et al., *Use of Facial Composite Systems in U.S. Law Enforcement Agencies*, 12 PSYCHOL., CRIME & L. 505, 505 (2006).

including his race, clothes, and facial hair. Law enforcement in the vicinity of the attack stopped the defendant. His physical characteristics matched two of the three features provided by the victim, causing immediate suspicion from the officers. After this initial suspicion, the victim later identified the defendant as the attacker. Rather than being based on a single factor, the officers' identifications are often in tandem with other forces to cast suspicion on a suspect.

These patterns in our data suggest that police may benefit from receiving training on the limitations of victim recollection and descriptions. For example, officers should be versed in the possibility that a vague or imprecise description may match at least one person in the area, even someone who is not guilty. Moreover, our analysis reveals that a key sequence in officer identification cases is the combination of the victim's description of a perpetrator and the officer's subsequent identification. Without the description from the victim, later identification by an officer would be impossible. This pattern suggests that there may be an interactive effect between the accuracy of victims' or witnesses' descriptions and officers' subsequent identifications based on those descriptions. Although research to date has rarely examined the effect of compounding errors in an investigation, our findings suggest that those interactions may influence the likelihood of an innocent defendant becoming a suspect.

Further, although officer identifications constituted a tenth of all initial implications in our dataset, to our knowledge, few studies have examined the accuracy of officer identification or officers' memory regarding faces. Questions remain as to whether police officers are more accurate in their identification of suspects than victims or eyewitnesses. It is possible that officers' professional experience and increased exposure to these situations may cause them to be more accurate in their identifications of civilians. Consequently, this may present a fruitful area for future research and help develop corresponding policy recommendations.

C. Civilian Identification

Non-eyewitness civilians were the first to identify the defendants in 11.71 percent of the cases in our dataset.³⁶ In these cases, civilian or

36. Lowrey-Kinberg et al., *supra* note 7, at 34.

off-duty members of law enforcement were the first to draw a link between the perpetrator and the innocent defendant. Off-duty law enforcement officers' identifications were included in this category because the weight of these identifications as evidence are likely to be comparable to those made by civilians, as opposed to on-duty law enforcement officers.³⁷ Like the other forms of identification discussed thus far, the civilians in these cases did not intentionally provide an incorrect identification. Instead, they appear to have genuinely believed that the identification they made was correct.

In our dataset, civilian misidentifications of defendants sometimes included cases in which a person familiar with the defendant recognized the victim's description of the perpetrator. Family, friends, neighbors, and coworkers of the victim or defendant often responded to a description of the perpetrator. For example, after a white woman was raped at a workplace, she gave police a description of her African American attacker. In an attempt to identify the perpetrator, the police distributed this cross-racial description in attempting to find the perpetrator. A white employee at the location of the crime named the defendant as resembling the victim's description. The defendant was placed into a photo array and positively identified by the victim. In this case, the potential for error in cross-racial identification occurred on three levels—not only in the initial formulation of the description by the victim but also in the ensuing identifications by both the civilian and the victim. This finding adds further weight to our call for additional research concerning compounded errors occurring at different stages of the police investigation.³⁸

In other cases, civilians did not previously know the victim or the defendant when making their identifications. These civilians were sometimes members of the public who recognized a "wanted" poster or composite sketch in the newspaper. Here, unknown callers were the

37. See *Webster v. State*, 474 A.2d 1305, 1326 (Md. 1984) (holding that the evidentiary weight of an off-duty police officer's identification of a suspect was a matter for the jury to decide).

38. Note that our findings did not find a significant correlation between defendant race and citizen identifications as the origin of implication. Nonetheless, the identification literature suggests that defendant race may be a relevant factor in accuracy of identifications. See, e.g., Meissner & Brigham, *supra* note 21, at 3 ("[O]wn-race faces are better remembered when compared with memory for faces of another, less familiar race.").

first to name an innocent defendant as a suspect in several cases. Following such phone tips, defendants were often included in a lineup and identified by the victim. In these cases, there was no indication that the identifications were knowingly false or malicious; rather this was the result of well-intentioned citizens attempting to solve crimes. In the dataset, the prevalence of mistaken citizen identifications adds to the often-cited limitations of perpetrator descriptions as being helpful in generating accurate information in investigations.³⁹

We found that defendants with a cognitive or mental impairment⁴⁰ were more likely than others to be mistakenly identified by civilians. There are two sources within the literature that provide potential explanations for this finding. First, research has shown that the general public views individuals with mental illnesses as more dangerous,⁴¹ which could increase their tendency to view these people with suspicion. Second, certain cognitive impairments affect the person's social skills and understanding of culturally appropriate behavior.⁴² Therefore, it is possible that the cognitively or mentally impaired defendants in our sample engaged in behavior that could be interpreted by the general public as suspicious or potentially criminal as a result of their impairment. This in turn could have increased the likelihood that police questioning about suspicious persons would bring the individual to mind.

The above-mentioned explanations from the literature are consistent with patterns we discovered in police investigations for a number of cases. For example, while attempting to identify suspects in a woman's rape and murder, the police were given tips by two citizens from the victim's neighborhood that they should investigate the

39. See Nancy Steblay et al., *Eyewitness Accuracy Rates in Sequential and Simultaneous Lineup Presentations: A Meta-Analytic Comparison*, 25 LAW & HUM. BEHAV. 459, 470 (2001).

40. Following on the Preventing Wrongful Convictions Project, cognitive or mental impairment was defined in this study as including "emotional and personality disorders as well as chemical addictions that affect behavior or memory loss" and/or an IQ below 80. Jon B. Gould et al., *supra* note 9, at 210.

41. Bruce G. Link et al., *Public Conceptions of Mental Illness: Labels, Causes, Dangerousness, and Social Distance*, 89 AM. J. OF PUB. HEALTH 1328, 1328 (1999).

42. David B. Feldman & Christian S. Crandall, *Dimensions of Mental Illness Stigma: What About Mental Illness Causes Social Rejection?*, 26 J. OF SOC. & CLINICAL PSYCHOL. 137, 138 (2007).

defendant. Both citizens described the defendant as recently having been in the neighborhood and as having acted strangely. However, the defendant had significant mental impairments, which may have accounted for the neighbors' characterization of his behavior. After these identifications, the police interrogated the defendant, who eventually confessed.

Wrongful conviction literature has certainly considered a defendant's cognitive or mental status as a source of false confessions.⁴³ In addition, the increased chance of being identified by civilians may be another way in which defendants with cognitive impairments are at a disadvantage in the criminal justice system. This issue merits further research, but in the interim, investigators should be aware of the possible biasing effect of cognitive and mental disabilities. Given the susceptibility of the cognitively impaired to erroneous identifications and false confessions (should the investigation progress that far), our results suggest that investigators may need to be particularly careful in scrutinizing whether identifications of suspects with cognitive impairments are accurate.

D. Intentional Misidentification

In addition to identifications that were *unintentionally* erroneous, many defendants in our dataset were *intentionally* misidentified by a person who knew that the defendant was not guilty of the crime. In fact, intentional misidentification accounted for approximately 20 percent of cases in our dataset, making this the second most common origin of implication after unintentionally incorrect victim or eyewitness identification.⁴⁴ Malicious or harmful intent was present in some cases of intentional misidentification, but it was not a requirement for a case to be placed into this category, the defining characteristic being mere intentionality.⁴⁵ Intentional misidentifications were present in various forms, primarily false rape accusations and implication by a co-defendant while under police pressure. There were also rare instances

43. See Saul M. Kassin et al., *Police-Induced Confessions: Risk Factors and Recommendations*, 34 *LAW & HUM. BEHAV.* 3, 5 (2010) (discussing how the two most commonly cited dispositional risk factors for false confessions are a suspect's age and mental impairment).

44. Lowrey-Kinberg et al., *supra* note 7, at 16.

45. *Id.* at 8 n.3.

of police framing an innocent suspect, the real perpetrator deflecting blame, and ordinary citizens identifying an innocent person in order to collect a reward.

A large portion of intentionally misidentified defendants in our dataset were falsely accused of sexual assault. False rape allegations, an often-studied subject, have recently been estimated to comprise between 2 and 8 percent of all reported sexual assaults.⁴⁶ O’Neal and colleagues found that the motivations behind false allegations could be categorized into five types: (1) covering for a consensual activity (sexual or otherwise), (2) a form of retaliation against the alleged offender, (3) attention-seeking behavior, (4) regretting a consensual sexual encounter, and (5) mental illness.⁴⁷ Other studies on false rape allegations have come to similar conclusions.⁴⁸

A similar pattern was evidenced in our dataset. In one case, a woman who engaged in consensual sexual activity at a party later invented a sexual assault when questioned by her boyfriend about her whereabouts. Another case involved a young woman accusing her mother’s boyfriend of rape in retaliation for being unhappy with the relationship between the mother and the boyfriend. False accusations also served as revenge for a breakup, a bad class grade, or even for having been grounded by a parent. Consistent with previous literature, our findings show that defendants were directly and maliciously implicated for a number of reasons, with many accusations driven by retaliation.

In non-rape cases, additional motives surfaced for the malicious and intentional misidentification of innocent defendants. These reasons included people wanting to deflect blame away from the real perpetrator, wanting to collect a reward, and attempting to end an abusive relationship. However, in only a handful of cases did police

46. Kimberly A. Lonsway et al., *False Reports: Moving Beyond the Issue to Successfully Investigate and Prosecute Non-Stranger Sexual Assault*, 3 THE VOICE 1, 2 (2009), http://www.ndaa.org/pdf/the_voice_vol_3_no_1_2009.pdf.

47. Eryn Nicole O’Neal et al., *The Truth Behind the Lies: The Complex Motivations for False Allegations of Sexual Assault*, 24 WOMEN & CRIM. JUST. 324, 329 (2014).

48. See, e.g., Eugene J. Kanin, *False Rape Allegations*, 23 ARCHIVES OF SEXUAL BEHAV. 81, 85 (1994) (concluding that in a study of forty-five false rape allegations, “providing an alibi, a means of gaining revenge, and a platform for seeking attention/sympathy” were the three major motives of the complainants).

officers directly implicate a defendant known to be innocent. These included a case in which police illegally entered the defendant's home, shot him, and staged the crime scene to appear as if he had fired first. In the other two instances of police framing, officers appear to have been motivated to clear the case.

In other cases of intentional misidentification, co-defendants provided defendants' names under duress. Such non-malicious false implication was often elicited during the course of a co-defendant's false confession. False confessions are estimated to occur in 13–25 percent of wrongful conviction cases and are one of the primary areas of focus within wrongful conviction scholarship.⁴⁹ Our research reveals that not only are confessions a factor in false *self*-implication, they also can place false suspicion on other innocent individuals. Thus, efforts to prevent false confessions and improve the likelihood of their detection can both avoid further incrimination of persons already under police suspicion *and* prevent some innocent persons from entering the criminal justice system as suspects. This dual impact of false confessions on police investigations suggests that more research is needed on the effects of false identifications implicating a defendant who is not the confessor.

Overall, white defendants were more likely to fall under suspicion through intentional misidentification than non-white defendants.⁵⁰ This contrasts with our findings described above that non-white defendants were more likely to become suspects via *unintentional* misidentification.⁵¹ The explanation for this pattern is unclear. One possibility is that white defendants may be more likely to have greater status and resources, giving accusers fewer options to rectify perceived injustices by naming such individuals as suspects. This explanation is supported by our findings regarding the motives for intentional misidentifications, which includes punishing the defendant for a variety of slights or injuries. Furthermore, casting suspicion upon defendants is

49. Richard A. Leo, *Interrogation and False Confessions in Rape Cases* (Univ. of S.F. Law Res. Paper No. 2016–17), <https://ssrn.com/abstract=2700410>; PRACTICAL ASPECTS OF RAPE INVESTIGATION: A MULTIDISCIPLINARY APPROACH 12 (Robert R. Hazelwood & Ann Wolbert Burgess eds., 5th ed. 2016).

50. Lowrey-Kinberg et al., *supra* note 7, at 18.

51. *See supra* p. 5.

one way that the accusers may gain retribution when they do not have other recourse.⁵²

Considering false sexual assault allegations in particular, cultural factors and the fact that most sexual assaults are interracial⁵³ may explain why non-white men are less likely to be the subject of a purposefully false allegation. Previous research has found that African American women are overall less likely than white women to report sexual assault.⁵⁴ The reasons are varied, but include fear of not being believed by the authorities⁵⁵ or cultural pressure not to implicate additional African American men in criminal activity.⁵⁶ Although these findings may explain why African American women are less likely than white women to report true rapes, the findings may also shed some light on why this group of women do not make as many false rape accusations. It is possible that non-white accusers who wish to gain revenge may consider a false accusation, only to conclude they would not be believed or would be ostracized for doing so. When considered as a whole, these factors may explain why white defendants are more likely than non-white defendants to be intentionally misidentified.

Training police on the prevalence of intentional misidentification can help investigators uncover and recognize motives for false accusations, thereby preventing innocent defendants from moving through the criminal justice system. Once a potential motive for intentional misidentification is identified, investigators may then attempt to corroborate guilt with another source or with additional evidence. There is a balance to maintain, however, between an investigator's suspicion of a victim's story and corroborating an

52. See Sally Merry, *Going to Court: Strategies of Dispute Management in an American Urban Neighborhood*, 13 *LAW & SOC'Y REV.* 891, 901 (1979).

53. Patricia A. Washington, *Disclosure Patterns of Black Female Sexual Assault Survivors*, 7 *VIOLENCE AGAINST WOMEN* 1254, 1255 (2001).

54. *Facts & Stats: Domestic Violence in Communities of Color*, WOMEN OF COLOR NETWORK 2 (2006), http://www.doj.state.or.us/wp-content/uploads/2017/08/women_of_color_network_facts_domestic_violence_2006.pdf.

55. Shaquita Tillman et al., *Shattering Silence: Exploring Barriers to Disclosure for African American Sexual Assault Survivors*, 11 *TRAUMA, VIOLENCE & ABUSE* 59, 63 (2010).

56. *Id.* at 66; Helen A. Neville & Aalece O. Pugh, *General and Culture-Specific Factors Influencing African American Women's Reporting Patterns and Perceived Social Support Following Sexual Assault: An Exploratory Investigation*, 3 *VIOLENCE AGAINST WOMEN* 361, 366 (1997); Washington, *supra* note 53, at 1257.

accuser's claim. Sexual assault victims are already reluctant to report victimization for fear of being discredited.⁵⁷ This creates a tension for officers trying to verify a victim's story without appearing to blame or disbelieve the victim. This further emphasizes the importance of investigator training.

E. Physical Evidence

Innocent suspects were also implicated by the recovery of physical evidence that linked them to the crime scene or victim. Physical evidence, including DNA, hair, fingerprints, and objects (e.g., clothing or vehicles), was the basis for suspicion in 6.08 percent of cases in our dataset.⁵⁸ No defendant or case characteristics predicted whether physical evidence was the basis for suspicion.⁵⁹ The lack of a statistical link may be due to the small number of cases in this category (n=29),⁶⁰ compared to the varied ways defendants can be implicated through evidence, as described below.

Vehicles purported to match witness descriptions of those associated with the crime were among the physical objects that drew initial suspicion. For example, one defendant in our dataset was initially implicated because he was driving a truck, as did the perpetrator in a shooting that occurred earlier the same day. Although the color and model of the defendant's truck did not match that of the perpetrator, the defendant became a suspect and witnesses later misidentified him as the perpetrator. A similar pattern of implication was evident in a number of other cases.

Other physical objects implicated innocent defendants as well. For instance, a defendant who lived in the same apartment complex as a rape victim found a radio that was stolen during the attack. When he was discovered with the radio, he immediately became the prime suspect. In a series of similarly unfortunate events, a toy became the basis for suspecting an innocent defendant in a rape case, as the same type of toy had been missing from the victim's car after she was

57. See Bonnie S. Fisher et al., *Reporting Sexual Victimization to the Police and Others: Results from a National-Level Study of College Women*, 30 CRIM. JUST. & BEHAV. 6, 10 (2003).

58. Lowrey-Kinberg et al., *supra* note 7, at 34.

59. *Id.* at 18.

60. *Id.* at 34.

assaulted. Thus, coincidences surrounding physical objects in the defendants' possession led investigators to become suspicious and pursue a victim identification.

Forensic evidence also cast suspicion upon innocent defendants. Although forensic evidence generally comes into play after a defendant becomes a suspect, there were several cases in which this evidence was the *first* link between a defendant and a crime. In one unusual case, miscommunication within a crime lab led detectives to erroneously believe that the defendant's fingerprint was found on the same part of a wall as the victim's blood. In another case, microscopic hair analysis was the initial basis of suspicion for another defendant, after his hair, along with that of several of other local men, was collected for comparison.

Recently, the scientific community has voiced serious concerns about the accuracy of forensic evidence techniques,⁶¹ including hair comparison,⁶² fingerprint analysis,⁶³ and forensic odontology (dental studies).⁶⁴ The literature illustrates a correlation between erroneous forensic science reports and wrongful convictions.⁶⁵ Despite these concerns, forensic evidence is often still seen as infallible by actors within the criminal justice system, including investigators.⁶⁶ Increasing awareness of the error rates of forensic science techniques may help to mitigate the effects of erroneous forensic evidence.

Although our quantitative analysis indicates that defendant and case characteristics did not predict when a defendant became a suspect via physical evidence, our qualitative analysis provides a holistic perspective from which we can draw several conclusions. One common

61. See generally NAT'L RES. COUNCIL, *STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD* (2009).

62. MM Houck, *Forensic Human Hair Examination and Comparison in the 21st Century*, 17 *FORENSIC SCI. REV.* 51, 59–60 (2005).

63. Nikola K.P. Osborne & Rachel Zajac, *An Imperfect Match? Crime-related Context Influences Fingerprint Decisions*, 30 *APPLIED COGNITIVE PSYCHOL.* 126, 126 (2016).

64. Gregory S. Golden, *Bite-Mark and Pattern Injury Analysis: A Brief Status Overview*, 43 *J. OF CAL. DENTAL ASS'N* 309, 309 (2015).

65. See generally Brandon L. Garrett & Peter J. Neufeld, *Invalid Forensic Science Testimony and Wrongful Convictions*, 95 *VA. L. REV.* 1 (2009).

66. See NAT'L INST. OF JUST., *CONVICTED BY JURIES, EXONERATED BY SCIENCE* (U.S. Dep't of Justice 1996), <https://www.ncjrs.gov/pdffiles/dnaevid.pdf>.

theme is the unfortunate, coincidental convergence of circumstances. In the foregoing examples, the defendant owning a vehicle similar to one involved in a crime, discovering a key piece of evidence (as in the case of the television), or being the subject of an anomalous laboratory error were simply unfortunate coincidences. Yet these unlucky convergences of events seemed to form a reasonable basis for police suspicion.

These coincidences are difficult, if not impossible, for an investigator to preemptively guard against. Therefore, where physical evidence is the basis for the initial suspicion, there is an increased need to triangulate evidence before implicating a suspect. This can help reduce the number of innocent defendants that become the focus of an investigation unnecessarily. Policy changes are unlikely to prevent all instances of false suspicion, especially in cases of unfortunate and unpredictable coincidences. The solution may lie in investigators' maintaining a degree of skepticism and seeking additional evidence to corroborate an initial suspicion.

F. Criminal Activity

We found an investigator's initial suspicion also originated with an innocent defendant's past or present involvement in, or suspected connection to, criminal activity. Of the defendants in our dataset, 5.63 percent became suspects because other criminal actions "linked [them] to the crime, crime scene, a co-defendant, or a victim."⁶⁷ Importantly, the cases in this category do not include instances in which a past mug shot or arrest photo was used in a photo array, because in those cases, the defendants' physical appearance, rather than *criminal activity*, was the ultimate motivator in suspecting their involvement. In these cases, the past or present criminal actions were the reason for suspicion.

Lack of a previous personal relationship between the victim and defendant seems to implicate innocent defendants with criminal pasts. Thus, defendants were more likely to be implicated on account of other criminal activity when the victim and the defendant were strangers. This is likely because when victims know their attackers, they are more likely to identify them directly. Conversely, when a victim does not know the attacker, police must pursue other leads to identify suspects. In the investigative policing literature, a common way to identify

67. Lowrey-Kinberg et al., *supra* note 7, at 13.

suspects is to investigate individuals in the area with criminal histories or associations to similar crimes.⁶⁸ Thus, when a victim is unable to directly name or identify their attacker, due to lack of a personal relationship, investigators may be more inclined to canvass known offenders in the area of the crime.

A qualitative examination of the cases within our dataset supports this explanation, as some defendants first became suspects because they were involved in other criminal activities similar to the crime in question, rather than because of their physical appearance. In one case, a defendant became a suspect in a child rape case and was added to a photo array solely because he had a prior conviction for child molestation and kidnaping. These prior charges, rather than strictly his appearance, led police to include the defendant in the lineup. Once in the array, the defendant was identified by the victim and witnesses. In another case, police investigating a set of rapes suspected a man who had recently been involved in an invasion of privacy incident in the area. This first link, based off the defendant's past criminal activity, resulted in his placement in a lineup, where he was identified by victims. In these and similar cases, some level of physical similarity is, of course, implied, because the defendants were eventually identified in a lineup. However, defendants' prior suspicious or criminal activity was the original reason they were included in a lineup or photo array. Only afterward were the defendants identified by victims.

The often-unjustified focus on individuals with prior criminal history further emphasizes the recommendations we have previously discussed. The cases described in this section illustrate again the many ways in which errors can compound a false suspicion. Many innocent defendants were initially suspected because of their prior criminal activity, but the suspicion grew because of subsequent errors. These mistakes might take the form of an erroneous eyewitness identification, a false confession, or forensic evidence errors. Together, these errors show investigatory tunnel vision in action.

68. See MURDER INVESTIGATION MANUAL, *supra* note 13, at 262; HOME OFFICE RESEARCH REPORT, *supra* note 34, at 43.

G. Physical Proximity

In some cases, an innocent individual was implicated merely because he or she was connected to the location of the crime. This connection occurred when the defendant frequented the area where the crime took place or was in the vicinity when the crime occurred. Physical proximity as the basis for suspicion accounted for 6.08 percent of cases in our dataset.⁶⁹ None of the defendant or case characteristics predicted whether a defendant became a suspect due to physical proximity. As with implication via evidence, this result likely reflects the relatively small number of cases in this category (n=27),⁷⁰ in contrast to the variety of individual pathways within the physical proximity category.

Some defendants in this set of cases became suspects from working near the crime, while others simply happened to regularly frequent the area where the crime ultimately occurred. For example, in a murder case, two employees of the business where the victim was killed were questioned simply because they worked at the scene of the crime. Similarly, in another case, a rape victim's stolen items were found near the defendant's workplace, making the defendant one of the prime suspects. Other defendants were simply known to frequent the area of the crime. For example, one defendant in our dataset was known to loiter near the college where a professor had been murdered. The defendant became a suspect in the early stages of the police investigation because of his association with the location of the crime. In another case, two defendants originally became suspects because they were known to frequent the business where the victim had worked before her death. Regular presence near the location of the crime or the victim was, therefore, the source of mistaken suspicion in this subset of cases.

Finally, several defendants merely happened to be present at or near the location of the crime. Their physical proximity, presumably giving them the opportunity to commit the crime, was the investigators' basis for suspicion. Among these individuals, several were suspected in arson cases. One defendant, for example, was the first person to escape the burning building and also the least injured. This led police to suspect

69. Lowrey-Kinberg et al., *supra* note 7, at 34.

70. *Id.*

him in the case despite the lack of corroborating evidence. Similarly, other defendants became suspects simply for having been at the wrong place at the wrong time, such as having a car accident near the crime scene or being the first person to find the victim and report the crime to authorities.

Due to the relatively small number of cases involving physical proximity, it is difficult to discern concrete patterns from which to draw practical implications for police investigators. Of course, there is always the admonition to balance suspicion with skepticism, but our ultimate conclusion is that additional research should be conducted to better understand these subcategories (e.g., lurking at crime scenes, being the 911 caller, working near the crime) and their practical significance.

H. Social Proximity

Social relationships were the basis for suspicion for 7.88 percent of the defendants in our dataset.⁷¹ For a case to qualify under this category, the defendant's relationship with the victim or co-defendant must have been the initial factor that brought the innocent defendant under police suspicion. Relationships in this category commonly include parent (as the defendant) and child (as the victim). Other relationships include past or present friendships, marriages, and romantic relationships.

Past research has suggested that police investigators may unconsciously draw upon societally-derived ideas of relationships and roles when conducting investigations and creating suspect lists.⁷² This line of research has examined how stereotypes of women's caretaking role can lead investigators to focus on mothers as suspects in cases of infant or child deaths.⁷³ In addition to forming the basis for suspicion,

71. Lowrey-Kinberg et al., *supra* note 7, at 34.

72. See, e.g., Andrea L. Lewis & Sara L. Sommervold, *Death, but is it Murder: The Role of Stereotypes and Cultural Perceptions in the Wrongful Convictions of Women*, 78 ALB. L. REV. 1035 (2014); Elizabeth Webster & Jody Miller, *Gendering and Racing Wrongful Conviction: Intersectionality, Normal Crimes, and Women's Experiences of Miscarriage of Justice*, 78 ALB. L. REV. 973 (2014).

73. See Lewis & Sommervold, *supra* note 72, at 1050; Fiona E. Raitt & M. Suzanne Zeedyk, *Mothers on Trial: Discourses of Cot Death and Munchausen's Syndrome by Proxy*, 12 FEMINIST LEGAL STUD. 257, 265 (2004); Webster & Miller, *supra* note 72, at 1004. Similarly, Duru discusses how race-based expectations may impact criminal cases. He examines the myth of the Bestial Black Man, "a myth,

investigators' tendency to derive suspicion from archetypal notions of societal roles and relationships may also contribute to tunnel vision as investigators attempt to make cases fit a believable or relatable narrative.⁷⁴

Consistent with this body of literature, we found several cases in which no crime occurred, yet the police charged the mother with murder. One such case involved the mother of an infant child who showed signs of an undiagnosed illness. The child's blood tests suggested to doctors that the mother was responsible for the child's symptoms. Only after the child died and the mother was arrested was it discovered that the child's symptoms were actually the result of a genetic abnormality. In this case, the doctors' and investigators' readiness to suspect the mother of wrongdoing exemplifies one way of how the mother-child relationship can form the initial basis for suspicion.⁷⁵

Building on this literature, we found that fathers are also susceptible to suspicion solely from the parent-child relationship. Based on our qualitative analysis, we divided these cases into two types: no-crime cases and cases in which a crime did occur. In all of the no-crime cases, the fathers were charged with murdering their children after medical staff concluded that the death of the child was non-accidental or at least, not of natural causes. In all instances, the father was the only person with the child at the time of death or injury. Although fewer in

deeply imbedded in American culture, that black men are animalistic, sexually unrestrained, inherently criminal, and ultimately bent on rape" and how it contributed to the wrongful convictions of the Central Park Five case. N. Jeremi Duru, *The Central Park Five, the Scottsboro Boys, and the Myth of the Bestial Black Man*, 25 CARDOZO L. REV. 1315, 1320 (2005). Webster and Miller also touch upon "how cultural ideologies and 'controlling images' are features of the narrative accounts constructed to justify men's erroneous convictions." Webster & Miller, *supra* note 60, at 1031. These assertions are intertwined with the statistics surrounding the wrongful convictions of women. Whereas 64 percent of exonerated women "were wrongfully convicted even though no crime had occurred," the equivalent number for men is just 23.2 percent. Lewis & Sommervold, *supra* note 60, at 1036. Further, female exonerees are more likely to know the victim, as opposed to male exonerees. Webster & Miller, *supra* note 60, at 1019. These figures bolster the claim that wrongful convictions and exonerations of men and women fundamentally differ.

74. See Webster & Miller, *supra* note 72, at 975 (discussing the potential implications that contemporary cultural understandings of appropriate maternal behavior have on investigating a mother's role in a child's death).

75. See *id.*; Lewis & Sommervold, *supra* note 72, at 1047-48.

number, these cases mirror those in which mothers were accused of murder in no-crime cases.

In many cases involving actual criminal wrongdoing, the defendant was the father of a daughter who had been sexually assaulted and murdered. For example, in one case, the defendant's young daughter was kidnapped, sexually assaulted, and found dead near the defendant's home. Investigators immediately suspected the father even though there was no other evidence implicating him. In fact, investigators ignored potentially exculpatory evidence. While most cases of mothers' guilt are based upon their caretaking role, fathers may become suspects for a decidedly different reason: investigators' willingness to believe a narrative of paternal sexual assault. To our knowledge, the possibility of fathers becoming suspects merely because of their paternity has not been examined in the literature, and our research suggests that this may be an area for future inquiry.

Marriages and romantic involvements were another common set of relationships that caused police to suspect an innocent defendant, especially for male defendants. For example, one defendant became a suspect after police learned that he had maintained a secret relationship with the victim that he wished to end. Another victim's boyfriend became a suspect because police believed the victim was pregnant with the defendant's child and refused to end her pregnancy. Additionally, several victims' husbands or partners were previously known to be alcoholics or had a history of domestic violence and immediately became suspects in murder cases.

These patterns in defendant relationships echo stereotypical images of men who murder their partners (e.g., the abusive husband, the angry lover, the jealous boyfriend). While many murders are indeed committed by partners or family members,⁷⁶ the fact that police relied on these relationships as the sole basis for identifying innocent defendants as suspects warrants further research. Making investigators aware of "research-based findings on the role stereotypes play in investigations"⁷⁷ may help officers recognize when these stereotypes are the sole basis for suspicion, thereby reducing instances of wrongful suspicion. Although this initial recommendation concerned female

76. See generally U.S. DEP'T OF JUSTICE, FAMILY VIOLENCE STATISTICS: INCLUDING STATISTICS ON STRANGERS AND ACQUAINTANCES (2005).

77. Lewis & Sommervold, *supra* note 72, at 1057.

suspects,⁷⁸ our findings suggest that a broader demographic, including men who are accused of harming their child or partner, could benefit from this type of investigator training.

Finally, we note that defendants in cases with a deceased victim were more likely to be implicated due to a social relationship.⁷⁹ Certainly, a surviving victim may provide investigators with leads or a description, replacing the need to investigate relationships as a first recourse. Deceased victims, unfortunately, are unable to vouch for the innocence of a family member or friend, increasing the likelihood that these relationships are the implicating factor. In cases without a living victim (e.g., murder cases), investigators should be particularly cautious when drawing on social relationships as the basis for suspicion.

I. Other

Because almost five percent of the cases in the dataset did not fall within one of our eight categories, we placed these cases into an “other” category.⁸⁰ Some defendants in this category became suspects due to self-implication or by inserting themselves into the investigation. For example, while in custody for a separate offense, one of the defendants in our dataset accused a friend of having committed a murder. The defendant himself became a suspect when his friend was cleared by police. In several other instances, confusion over name and biographical similarities between the defendant and the real perpetrator led to the implication of certain defendants. One defendant, for example, had a similar name to the real perpetrator and their fathers’ names were the same. These similarities led officials to mistakenly believe the defendant was the perpetrator. Finally, unusual behavior by defendants was the source of suspicion in several additional cases. For example, in one case a defendant was implicated when it was thought they acted excessively distressed by the victim’s death. More research using a larger dataset may determine whether these patterns occur at a higher rate among innocent defendants and should constitute a separate category.

78. *See id.*

79. Lowrey-Kinberg et al., *supra* note 7, at 17.

80. *Id.* at 34.

J. Unknown

Due to limited or contradictory information, we could not determine the method of implication for 6.08 percent of the cases in our dataset.⁸¹ We placed these cases in an “unknown” category.⁸² Of the thirty-one cases with unknown origins of implication, in fourteen we were able to determine that the defendant was placed in a photo array or lineup but could not pinpoint *why* they were included. In order to be placed in an array or a lineup, a defendant must already be a suspect.⁸³ However, we were unable to determine how these defendants became suspects. For the remaining seventeen cases in the dataset, we lacked sufficient information to understand how they initially came to the attention of law enforcement.

IV. ORIGIN OF IMPLICATION AND TUNNEL VISION

While the implications discussed above provide recommendations for investigators, our findings on origin of implication also speak to concepts in the larger scope of wrongful conviction scholarship. At its core, the inherent danger of false suspicion is the failure to correct initial error. Once an innocent person becomes suspect, he may be unable to escape the escalating pressure and commitment devoted to the case by actors in the criminal justice system and may eventually lead him to be convicted and imprisoned. As Findley and Scott note, the police investigation is “where tunnel vision begins, and in many respects where it can be most damaging, because all later stages of the process feed off the information generated in the police investigation.”⁸⁴ In this section we provide an overview of the concept of tunnel vision⁸⁵ and outline how the initiation of suspicion may trigger this phenomenon.

81. *Id.*

82. *Id.*

83. See THE JUSTICE PROJECT EYEWITNESS IDENTIFICATION: A POLICY REVIEW 3 (2007), <http://web.williams.edu/Psychology/Faculty/Kassin/files/Justice%20Project%20-%20on%20ET.pdf>.

84. Findley & Scott, *supra* note 5, at 295.

85. Scholars have conceptualized of tunnel vision in slightly different ways within criminal investigations. For our purposes, we are following Findley and Scott’s lead by using tunnel vision as an umbrella term for the cognitive processes that lead to potentially biased investigations.

We conclude by recommending the use of checklists akin to those used in the fields of aviation and medicine to combat tunnel vision.⁸⁶

Understanding the general progression of a criminal investigation indicates how critical the initiation of suspicion is to the process that results in a wrongful conviction. Broadly, the investigative policing literature has identified two phases to a criminal investigation, each representing a distinct focus.⁸⁷ In the first phase, law enforcement primarily collects facts and plans potential avenues of investigation.⁸⁸ The second phase begins when the suspect pool is narrowed from all possible suspects, down to one.⁸⁹ When this individual is no longer *a* suspect, but rather *the* suspect, investigators turn their attention away from broad information gathering and, instead, focus their energy on building a case against the suspect.⁹⁰ Ideally, policy would identify a prime suspect after all other potential suspects have been investigated and eliminated. However, in reality, the identification of the first likely suspect is often enough to cause a shift in focus.⁹¹ In this way, a suspect's origin of implication often coincides with the investigatory shift from broad information collection to narrower case building.

This singular focus on a suspect is one reflection of tunnel vision. Tunnel vision has been deemed to be a significant contributor to wrongful convictions, and it affects even those criminal justice actors with the best of intentions through unconscious psychological processes.⁹² People have an innate "need to process efficiently the flood

86. See generally ATUL GAWANDE, *THE CHECKLIST MANIFESTO: HOW TO GET THINGS RIGHT* (2009).

87. See generally Ivar A Fahsing et al., *The Man Behind the Mask: Accuracy and Predictors of Eyewitness Offender Descriptions*, 89 J. OF APPLIED PSYCHOL. 722 (2004).

88. *Id.*

89. *Id.*

90. INNES, *supra* note 3, at 234.

91. The psychological process behind this behavior is called *satisficing*, which we discuss later in this discussion.

92. See Gould et al., *supra* note 9, at 477; Findley & Scott, *supra* note 5, at 295; Webster & Miller, *supra* note 73, at 981. Research into tunnel vision can be divided into two distinct methods: qualitative analyses and laboratory experiments. See Gould et al., *supra* note 11 for an expert panel analysis is an example of the former. The majority of recent research, however, has utilized laboratory experiments to explore the phenomenon. Using either a sample of law enforcement officers or university students, these studies have employed different methods to measure the effects of

of sensory information coming from the outside world.”⁹³ To do so, they often take cognitive shortcuts when processing large amounts of stimulus, resulting in a set of psychological processes, or cognitive biases, that together comprise tunnel vision. In the criminal justice system, these cognitive biases may be manifested in the tendency for criminal justice actors to focus exclusively on one suspect and ignore exculpatory evidence.⁹⁴ In combination with the adversarial nature of the criminal justice system,⁹⁵ tunnel vision may “[prevent] the system from self-correcting once an error is made.”⁹⁶

The investigatory shift from information gathering to case building, and the resulting tunnel vision, was evident throughout our qualitative examination of the cases in our dataset. This analysis revealed that the misclassification of an innocent person as a suspect was often succeeded by additional errors in the investigation, after which it was difficult to redirect the investigation. To illustrate how tunnel vision can derail an investigation, the following section provides a narrative of an investigation that was severely affected by the lack of consideration to possible alternative scenarios.

A. Tunnel Vision in Action

The phrase tunnel vision is an umbrella term encompassing a range of behaviors, and scholars have yet to agree upon a definitive list of the

tunnel-vision on decisions within criminal investigations. See Karl Ask et al., *Investigators under Influence: How Social Norms Activate Goal-Directed Processing of Criminal Evidence*, 25 APPLIED COGNITIVE PSYCHOL. 548 (2011); Eric Rassin et al., *Let's Find the Evidence: An Analogue Study of Confirmation Bias in Criminal Investigations*, 7 J. OF INVESTIGATIVE PSYCHOL. & OFFENDER PROFILING 231 (2011). Only one of these studies was conducted within the United States, which could potentially reduce the generalizability of the majority of the findings. Barbara O'Brien, *Prime Suspect: An Examination of Factors that Aggravate and Counteract Confirmation Bias in Criminal Investigations*, 15 PSYCHOL., PUB. POL'Y, & L. 315 (2009). The single study within the United States utilized a convenience sample of students, likewise decreasing the generalizability. For this reason, our discussion of tunnel vision is drawn from experts within the field of criminal investigation and wrongful convictions, supplementing with experimental data when possible.

93. Findley & Scott, *supra* note 5, at 309.

94. Gould et al., *supra* note 11, at 498; Findley & Scott, *supra* note 5, at 292; Martin, *supra* note 4, at 848.

95. Findley & Scott, *supra* note 5, at 295.

96. Gould et al., *supra* note 11, at 477.

individual psychological processes that comprise the phenomenon. The various thought patterns and tendencies covered by this term have been variously described and applied to understand how wrongful conviction cases arise.⁹⁷ Here, we describe the subset of these cognitive biases—satisficing and confirmation bias—that are most closely related to origin of implication and show how they manifested in the initial stages of a criminal investigation in our dataset.

In perhaps one of the starkest examples of tunnel vision in our dataset, Dean Anderson was accused of sexually assaulting and murdering his young daughter. The victim was found deceased near the family's home, and there was evidence that she had been sexually assaulted. Anderson, as her father, immediately fell under police suspicion due to social proximity. He was thereafter interrogated and confessed. Although his confession was later ruled to be coerced, the investigators' suspicion was seemingly corroborated when Anderson's son was interviewed and told investigators that his father had left the house with the victim the night before. At this point, investigators were convinced of Anderson's guilt and ceased DNA testing. They also disregarded a pair of shoes found near the crime scene, which could have provided further information on the case if analyzed. The investigators' decisions in Anderson's case display the two main cognitive biases contributing to tunnel vision: satisficing and confirmation bias.

Satisficing, a portmanteau for "satisfy" and "suffice," describes the cognitive shortcuts that may lead investigators to *first* suspect a defendant. This process occurs when a person engages in "the sequential consideration of options until one is found that appears to meet a certain aspiration level."⁹⁸ In the criminal justice context, this concept may translate into investigators accepting the first plausible narrative explanation of how a crime occurred. In Anderson's case, he appeared to have several marks against his character from the beginning: he had a history of drug abuse, admitted to watching pornography on the night of the murder while his children slept, and did not immediately call authorities when he realized his daughter was

97. Scholars have identified several distinct but overlapping descriptions of these processes. See, e.g., Martin, *supra* note 4; Findley & Scott, *supra* note 5.

98. Snook & Cullen, *supra* note 5, at 88.

missing. Thus, there was a readily-available narrative that appeared to perfectly fit the case: parental sexual assault.

Having initiated suspicion upon the father, the investigators' energy switched to case building. It is at this point that *confirmation bias*—the tendency to seek only evidence that confirms a person's hypothesis—took hold.⁹⁹ Investigators soon took steps to confirm their initial suspicion that Anderson was guilty. Within the literature on confirmation bias, several reasoning mechanisms explain how confirmation bias operates. Most relevant to this case is the *selective framing strategy*, where investigators identify information that would be present if their hypothesis was true, and search exclusively for this evidence.¹⁰⁰ In this case, investigators sought a confession of guilt. In an example of selective framing, Anderson was subjected to being aggressively interrogated, beginning in the evening and continuing overnight, during which time he confessed. Anderson quickly claimed that the confession was coerced and that in the overnight interrogation, he was persistently subjected to threats and lies. Not only did investigators subject Anderson to a grueling interrogation, but his young son was ultimately pressured by investigators to state that his father had left with the victim the night of the murder, despite the young boy having repeatedly denied earlier in the interview that any such event had occurred. Both Anderson's interrogation and his son's interview demonstrated the pervasiveness of confirmation bias and the extent to which investigators were willing to advance their theory of the crime after initial suspicion.

Another mechanism present in confirmation bias is *selective exposure*, which refers to investigators' failure to examine evidence that could disconfirm their hypothesis.¹⁰¹ In Anderson's case, police failed to investigate a pair of shoes collected in the same area as his daughter's body. Although found near the crime scene, and despite the possibility that these shoes might provide information on the case, investigators

99. See *id.* at 90; ROSSMO, *supra* note 5, at 17; Findley & Scott, *supra* note 5, at 309. In addition to confirmation bias, Findley and Scott discuss two additional cognitive biases: hindsight bias and outcome bias. For the purposes of this discussion, we focus only on confirmation bias, as this is the process most relevant to the initiation of suspicion.

100. DAN SIMON, *IN DOUBT: THE PSYCHOLOGY OF THE CRIMINAL JUSTICE PROCESS* 37 (2012).

101. *Id.*

did not conduct further testing or investigation. These shoes were later found to belong to the true perpetrator. Finally, in an example of *selective stopping*—in which an investigation ceases after enough evidence has been gathered to support the dominant theory—the investigators failed to conduct DNA testing after Anderson’s confession. This could have proved his innocence. The exculpatory DNA was only discovered later by Anderson’s defense attorney.

This unfortunate case reveals not only the myriad ways in which tunnel vision can function within a criminal investigation but also, and more importantly, how it began with Anderson’s origin of implication—his social proximity to the victim. The identification of Anderson as the most likely suspect was the turning point of the investigation. Despite multiple pieces of information pointing to his innocence, and to the guilt of an unknown perpetrator, the shift to case building rendered investigators blind to his innocence. Anderson instead fell victim to tunnel vision. Had investigators not immediately jumped to implicate Anderson, but instead questioned their own suspicion of him or sought any exculpatory information, he may never have been the subject of such an intense and overbearing investigation.

B. *Breaking the Connection*

Some scholars have emphasized that the processes involved in tunnel vision are not inherently undesirable in the context of a police investigation. Investigators are subject to multiple constraints, causing many crimes to receive minimal attention.¹⁰² These constraints include investigators’ time, cognitive ability and knowledge, as well as the police department’s financial resources.¹⁰³ When combined, these limitations create an environment in which cognitive shortcuts are required for investigators to properly fulfill their duties. Snook and Cullen note that:

[O]fficers who build a *successful case* by searching for evidence that supports their belief while ignoring evidence that contradicts their belief would likely be applauded Those who use the same strategy in a *case that ends in a wrongful conviction*, on the other

102. Snook & Cullen, *supra* note 5, at 82.

103. *Id.* at 82–83.

hand, might be accused of using confirmation bias (or perhaps tunnel vision), as though they neglected to properly fulfill their duties.¹⁰⁴

Thus, while cognitive shortcuts appear to contribute to wrongful convictions, they may also be an integral part of policing.

Consequently, it may not be the cognitive processes themselves that generate flawed investigations, but rather their application and the strict adherence to conclusions reached early in the investigation. Findley and Scott recommend training investigators about these processes and the ways to mitigate their harmful effects.¹⁰⁵ They also suggest police departments emphasize the capacity to overcome these cognitive biases when hiring investigators. While both suggestions should be considered by law enforcement, the fact remains that investigators may not always be able to devote attention to these concerns during a homicide investigation.¹⁰⁶

In order to ensure that cognitive shortcuts do not lead investigators astray, a more formalized and institutional procedure should be established for criminal investigations. Recognizing this, Findley and Scott propose the development of a checklist that would require investigators to document “all the evidence expected to be found, all that was found, all that was sought but not found, all possible suspects and what the investigations into them produced, any inconsistencies in the evidence, and whether nearby police agencies have been consulted to identify possible alternative perpetrators.”¹⁰⁷ This suggested documentation casts a wide net, encompassing the entire investigatory process. Unfortunately, given the time constraints placed on investigators, it is possible that such an exhaustive procedure would not be appropriately implemented, even if it should be adopted.

104. *Id.* at 91 (emphasis in original); *see also* Zalman, *supra* note 6. Zalman describes process through which David Vasquez was exonerated through the work of Detective Joe Horgas. Convinced that other similar cases were linked to the one for which Vasquez was convicted, Horgas continued to pursue his theory with a determination that could be described as tunnel vision. In this instance, his persistence resulted in the first DNA exoneration in the United States, as opposed to a wrongful conviction.

105. Findley & Scott, *supra* note 5, at 397.

106. Snook & Cullen, *supra* note 5, at 81.

107. Findley & Scott, *supra* note 5, at 376–77.

We suggest that a more practical solution may be to focus on suspects' origin of implication because the initiation of suspicion provides a natural point for investigators to reflect on the next step in the investigation. Disrupting tunnel vision at its point of origin has the potential to prevent innocent suspects from being indicted, convicted, and imprisoned. Once investigators have taken all reasonable steps to avoid identifying an innocent individual, the cognitive processes and heuristics that produce tunnel vision can be positively channeled into developing a case for prosecution, rather than pursuing an innocent suspect.

C. Origin of Implication Checklists

The use of checklists within criminal investigations is not a new concept;¹⁰⁸ however, many existing checklists resemble the exhaustive list suggested by Findley and Scott¹⁰⁹ and could therefore fall victim to the same lack of compliance. For example, the *Practical Homicide Investigation Checklist and Field Guide*, originally published twenty years ago, has been used as a representative example of existing checklists.¹¹⁰ However, this publication appears to be less of a checklist, in the strict sense, than it does a teaching tool. Despite the instructions advising investigators to “simply utilize this Checklist as a guide to refresh the memory,” each line item contains descriptions that are more suited to a novice trainee than a seasoned investigator.¹¹¹ For example, the section dedicated to “Emergency Medical Service (EMS) and Ambulance Personnel” has one main entry reminding the investigator to speak with EMS personnel regarding their activity at the crime scene.¹¹² For an experienced investigator, this single line would serve as a useful reminder. The six sub-items, however, do more than simply remind an investigator to complete a task. Instead, they outline a series of specific actions to be taken (e.g., fingerprinting the EMS personnel for exclusion) and questions to be asked (e.g., Was the body disturbed in any way?). An experienced investigator would likely not need

108. *See id.* at 376.

109. *Id.* at 376–77.

110. VERNON J. GEBERTH, PRACTICAL HOMICIDE INVESTIGATION CHECKLIST AND FIELD GUIDE (2013).

111. *Id.* at 12.

112. *Id.* at 16.

individual reminders to complete such tasks, and the addition of these sub-items serves to lengthen the checklist considerably, thereby making it less convenient to use. Therefore, the inclusion of these items would most likely only benefit novice investigators, while more seasoned officers would be better off with only succinct reminders.

In order to create a more realistic checklist for a time-sensitive and sometimes chaotic process—such as criminal investigations—we support James Doyle’s suggestion that the criminal justice arena should adopt a more system-oriented view, similar to those found in the fields of medicine and aviation.¹¹³ In the following section, we reference Atul Gawande’s *The Checklist Manifesto*, which provides a comprehensive view of successful checklists in action within these industries.¹¹⁴

I. Applicability

Before discussing the lessons that could be learned from these checklists, we must first address the question inherent in all interdisciplinary comparisons: can findings from one field be applied to another? Gawande recounts struggling with this very question when he first explored the potential of checklists to reduce surgical errors.¹¹⁵ In discussing the development of medicine over the past century, Gawande states that the increase in knowledge has provided “the means to make some of the most complex and dangerous work we do . . . more effective than we ever thought possible.”¹¹⁶ This ability, however, requires a shift to evidence-based standards, such as checklists, thereby contradicting the “traditional culture of medicine” in which the expertise and decision-making abilities of a practitioner are given the highest priority. Similar to medicine, a traditional culture can be seen in criminal investigations, which has resisted the adoption of protocols based on empirical evidence.¹¹⁷

113. James M. Doyle, *Learning from Error in American Criminal Justice*, 100 J. OF CRIM. L. & CRIMINOLOGY 109, 113 (2010). The National Institute of Justice’s Sentinel Events Project likewise follows this path and draws heavily from these fields in its work.

114. GAWANDE, *supra* note 86.

115. *See id.* at 31.

116. *Id.* at 161.

117. *See generally* Findley & Scott, *supra* note 5.

The similarities between the fields are evident not only in their overall professional cultures, but also in the specific tasks performed. Many investigators describe the nature of homicide investigations as being highly-pressurized.¹¹⁸ A similar sentiment is expressed in Gawande's description of the unpredictable nature of surgical interventions.¹¹⁹ Both investigators and surgeons are subject to institutional pressures, such as the sheer volume of tasks faced on a regular day and the need to successfully close cases or treat patients, respectively. Further, both are required to remain within an allotted timeframe and budget.¹²⁰ Gawande proposes that checklists should be developed to address the errors arising from these aspects of medicine.¹²¹ Therefore, it is feasible to conclude that checklists can be effectively implemented in criminal investigations as well.

2. Anatomy of a Checklist

Unlike the aforementioned investigative checklists, a successful checklist by Gawande's standards is not a teaching tool nor a comprehensive accounting of procedure.¹²² Instead, it should be a precise document that includes only items that "even the highly skilled professionals using them could miss"¹²³ and is designed for use during "pause points,"¹²⁴ or during moments when it is logical for practitioners to stop and initiate the checklist.

The highly curated nature of the items of these lists is critical in time sensitive applications (such as engine failure in an airplane) but is also desirable in moments of lower temporal pressure, such as preparing a patient for non-emergency surgery. By reducing a checklist to the minimum length necessary, the likelihood of compliance is increased. This is because practitioners may begin to skip steps if the procedure becomes too cumbersome. In order to identify this minimum length,

118. See, e.g., Amaury Murgado, *12 Tips from Homicide Detectives*, POLICE MAG. (Dec. 23, 2013), <http://www.policemag.com/channel/careers-training/articles/2013/12/12-tips-from-homicide-detectives.aspx>.

119. See, e.g., GAWANDE, *supra* note 81, at 4.

120. Findley & Scott, *supra* note 5, at 325.

121. See generally GAWANDE, *supra* note 86.

122. *Id.* at 120.

123. *Id.*

124. *Id.* at 111.

Gawande recommends focusing on “killer” items, or “the steps that are most dangerous to skip.”¹²⁵ In surgery, these items include blood loss, anesthesia, infection, and the unexpected.¹²⁶ The first three are “simple failures,” which are easily remedied by a checklist.¹²⁷ The fourth, however, can only be remedied through communication and preparation.¹²⁸ Therefore, Gawande recommends including items on the checklist that require communication among members of a team.¹²⁹ In the final Surgical Safety Checklist created by Gawande and others for the World Health Organization, there is a section titled “Anticipated Critical Events.”¹³⁰ This section prompts the surgeons, anesthesiologists, and nurses to communicate any abnormalities or concerns regarding the patient prior to the commencement of the surgery.¹³¹

Most important to developing a successful checklist is perhaps the need for field testing. In his research on the use of checklists in aviation, Gawande was informed that pilots use checklists for two reasons: (1) the use of checklists is integrated into their training; and (2) the checklists function as intended.¹³² In other words, the use of the checklists actually decreases error. In order to ensure a checklist functions properly, it must consider and include all stakeholders during its development phase and be tested in multiple field settings.¹³³ It is

125. *Id.* at 101.

126. *Id.*

127. *Id.*

128. *Id.* at 101–102.

129. *See id.* at 99.

130. *WHO Surgical Safety Checklist*, WORLD HEALTH ORG., <http://www.who.int/patientsafety/safesurgery/checklist/en/> (last visited Apr. 18, 2018) [hereinafter *WHO Checklist*].

131. GAWANDE, *supra* note 81, at 140–41.

132. *Id.* at 121.

133. *See id.* at 100–13, 142–51. When Gawande utilized the first attempt at the surgical checklist in his own operating room, he discovered multiple issues that needed to be resolved. For example, there was no indication on the checklist that the surgical team was to be completed verbally, and many of the items that seemed clear to him were ambiguous to others on the surgical team. By including all members of an operating team, he was able to determine what items needed revision. Further, during the pilot testing phase in hospitals across the world, the variety resources and sophistication of the facilities necessitated that certain items be altered to better accommodate all types of operating rooms. Translated to policing, the difference between a hospital in United States and a hospital in Tanzania becomes the difference

important to note that the presence of a checklist does not automatically alter behavior.¹³⁴ Instead, the organization adopting the checklist must be supportive of its use. By including multiple stakeholders from within an organization, developers can gauge the receptiveness of the organization to the implementation of the checklist and then alter the document accordingly. An additional benefit of this broad outreach is the increased legitimacy accorded to the checklist, which in turn increases the likelihood of adoption.

The actual format for checklists varies according to industry needs. For example, in the construction industry, checklists are lengthy documents detailing not only what is to be done, but when each item is to be completed.¹³⁵ Conversely, in aviation, pilots are provided a book of extensive checklists for all potential events, but each checklist consists of less than ten bullet points and contains specific actions to be conducted in sequence.¹³⁶ In some instances, aviation checklists function as flow charts, directing pilots to additional lists based on the answers to certain questions.¹³⁷ The surgical checklists referenced by Gawande appear to be in the middle of these two extremes—while they are short, they are designed to facilitate communication, therefore representing substantial periods of time. As previously stated, the Surgical Safety Checklist contains closed-ended questions such as, “Is this site marked?” and open-ended questions such as, “Are there any patient specific concerns?”¹³⁸

3. Proposed Checklist Items

In our suggestions for an investigative checklist, we reiterate many of the recommendations outlined in Part III in a format more consistent with Gawande’s guidelines. We also include items derived from our earlier discussion regarding tunnel vision. Therefore, our

between the New York City Police Department and a local sheriff’s office with only three sworn officers.

134. Charles L Bosk et al., *Reality Check for Checklists*, THE LANCET 374, 444 (2009).

135. GAWANDE, *supra* note 86, at 62.

136. *See id.* at 123.

137. *See id.* at 114–35. For example, one checklist noted by Gawande has two sets of instructions for pilots based upon the plane’s altitude at the time of the incident.

138. WHO Checklist, *supra* note 130.

recommendations address two major concerns: evaluating the strength of the evidence used to identify the suspect in question, and ensuring that alternative suspects have been considered and vetted. Here, we focus on the former category, as it is most closely linked with origin of implication. The proposed checklist items can be found in Figure 1.

The most salient finding in our analysis was the need for corroboration or triangulation of evidence. Regardless of the origin of implication, it is important for investigators to resist identifying a person as a suspect on the basis of a sole piece of evidence, especially when exculpatory evidence is also present. Therefore, the first item on our proposed checklist would ask investigators to discuss what pieces of incriminating evidence are present and what pieces of exculpatory evidence are present. Investigators should also discuss what additional evidence would be required to support both propositions. Here, by suggesting the use of different evidence types, we are creating a caveat guarding against compound errors. For example, a suspect identified based on a witness description should not have his or her potential guilt verified by presenting the suspect to the describing witness in a lineup or photo array. Instead, investigators should try to corroborate this identification through other forms of evidence, such as forensic testing.

The next series of items should address the presence or absence of defendant-specific characteristics that could influence the likelihood of the defendant being erroneously classified as a suspect. First, investigators should determine whether the suspect could have a cognitive impairment or mental illness. This need not necessarily require a formal psychological evaluation, but rather a general observation of the suspect's behavior. If the investigators believe that the suspect shows signs of mental illness or cognitive impairment, they should consult with officers assigned to the area in question as it is possible that they are familiar with the suspect's behavior patterns or propensity for violence. Further, the investigators should determine if the impairment would affect suspect's ability to have committed the crime in question, and whether the impairment could offer an alternative explanation for the suspect's unusual behavior.

Another defendant characteristic that should be considered in a checklist is criminal history. Although examination criminal history is a valid investigative technique when developing a list of suspects,¹³⁹

139. See MURDER INVESTIGATION MANUAL, *supra* note 13, at 262.

investigators should pause to consider whether other evidence of guilt exists, especially when a suspect's past conduct is the first or primary basis for suspicion. Again, it is important to note that in many cases in our dataset, triangulating evidence could have reduced the occurrence of innocent suspects from progressing as suspects. Moreover, investigators should consider whether the implicating criminal history is in the form of a conviction, or merely a suspicion of illegal conduct, as the latter is a less substantial basis for suspicion. Investigators should also consider whether the basis for suspicion is from criminal activity of the same or different type as the crime in question. Finally, if the suspect has a lengthy criminal history, investigators should consider whether there could be an alternative explanation, such as frequent police contact due to mental illness.

Regarding eyewitness identifications, our analysis primarily substantiated previous research findings. Investigators should consider whether the identification is cross-racial, as this may increase the odds of mistaken identification. Another consideration is the distinctiveness of the description given by the victim or witnesses. For example, if the witness gives a fairly generic description of an African American male, and the search radius primarily encompasses an African American populated neighborhood, the officer should consider the likelihood of false suspicion. We also recommend that previous best practices in eyewitness identification procedures be implemented in the checklist, including the use of sequential photo arrays, double-blind administration of photos and in-person lineups, and avoiding show-ups.¹⁴⁰

140. See generally Gary L. Wells et al., *Eyewitness Identification Procedures: Recommendations for Lineups and Photospreads*, 22 LAW & HUM. BEHAV. 1 (1998).

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Additionally, investigators should evaluate whether their suspicion is based *solely* on a relationship between the defendant and the victim. Although it is entirely possible that the perpetrator may be someone known to the victim, common expectations of relationships and societal roles may make investigators susceptible to the pursuit of suspects who would otherwise be cleared by the available evidence. In our analysis, we found this to be the case for both male and female defendants who were either family members, friends, or even acquaintances of the victim. In cases where the victim and the defendant know each other, a checklist item that asks investigators to pause and evaluate the source of their suspicion could reveal whether this suspicion is based on evidence, rather than cultural narratives or themes. Similarly, investigators should ask themselves whether there is concrete evidence of guilt, and whether there are other possible narratives for the crime, perhaps some that are less readily apparent, that could explain the evidence.

In cases involving a friend, family member, or co-defendant who directly implicates a suspect, investigators should consider whether the identification could be intentionally false. One question investigators should ask themselves is whether the implicating person has anything to gain from identifying the suspect, such as revenge for a past misdeed. It is important that investigators also discuss what evidence they could collect to support these motives, rather than simply rely on hearsay or their intuition. By tying the potential motives to tangible pieces of evidence, investigators may be able to distinguish concrete motives from stereotypical themes that arise in criminal cases, such as false rape narratives in sexual assault cases.¹⁴¹

Additionally, one category of intentionally mistaken identifications in our dataset was that of suspects themselves naming co-perpetrators, often under duress or during the course of an interrogation. In these cases, any potential pressure upon the naming suspect should be carefully evaluated. Further, investigators should be careful to note who first named the co-perpetrator: the investigators or the suspect him or herself.

In order to address the second major concern, the consideration of alternative scenarios and suspects, we recommend a final set of

141. See André W. E. A. De Zutter et. al., *Motives for Filing a False Allegation of Rape*, 47 ARCHIVES OF SEXUAL BEHAV. 457, 458 (2017).

considerations for all cases. A series of checklist items should be added to help investigators overcome tunnel vision. An assessment of alternative explanations for facets of the case that investigators may easily come to take for granted should be evaluated. For example, investigators may ask themselves: Are there alternative explanations for the presence of suspect at crime scene? Is there another explanation for why a suspect might have been in possession of seemingly incriminating evidence? What evidence is required to confirm or exclude these alternative explanations? Are there alternative motives for the crime that have yet to be explored? Investigators should also consider whether there is any evidence that has not been forensically tested or fully evaluated. These questions are important in raising investigators' awareness of possible biases in their own thought patterns.

Relatedly, a common theme throughout our qualitative analysis was the possibility that unfortunate coincidences may cause an innocent defendant to appear guilty. To avoid implicating innocent defendants who were simply at the wrong place at the wrong time, we recommend that investigators be realistic about probability estimates when a convergence of events seems to be indicative of a suspect's guilt.¹⁴² To this end, investigators should ask themselves whether seemingly incriminating events could merely be a coincidence, rather than proof of guilt. Reinforcing the other elements of the proposed checklist, this final item could further reveal tunnel vision in investigators' thinking and help them investigate all options by providing several additional avenues of inquiry.

Multiple studies emphasize that ending tunnel vision before it can take hold of an investigation is a key step in preventing wrongful convictions. Developing and implementing a checklist that can "ensure investigative bias is prevented or overcome while conducting an investigation" is one way to disrupt tunnel vision.¹⁴³ The initiation of suspicion is a natural point at which investigator should pause to weigh alternative scenarios and evaluate the evidence against a suspect to ensure they are not falling prey to cognitive biases. If systematized and

142. ROSSMO, *supra* note 5, at 37.

143. INT'L ASS'N OF CHIEFS OF POLICE ET AL., NATIONAL SUMMIT ON WRONGFUL CONVICTIONS: BUILDING A SYSTEMATIC APPROACH TO PREVENT WRONGFUL CONVICTIONS 11 (2013).

compiled into an easily implemented checklist, the items we have outlined in this section could help investigators disrupt the cognitive biases that comprise tunnel vision.

V. CONCLUSION AND FUTURE RESEARCH

Our focus on pathways to suspicion opens avenues for future research on the role of investigatory procedures in the wrongful conviction process. The results of this analysis suggest additional research is warranted into several new areas, including the accuracy of police identifications. The presence of this implication method in our dataset raises questions regarding officers' identification skills, a topic that has received little research attention.¹⁴⁴ Relatedly, rather than widespread police misconduct, we found that very few defendants were intentionally misidentified by law enforcement in the *initial* stages of the investigation.¹⁴⁵ Thus, our results indicate that improper police conduct throughout the police investigation, such as framing or withholding evidence, may be largely a result of tunnel vision that begins through some other means. Future research should examine this trend to determine whether it holds true in a broader set of cases.

The majority of wrongful conviction literature examines the impact of each type of investigative error separately. Our findings, however, suggest that there are also interactive effects among these errors. For example, imagine that a composite sketch based on the hesitant description of a witness is shown on a local news program. Days later, a viewer of this program then sees a person she believes matches this composite. Not only is there a risk of error in the victim's description,

144. See Patrick Radden Keefe, *The Detectives Who Never Forget a Face*, THE NEW YORKER (Aug. 22, 2016), <https://www.newyorker.com/magazine/2016/08/22/londons-super-recognizer-police-force>. Some police departments have recently recognized that certain officers have an enhanced ability to identify faces. These officers are called "super-recognizers." These extraordinary facial-recognition abilities appear to be inherited, rather than learned. London's Metropolitan Police Service has a unit of "super-recognizers," yet even the identifications made by this unit are incorrect 13 percent of the time. Equivalent rates are not available for other police departments, but if collected could help researchers and practitioners better understand how officers can improve their accuracy.

145. Because our analysis only examined the initiation of suspicion, we do not make any claims as to whether police misconduct was present at other stages in the investigation for the cases in our dataset.

there is also a risk in the generation of the composite and in the viewer's memories of both the composite and the person she believes it resembles. Similarly, imagine that detectives place a person identified through physical proximity to a crime scene into an improperly conducted and suggestive lineup, which leads to an incorrect identification. In this scenario, an incorrect initiation of suspicion based on circumstantial evidence is compounded by a questionable procedure (a suggestive lineup).¹⁴⁶ Future research should explore the potential impacts of these interactions, as certain combinations may prove more damaging than others.

The checklist items we have proposed in this article should be used as a starting point for reducing false initiation of suspicion. Upon implementation, these checklist items should be evaluated as additional research is completed. For instance, several methods of implication, namely, physical evidence and physical proximity, were represented in small numbers within our dataset. The relatively few cases in these categories made it difficult to synthesize policy implications. With additional research, insights into these categories may be gained. We also suggest additional variables should also be included in future analyses of defendants' origin of implication. First, the degree of public pressure placed on police in the early stages of an investigation was not available in our dataset. The pressure may influence how police conduct the investigation and, correspondingly, how an individual becomes a suspect. Although the original Preventing Wrongful Convictions Project did examine public pressure, the variable encompasses public pressure at any stage of the criminal justice system, rather than only before the initiation of suspicion. Second, the effects of a defendant's gender on origin of implication could not be tested due to the low number of female defendants in our dataset. Conducting a similar analysis with a sample of innocent female defendants could illuminate the extent to which gender dynamics and expectations of female suspects impact the course of a criminal investigation.

Finally, with regard to tunnel vision, it may be instructive to examine whether a given method of implication is more likely than another to result in its occurrence. The answer to this question requires the in-depth examination of investigations, which was outside the scope

146. These hypothetical scenarios with interacting factors are analogous to cases in our dataset.

of our analyses and might be better suited to path analysis.¹⁴⁷ We believe our analysis and proposed checklist items provide a solid foundation upon which future research can be built in an attempt to determine the most effective way to ensure that innocent individuals do not become, or, at minimum, do not remain, suspects in criminal investigations.

147. See Richard A. Leo & Jon B. Gould, *Studying Wrongful Convictions: Learning from Social Science*, 7 OHIO ST. J. OF CRIM. L. 7, 25 (2009).