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Full Disclosure: Cognitive Bias, Informants, and Search Warrant Scrutiny

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FULL DISCLOSURE: COGNITIVE SCIENCE, INFORMANTS, AND SEARCH WARRANT SCRUTINY

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I. INTRODUCTION

"[T]he outcome of a [criminal] case is usually determined long before trial (or plea), that is, at the administrative investigation stages. If truth and reliability are the objectives, therefore, what really must be done is improve the quality of the evidence gathering and interpreting at the initial investigation stages."[1]

This article aims to improve the quality of evidence gathering and interpretation at one crucial phase of investigations: the evaluation of search warrant applications. The Fourth Amendment's warrant

1. Keith A. Findley, *Adversarial Inquisitions: Rethinking the Search for the Truth*, 56 N.Y.L. SCH. L. REV. 911, 929 (2011/12).

requirement is often portrayed as "the centerpiece of the law of search and seizure, and pre-screening by neutral and detached magistrates is the heart of citizens' protection against police overreaching."[2] While the Supreme Court has expanded the exceptions to the warrant requirement in recent years,[3] the Court has nevertheless continued to emphasize the importance of search warrants.[4] Similarly, legal scholars have noted the important function search warrants play in preventing police overreaching and invasions of privacy.[5] Search warrants are particularly valuable because they require an *ex ante* determination of the validity of the search before the search occurs. This review prevents what happens during the search from shading police testimony about what they knew before the search, and it prevents the judge's opinion of the search from being tainted by the police finding incriminating evidence.[6]

As discussed below, the burgeoning literature on cognitive bias and its effects on the criminal justice system support the value of *ex ante* review of searches.[7] Those who study wrongful convictions have come to realize that "unintentional cognitive biases can play at least as large a

2. William J. Stuntz, *Warrants and Fourth Amendment Remedies*, 77 VA. L. REV. 881, 882 (1991).

3. *See, e.g.*, Wayne D. Holly, *The Fourth Amendment Hangs in the Balance: Resurrecting the Warrant Requirement Through Strict Scrutiny*, 13 N.Y.L. SCH. J. HUM. RTS. 531, 544 (1997) ("despite the Court's asserted preference for warrants, it is clear that its practice is fundamentally inconsistent with its theory."). The precise contours of the debate over the validity of a warrant preference and its possible contours are beyond the scope of this article.

4. *See, e.g.*, Kentucky v. King, 131 S. Ct. 1849, 1856 (2011) (emphasizing the Fourth Amendment principle that searches of homes without warrants are presumptively unreasonable before discussing the exceptions to that rule). *See also* Messerschmidt v. Millender, 132 S. Ct. 1235, 1245 (2012) (reasoning search warrants obtained through a neutral magistrate and proper procedure are the clearest indication the officers acted in an objectively reasonable manner for purposes of qualified immunity).

5. Holly, *supra* note 3, at 553 ("The warrant therefore does not merely redress privacy intrusions once suffered, but rather prevents such violations from occurring at all."). *See also* Chimel v. California, 395 U.S. 752, 766 n.12 (1969) ("The [Fourth] Amendment is designed to prevent, not simply to redress, unlawful police action.").

6. Stuntz, *supra* note 2, at 890 ("The essence of the warrant process lies . . . in the timing of the magistrate's decision. A judge in a suppression hearing decides whether the officer's past conduct was legal. A magistrate reviewing a warrant application must decide whether a search is legal before it takes place."); *id.* at 884 (noting the ways that knowledge of what happened in a search can taint the suppression hearing). Stuntz also argues that requiring police to provide more information to magistrates makes it harder for police to fabricate tips from informants. *See id.* at 930 ("the more information the officer puts in the affidavit, the harder it is to lie without taking a serious risk that the lie will be uncovered later.").

7. For just a few examples of the recent scholarship on cognitive bias and the criminal justice system, *see, e.g.*, L. Song Richardson, *Police Efficiency and the Fourth Amendment*, 87 IND. L.J. 1143, 1145 (2012); Anna Roberts, *(Re)Forming the Jury: Detection and Disinfection of Implicit Juror Bias*, 44 CONN. L. REV. 827 (2012); and Melanie D. Wilson, *Quieting Cognitive Bias with Standards for Witness Communications*, 62 HASTINGS L.J. 1227 (2011).

role in wrongful convictions as intentional prosecutorial misconduct."[8] The term "cognitive bias" refers to errors in how we process or remember information in ways that skew decision-making.[9] More broadly, many legal scholars have turned to cognitive bias research to provide a more nuanced understanding of human decision-making, the law's utility in creating incentives, and penalties that can shape decision-making.[10] This article therefore draws on cognitive bias research to evaluate the incentives and penalties associated with the search warrant process, with the goal of improving that process.

Cognitive bias research may well help explain the significant gap between the pro-warrant rhetoric in the case law and the actual reality of search warrant practice.[11] Yet the current case law on challenging the adequacy of search warrant information is inadequate to provide a meaningful remedy to the flaws identified below. In applying research into cognitive biases such as implicit bias, tunnel vision, and hindsight bias, this article proposes both doctrinal reform for challenges to search warrant adequacy and changes in the way that the rules are applied in certain cases. My aim in doing so is to help magistrates make better decisions when reviewing search warrants by giving them full and accurate information on which to base these decisions. The effects of these changes may be difficult to measure in specific cases, but the goal is to improve the search warrant process in the aggregate.[12]

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8. Alafair Burke, *Neutralizing Cognitive Bias: An Invitation to Prosecutors*, 2 N.Y.U. J. L. & LIBERTY 512, 515 (2007) [hereinafter Burke, *Neutralizing Cognitive Bias*].

9. Keith A. Findley & Michael S. Scott, *The Multiple Dimensions of Tunnel Vision in Criminal Cases*, 2006 WISC. L. REV. 291, 307 (2006). *See also infra* Part III for a discussion of the various types of cognitive biases that may affect analysis of search warrant applications.

10. *See generally* Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CALIF. L. REV. 1051 (2000). *But see* Gregory Mitchell, *Taking Behaviorism Too Seriously? The Unwarranted Pessimism of the New Behavioral Analysis of the Law*, 43 WM. & MARY L. REV. 1907, 1936-37 (2002) (urging skepticism about overly broad statements about "the manner in which all legal actors process information, make judgments, and reach decisions" and arguing for a narrowing and more nuanced use of psychological analysis of law).

11. *See* Laurence A. Benner & Charles T. Samarkos, *Searching for Narcotics in San Diego: Preliminary Findings from the San Diego Search Warrant Project*, 36 CAL. W. L. REV. 221, 222 (2000) (noting the gap between rhetoric and reality, and questioning whether the judiciary provides meaningful enforcement of Fourth Amendment principles designed to protect individual privacy and security).

12. I do not mean to suggest that cognitive biases will themselves be grounds for individual litigation challenges, as the Supreme Court has been very clear in recent years that Fourth Amendment issues are analyzed for objective reasonableness, without regard to individual intent. *See, e.g.*, Ashcroft v. al-Kidd, 131 S. Ct. 2074, 2083 n.4 (2011) ("Efficient and evenhanded application of the law demands that we look to whether the arrest is objectively justified, rather than to the motive of the arresting officer."); Whren v. United States, 517 U.S. 806, 814 (1996) (holding

In critiquing the state of the law regarding the search warrant process, this article focuses in particular on search warrant applications based on criminal informants' tips.[13] It does so because although the overall use of warrants has declined considerably,[14] studies suggest that significant numbers of search warrants are based on information from confidential informants.[15] Understanding how informants contribute to search warrants is crucial to understanding the reality of how search warrants are crafted and evaluated. Furthermore, warrants based on criminal informants' tips seem to have higher rates of inaccuracy than other types of warrants.[16] These inaccuracies can have grave consequences, including innocent individuals being injured or killed during the execution of the search warrants,[17] innocent individuals being wrongfully convicted and imprisoned,[18] and greater community mistrust

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that objective reasonableness rather than the officer's subjective intent was key to validity of traffic stop). But cognitive bias research is nevertheless valuable to identify what is actually happening, so that solutions can be crafted more effectively to change decision-making as appropriate.

13. "Criminal informants" are involved in some way in criminal behavior and provide information to police in exchange for some benefit, often relative leniency from their own crimes. *See* ALEXANDRA NATAPOFF, SNITCHING: CRIMINAL INFORMANTS AND THE EROSION OF AMERICAN JUSTICE 3 (2009) [hereinafter NATAPOFF, EROSION]. For a nuanced discussion of the distinctions between types of informants, *see* Amanda Schreiber, *Dealing with the Devil: An Examination of the FBI's Troubled Relationship with Its Confidential Informants*, 34 COLUM. J.L. & SOC. PROBS. 301, 303 (2001) (distinguishing between "cooperating defendants," "informant defendants," and "confidential informants," all within the general category of criminal informants).

14. *See, e.g.*, Owen Bar-Gill & Barry Friedman, *Taking Warrants Seriously*, 106 NW. U. L. REV. 1609, 1610-12 (2012) ("What was once a 'warrant requirement' is now a rule so laden with exceptions that it best resembles a piece of Swiss cheese, a state of affairs increasingly accepted as the new normal.").

15. *See, e.g.*, Alexandra Natapoff, *Snitching: The Institutional and Communal Consequences*, 73 U. CIN. L. REV. 645, 657 and nn. 56-57(2004) [hereinafter Natapoff, *Snitching*] (discussing studies that show between 80 and 92 percent of search warrant applications are based on informant tips). Use of informants varies significantly by jurisdiction, and some jurisdictions may rely less heavily on informants for search warrant applications. *See* Craig D. Uchida & Timothy S. Bynum, *Search Warrants, Motions to Suppress and "Lost Cases:" The Effects of the Exclusionary Rule in Seven Jurisdictions*, 81 J. CRIM. L. & CRIMINOLOGY 1034, 1055 (1991). Nevertheless, the existing empirical data on search warrants suggests that informants play a significant role in many search warrants, and as discussed *infra*, search warrants based on informants may be particularly likely to be inaccurate.

16. *See infra* Part III.A.

17. *See, e.g.* NATAPOFF, EROSION, *supra* note 13, at 1 (ninety-two-year-old woman killed during execution of a search warrant that was issued based on a tip from a criminal informant and fabricated information from the police about a controlled buy confirming the tip); Benner & Samarkos, *supra* note 11, at 223 (an unreliable informant's tip led to an unjustified shooting of a Fortune 500 vice-president at his home during a nighttime raid in San Diego, leading to increased scrutiny of the search warrant process in that area). Of course, individuals who have committed crimes can also be killed or injured during the execution of valid search warrants, and their lives are valuable as well.

18. *See, e.g.*, NATAPOFF, EROSION, *supra* note 13, at 3-4 (discussing several examples,

of police in general.[19] Despite these risks, my prior work concluded that courts fail to adequately scrutinize information from informants.[20] In fact, the cognitive bias research paints an even bleaker picture of the extent to which police, prosecutors, magistrates, and appellate judges all lack the incentives to identify and challenge false information from informants in search warrants.[21] Thus, while much of this article's critique can apply to the search warrant process generally, the article focuses in particular on warrants based on information from informants, both because of the frequency of that type of warrant and because of the particular risks posed by such warrants.

Part II of this article provides background on the search warrant application process, including how courts evaluate such applications based on informants' tips and how defendants can subsequently challenge those decisions. Part III then discusses the ways in which cognitive biases can affect each stage of the search warrant process. Part IV provides my suggested solutions to the problems identified, all of which fall under the general umbrella of full disclosure. That part argues that education about cognitive biases will play a key role in addressing the problems identified in the article. It also argues that police should use a checklist to help ensure that they provide magistrates with the necessary information to review the search warrant application, and it suggests doctrinal reforms to incentivize use of this checklist. These reforms are aimed at helping police and magistrates make better decisions when search warrants are applied for and reviewed. They should also help make the system more transparent, which in turn will create greater roles for defense counsel in individual cases and help scholars or others looking at systemic issues. Part V concludes the article

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including an informant whose false tips led to several guilty pleas before a lie detector test showed that the informant had lied and police discovered that the informant had mixed flour and baking soda with small amounts of cocaine to fabricate evidence of drug deals); Hon. Steven S. Trott, *Words of Warning for Prosecutors Using Criminals as Witnesses*, 47 Hastings L.J. 1381, 1383-85 (1996) (describing several examples of this problem); *See also* Andrew E. Taslitz, *Wrongly Accused Redux, How Race Contributes to Convicting the Innocent: the Informants Example,* 37 SW. U. L. REV. 1091 (2008) (discussing the risk of wrongful convictions based on informants' tips and the difficulties in detecting this risk).

19. *Id.* at 1139-41 (discussing the creation of a culture of distrust and undermining perceptions of law enforcement's legitimacy); Bar-Gill & Friedman, *supra* note 14, at 1628 (arguing that damages are an inadequate remedy for wrongful searches, in part because the cost of the psychic harms are incalculable: "It is undoubtedly difficult for most people even to comprehend the trauma of having police officials burst into one's home . . . Victims describe the utter helplessness, the feeling of freedom being taken away, the inability to trust cops thereafter.").

20. *See generally* Mary Nicol Bowman, *Truth or Consequences: Self-Incriminating Statements and Informant Veracity*, 40 N. MEX. L. REV. 225 (2010).

21. *See infra* Part III.

by briefly summarizing the issue and recommending more empirical research to verify some of the conclusions drawn throughout this article.

II. FOURTH AMENDMENT TREATMENT OF SEARCH WARRANTS

"The bulwark of Fourth Amendment protection, of course, is the Warrant Clause, requiring that, absent certain exceptions, police obtain a warrant from a neutral and disinterested magistrate before embarking upon a search."[22] The search warrant must be supported by documentation,[23] typically an affidavit written by a police officer to be understandable to laypeople.[24] The affidavit must provide sufficient detail to allow the magistrate to "make an independent evaluation of the matter."[25] The magistrate must then make that independent evaluation, rather than merely ratifying conclusions of the officer who drafted the affidavit.[26]

This part provides an overview of the magistrates' role in evaluating search warrant applications generally and introduces the role of informant tips in search warrant evaluation. It then explains how magistrates often fail to provide adequate review of these applications, and how post-search judicial review does not provide an adequate remedy for these problems.

A. Importance of the Magistrate's Role in Evaluating Search Warrant Applications

Both the courts and commentators generally stress the importance of the magistrate's neutrality. For example, the Supreme Court has repeatedly stated the Fourth Amendment protects individuals by requiring "neutral and detached magistrates" to evaluate the inferences from the facts uncovered by an investigation, rather than allowing those inferences to be drawn "by the officer engaged in the often competitive enterprise of ferreting out crime."[27] Magistrates play an important role

22. Franks v. Delaware, 438 U.S. 154, 164 (1978).

23. U.S. CONST. art. IV (providing that "no warrant shall issue, but on probable cause, supported by oath or affirmation").

24. *See* Andrew E Taslitz, *What Is Probable Cause, and Why Should We Care?: The Costs, Benefits, and Meaning of Individualized Suspicion*, 73 LAW & CONTEMP. PROBS. 145, 178 (2010) [hereinafter Taslitz, *What Is Probable Cause*].

25. Franks, 438 U.S. at 165.

26. *See, e.g.*, Illinois v. Gates, 462 U.S. 213, 239 (1983).

27. Johnson v. United States, 333 U.S. 10, 14 (1948) (quoted with approval relatively recently in Groh v. Ramirez, 540 U.S. 551, 575 (2004) and more relevant to the topic of this article, in Gates, 462 U.S. at 240).

because of the inherent tension, or even incompatibility, between the investigative and prosecutorial roles on the one hand, and a neutral evaluation on the other.[28] Requiring officers to justify their reasoning in a search warrant application should provide transparency, accountability, and error correction.[29]

The magistrate's neutrality is particularly important because search warrants are applied for and evaluated *ex parte*, i.e., without defense counsel present.[30] The subject of the search cannot be present or represented by counsel at a search warrant hearing, to minimize the risk of destruction or removal of evidence.[31] However, the *ex parte* nature of the warrant process has important consequences: "The usual reliance of our legal system on adversary proceedings itself should be an indication that an *ex parte* inquiry is likely to be less vigorous. The magistrate has no acquaintance with the information that may contradict the good faith and reasonable basis of the affiant's allegations."[32] At this stage, all the power rests with the state,[33] and the structure of the criminal justice system incentivizes the state to focus on the interests of victims and police, rather than on the vindication of truth.[34] Therefore, it is essential that magistrates play a meaningful role in scrutinizing the warrant applications. For magistrates to provide meaningful scrutiny, however, they must be provided with all the relevant information that they need to exercise independent judgment.[35] That is, they must be provided with

28. Robert P. Mosteller, *The Special Threat of Informants to the Innocent Who Are Not Innocents: Producing "First Drafts," Recording Incentives, and Taking a Fresh Look at the Evidence*, 6 OHIO ST. J. OF CRIM. L. 519, 573 (2009).

29. Andrew E. Taslitz, *Police Are People Too: Cognitive Obstacles to, and Opportunities for, Police Getting the Individualized Suspicion Judgment Right*, 8 OHIO ST. J. CRIM. L. 7, 64 (2010) [hereinafter Taslitz, *Police Are People Too*].

30. *See, e.g.*, 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, 331 (2009) [hereinafter O'Brien, *Prime Suspect*] (identifying as a contributing factor to wrongful convictions the fact that "defense attorneys typically do not begin working on cases as soon as crimes are discovered; instead, they begin work only after the police and prosecutors have not only identified but charged their clients.").

31. Franks v. Delaware, 438 U.S. 154, 169 (1978).

32. *Id. See also* Findley, *supra* note 1, at 914 ("The adversary system operates on the fundamental belief that the best way to ascertain the truth is to permit adversaries to do their best to prove their competing version of the facts. When two equal adversaries compete in this way, the theory goes, falsehoods are exposed and the truth emerges.").

33. *Id.* (noting that "only the State typically has much ability to look for and produce the key evidence in the case").

34. *See* Susan Bandes, *Loyalty to One's Convictions: The Prosecutor and Tunnel Vision*, 49 HOW. L.J. 475, 489 (2006).

35. *See, e.g.*, 2 WAYNE R. LAFAVE, SEARCH AND SEIZURE: A TREATISE ON THE FOURTH AMENDMENT § 3.3, at n. 92-134 (4th ed. 2004) (discussing the level of detail about an informant's

full disclosure. As used in this article, the term "full disclosure" means all known information that can help magistrates make probable cause determinations accurate and fair.[36]

B. Informants' Role in Establishing Probable Cause

The need for full disclosure is particularly acute in situations involving search warrants based on informants.[37] Informants are frequently "highly motivated to help themselves"[38] and have substantial motives to provide lies, rumors, or guesses to police in exchange for reduced or eliminated liability for their own activities.[39] Some use of informants may be a necessary evil, but the use of informants poses significant challenges for adequate judicial oversight.[40]

Historically, the courts used a two-pronged test to evaluate search warrant applications based on information from informants.[41] This *Aguilar-Spinelli* test required that the affidavit demonstrate both the informant's "basis of knowledge," i.e., the way the informant obtained his or her information,[42] and the informant's "veracity."[43] A deficiency in the showing under either prong could be remedied through police corroboration of some of the information provided.[44] In 1983, however,

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track record that should be provided to the magistrate to avoid the information being too conclusory).

36. It is true that practically speaking, disclosure will never really be literally "full," in that there may always be additional information that officers do not know that could be helpful, and I am not proposing that officers be required to do additional investigation. *See infra* Part IV.B. But I use the term "full disclosure," rather than "adequate" or "sufficient disclosure," to emphasize the aspirational nature of my proposal, that officers and magistrates both need to think more broadly about what information is relevant to probable cause determinations, and that officers need to provide that information to magistrates in warrant applications, to help the magistrates make better decisions in some cases.

37. *See generally* Bowman, *supra* note 20.

38. Mosteller, *supra* note 28, at 553-54. *See also* Natapoff, *Snitching*, *supra* note 15, at 652 (the criminal justice system's reliance on informants creates a "government-sponsored market in betrayal and liability.").

39. *See generally* Bowman, *supra* note 20.

40. *Id.* at 669. *Cf.* Ellen Yaroshefsky, *Cooperation with Federal Prosecutors: Experiences of Truth Telling and Embellishment*, 68 FORDHAM L. REV. 917, 936 (1999) (describing how much more police officers who serve as informant "handlers" know about the informant than prosecutors do, hampering the prosecutors' ability to make independent assessment of informants' credibility).

41. Bowman, *supra* note 20, at 229.

42. Aguilar v. Texas, 378 U.S. 108, 113-14 (1964), *overruled by* Illinois v. Gates, 462 U.S. 213, 238 (1983); Spinelli v. United States, 393 U.S. 410, 416 (1969), *overruled by* Gates, 462 U.S. at 238.

43. Aguilar, 378 U.S. at 114-15; Spinelli, 393 U.S. at 416.

44. *Cf.* Peter Erlinder, *Florida v. J.L.—Withdrawing Permission to "Lie With Impunity": The Demise of "Truly Anonymous" Informants and the Resurrection of the Aguilar/Spinelli Test for*

the United States Supreme Court decided *Illinois v. Gates*, which overruled *Aguilar-Spinelli* and replaced the two-pronged test with a "totality of the circumstances analysis" to analyzing warrants based on an informant's tip.[45] Under *Gates*, the informant's basis of knowledge and veracity are "closely intertwined issues that may usefully illuminate the commonsense, practical question whether there is 'probable cause' to believe that contraband or evidence is located in a particular place."[46] A deficiency in the showing under one prong of the test may be compensated for by a particularly strong showing under the other prong of the test or even by some other showing of reliability.[47] Under *Gates*, "[t]he task of the issuing magistrate is simply to make a practical, common-sense decision whether, given all the circumstances set forth in the affidavit before him, including the 'veracity' and 'basis of knowledge' of persons supplying hearsay information, there is a fair probability that contraband or evidence of a crime will be found in a particular place."[48]

Criminal procedure scholars have extensively criticized the *Gates* decision, arguing that it provides significantly weaker protection than the *Aguilar-Spinelli* test that it replaced.[49] A number of state courts have rejected *Gates* and continue to apply *Aguilar-Spinelli* on state law grounds.[50] Scholars disagree about both the normative value of the two approaches (which is more faithful to Fourth Amendment principles) and the empirical effects of each approach (which creates better incentives for effective policing, however that term is defined).[51]

Regardless, both *Aguilar-Spinelli* and *Gates*, in different ways, stress the important role played by magistrates. *Aguilar-Spinelli* and its progeny stress giving complete information to magistrates.[52] *Gates*, by

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Probable Cause, 4 U. PA. J. CONST. L. 1, 35 (2001) (prior to the decision in *Gates*, cases allowed for corroboration to satisfy the basis of knowledge prong of *Aguilar-Spinelli* but should not have been read, as they were, to satisfy the reliability prong as well).

45. Gates, 462 U.S. at 230, 234.

46. *Id.* at 230.

47. *Id.* at 233.

48. *Id.* at 238.

49. *See, e.g.*, LAFAVE, *supra* note 35, at 105-13 (extensively critiquing and refuting the reasoning of the *Gates* majority). *See also generally* Erlinder, *supra* note 44, at 5 (providing a particularly thorough discussion of the evolution of the law on probable cause determinations, including the key role that magistrates play).

50. Bowman, *supra* note 20, at 231 n.38.

51. Taslitz, *What Is Probable Cause, supra* note 24, at 167-68.

52. *See* Aguilar, 378 U.S. at 111; Spinelli, 393 U.S. at 416. *See also* State v. Jackson, 688 P.2d 136, 139 (Wash. 1984) ("Underlying the *Aguilar-Spinelli* test is the basic belief that the determination of probable cause to issue a warrant must be made by a magistrate, not law enforcement officers who seek warrants.").

contrast, stresses not burdening the magistrate with overly technical rules, freeing the magistrate to make a commonsense determination of probable cause.[53] The Court in *Gates* also relied in part on the concern that *Aguilar-Spinelli* created significant incentives for police to bypass magistrates by avoiding getting a warrant and using consent or some other warrant exception to justify the search *ex post*.[54]

Under either approach, magistrates must analyze a variety of factors that can contribute to the probable cause determination.[55] Under either test, it is crucial for the magistrate to scrutinize the information about the informant, as "a court's unwillingness to seriously inquire into the informant-handler relationship allows both the handler and the informant to misrepresent or mischaracterize facts."[56]

C. Magistrates Fail to Provide Sufficient Review

Unfortunately, however, magistrates issuing search warrants and courts reviewing defendants' challenges to those search warrants often fail to provide this type of meaningful review. For example, an empirical study of the search warrant process indicated that some magistrates view their role as assisting law enforcement rather than providing independent review.[57] Similarly, studies show that magistrates rarely deny search warrant applications,[58] a factor that may sometimes be influenced by police officers "judge–shopping," that is "selecting the judge with whom an individual officer feels comfortable or who is perceived as less likely to raise questions."[59] In the same study, magistrates admitted to being influenced, at least to some degree, by the reputation for truthfulness of the officer seeking the warrant and by the severity of the crime for which the warrant was sought; both factors affected their level of scrutiny of the information in the

53. Gates, 462 U.S. at 235-36.

54. *Id.* at 236.

55. *See* LAFAVE, *supra* note 35, at 112.

56. Clifford S. Zimmerman, *Toward a New Vision of Informants: A History of Abuses and Suggestions for Reform*, 22 HASTINGS CONST. L.Q. 81, 105 (1994).

57. *See* RICHARD VAN DUIZEND ET AL., THE SEARCH WARRANT PROCESS: PRECONCEPTIONS, PERCEPTIONS, PRACTICES 47 (1985).

58. *Id. See also* Lauryn P. Gouldin, *When Deference Is Dangerous: The Judicial Role in Material-Witness Detentions*, 49 AM. CRIM. L. REV. 1333, 1369 and related text (2012) (discussing how rarely federal warrants are denied, including noting that between 1999 and 2009, judges denied only two of more than 18,000 applications for wiretap applications).

59. VAN DUIZEND ET AL., *supra* note 57, at 48. *See also* Benner & Samarkos, *supra* note 11, at 223, 227-28.

affidavit.[60] The study also showed that the review by the magistrate was usually done very quickly, typically between two and three minutes per warrant application.[61]

Furthermore, despite the repeated emphasis in the case law for the need to provide specific information rather than boilerplate language to the magistrates, empirical studies show that magistrates tend to accept these boilerplate recitations as sufficient.[62] For example, in one of the jurisdictions studied, every warrant application involving a confidential informant contained the same boilerplate language about the reasons for keeping the informant's identity confidential.[63] In another jurisdiction, the warrant applications routinely stated that the informant had provided reliable information "on at least two prior occasions" and that "to the knowledge of the affiant, this informant has never supplied your affiant with information that was proven to be false."[64] The study correctly notes the dangers inherent in overreliance on boilerplate language: "one of the more insidious qualities of boilerplate presentations is that the affiant (officer) may take them only half-seriously, as part of the game that must be played, as form rather than substance."[65]

Affidavits are often drafted to reveal as little information as possible. Officers in one study acknowledged that they deliberately provided the minimum amount of information necessary to establish probable cause, to minimize later attacks by defense counsel.[66] Similarly, some officers provided minimal data on the informant's past reliability, perhaps to protect the identity of the informant.[67] One study

60. VAN DUIZEND ET AL., *supra* note 57, at 48-49.

61. *Id.* at 49. *But see* Bar-Gill & Friedman, *supra* note 14, at 1672-73 (questioning whether reports of magistrates "rubber-stamping" search warrant applications and police engaging in "magistrate-shopping" are accurate).

62. VAN DUIZEND ET AL., *supra* note 57, at 51-53. *See also id.* at 52-53 (offering one magistrate's perspective that he needed to make sure all the necessary boilerplate language was included "because once in a while the typist will leave something out"). This description suggests that both the officer and the magistrate are more focused on form over substance, contrary to the Supreme Courts' directives about meaningful magistrate review.

63. *Id.* at 52.

64. *Id. See also* Benner & Samarkos, *supra* note 11, at 239 (discussing use of boilerplate language regarding the need to keep the informant's identity confidential); *id.* at 242 (noting that affidavits tended to discuss arrests but not convictions when documenting the informant's "track record;" no discussion of countervailing times in which the informant's information was inaccurate).

65. VAN DUIZEND ET AL., *supra* note 57, at 52-53.

66. *Id.* at 53 ("We were told in [three cities] that affidavits are drafted to include the minimum amount of information necessary to establish probable cause, in order to limit the avenues of attack by the defense and to protect the identity of the informants.").

67. *Id.* at 54.

even found that half of the affidavits studied that included information from a confidential informant were written so that no officer had to swear that the confidential informant even existed; instead, the affiant officer stated that another officer told him about information from the confidential informant.[68] Although lawyers often draft documents to reveal as little as possible to the opposing side, that practice here contradicts the directives in case law that magistrates rather than officers should evaluate the inferences from the facts to determine whether probable cause exists,[69] which can only occur if magistrates are given adequate information.

D. Later Review by Trial and Appellate Courts Is Also Inadequate

As noted above, search warrants are issued *ex parte*, so defendants cannot challenge the validity of the search warrant until after it has been executed. Both doctrine and practice, however, seriously limit the value of these later challenges, which can take two different forms.

First, criminal defendants can accept as true the information in the search warrant application but argue that it fails to establish probable cause. Those challenges are typically litigated as suppression motions in the criminal case,[70] and they turn on the courts' interpretation of probable cause.[71] Unfortunately, courts often rely on "somewhat vapid generalizations as universal principles" when analyzing probable cause based on informants' stories.[72] Courts often fail to look skeptically at other information presented by police,[73] and they fail to demand full disclosure of information relevant to the probable cause analysis.[74]

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68. Benner & Samarkos, *supra* note 11, at 241 (noting that the practice has been upheld but that it would be preferable to require the officer with first-hand knowledge to prepare the affidavit, perhaps by seeking a telephonic warrant to alleviate timing concerns).

69. *See* Illinois v. Gates, 462 U.S. 213, 240 (1983). Scholars in other contexts have similarly criticized reviewing courts for failing to demand sufficient information, such as information about cooperation in material witness warrants in the post-9/11 age. *See* Gouldin, *supra* note 58, at 1352-53 and related text.

70. *See, e.g.*, Gates, 462 U.S. at 216-17. As discussed in Part II.B above, for tips from informants, most courts apply the *Gates* "totality of the circumstances" analysis to determining probable cause, while a few states continue to apply the two-pronged *Aguilar-Spinelli* test.

71. Probable cause is a complex concept that has been the subject of much scholarly analysis. *See, e.g.*, Taslitz, *What Is Probable Cause*, *supra* note 24. As noted earlier, many scholars have been quite critical of whether the courts are adequately rigorous in making probable cause determinations, particularly in cases involving information from informants. The contours of those debates are outside the scope of this article.

72. *Id.* at 153.

73. *Id.*

74. For example, in *Truth or Consequences*, I argue that courts analyzing suppression motions have not been sufficiently rigorous in analyzing probable cause in that they have relied too

Even more troubling, however, are the failures of the second line of attack on search warrants, where defendants more directly contest the quantity and quality of the information provided. Defendants can bring "*Franks* challenges" to contest the accuracy or completeness of the information in search warrant applications.[75] These challenges come from *Franks v. Delaware*, in which the Supreme Court concluded that it "would be an unthinkable imposition upon [the magistrate's] authority if a warrant affidavit, revealed after the fact to contain a deliberately or recklessly false statement," could not be challenged later by the defendant.[76] Therefore, under *Franks*, defendants can challenge the accuracy of information provided in support of search warrants, at least in limited circumstances.[77] *Franks* challenges concerning affidavits based on informants' tips are almost impossible to win, based on both the structure of the *Franks* test and the ways courts apply the test in cases involving omitted information about informants.[78]

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heavily on informants' statements against penal interest in establishing their reliability. *See generally* Bowman, *supra* note 20. I argued instead that they should consider a number of factors in determining whether those statements against interests really support the informant's credibility. Courts can only perform that analysis, however, if they are given full disclosure, i.e. if the documents supporting the search warrant application provide sufficient information about the various issues that should affect the magistrate's analysis of the informant's credibility. Too often, the courts fail to demand such information from police.

75. *See generally* LAFAVE, *supra* note 35, sec. 4.4, at 531-32. *See also* Franks v. Delaware, 438 U.S. 154, 165 (1978) (requiring that the information in a search warrant affidavit must "'truthful' in the sense that the information put forth is believed or appropriately accepted by the affiant as true.").

76. *Id. See also id.* at 168 ("The requirement that a warrant not issue "but upon probable cause, supported by Oath or affirmation," would be reduced to a nullity if a police officer was able to use deliberately falsified allegations to demonstrate probable cause, and, having misled the magistrate, then was able to remain confident that the ploy was worthwhile.").

77. *See, e.g.*, Franks, 438 U.S. at 167 (noting that "the rule announced today has a limited scope, both in regard to when exclusion of the seized evidence is mandated, and when a hearing on allegations of misstatements must be accorded.").

78. The application of the *Franks* doctrine to affidavits based on confidential informants has always been somewhat challenging. The *Franks* case itself did not involve information provided by a confidential informant. *See* Franks, 438 U.S. at 156-58. The Court only made fleeting mention of informants in its decision. *See, e.g., id.* at 165 (noting that the "truthfulness" of the information supporting a search warrant application must take into account the fact that affidavits often include hearsay, information gathered from an informant, and information gathered hastily during an investigation). The Court expressly reserved the "difficult question" of whether an informant's identify could ever be required to be disclosed after "a substantial preliminary showing of falsity has been made." *Id.* at 170. Furthermore, at the end of the opinion, in explaining the various limitations on the rules the Court was announcing, the court noted that "[t]he deliberate falsity or reckless disregard whose impeachment is permitted today is only that of the affiant, not of any nongovernmental informant." *Id.* at 171. As discussed in more detail below, the language in *Franks* about informants foreshadowed the difficulties that the lower courts would have in applying the doctrine to the factual and legal issues surrounding informant usage.

1. The *Franks* Standards Are Nearly Impossible to Meet for Search Warrants Based on Informants' Tips

Franks challenges involve heavy burdens for defendants to meet, even at the earliest stages. First, the defendant must make "a substantial preliminary showing that a false statement knowingly and intentionally, or with reckless disregard for the truth, was included by the affiant in the warrant affidavit."[79] A defendant's claim will fail if it only alleges innocent or negligent misrepresentation;[80] it will similarly fail if the court determines that the evidence fails to demonstrate falsity.[81] At this stage, the defendant must also show that "the allegedly false statement is necessary to the finding of probable cause."[82] Many *Franks* challenges fail at this stage because the court determines that the allegedly false statement is not important enough to affect the probable cause analysis.[83] If the defendant's "preliminary showing" clears all three of these hurdles (falsity, intent, and materiality), then the defendant is entitled to a hearing on the allegations.[84] At the evidentiary hearing, the defendant has to establish by a preponderance of the evidence the same three things; only then will the evidence be suppressed "to the same extent as if probable cause was lacking on the face of the affidavit."[85] Reviewing courts presume the affidavit's validity and require the defendant to provide specific allegations and an offer of proof.[86]

As applied to affidavits based on informants' tips, these standards are nearly impossible for defendants to meet. First, the officer, rather than the informant, has to be the one to make the false statement.[87] So long as the affiant reasonably believed the informant's story, then the informant's inaccuracy does not matter under *Franks*.[88] Although some courts say that the defendant can obtain a *Franks* hearing by showing "that the officer submitting the [affidavit] . . . acted recklessly because he seriously doubted or had obvious reasons to doubt the truth of the allegations,"[89] most courts rarely question whether it was reasonable for

79. *Id.* at 155-56.

80. *Id.* at 171 ("Allegations of negligence or innocent mistake are insufficient.").

81. *See id.* at 155-56.

82. *Id.* at 156.

83. *See, e.g.*, United States v. Croto, 570 F.3d 11, 15 (1st Cir. 2009); United States v. Charles, 138 F.3d 257, 264 (6th Cir. 1998).

84. Franks, 438 U.S. at 155-56.

85. *Id.*

86. *Id.* at 171.

87. *See, e.g.*, United States v. Johnson, 580 F.3d 666, 670 (7th Cir. 2009).

88. United States v. Rodriguez-Suazo, 346 F.3d 637, 648 (6th Cir. 2003).

89. Johnson, 580 F.3d at 670.

the officer to rely on the informant's information.[90] Instead, they tend to defer to the officer, even when the facts suggest grounds for skepticism.[91]

Furthermore, when officers draft affidavits to protect the identities of confidential informants, defendants often lack access to the very information they would need to make the required preliminary showing of falsity, intent, and materiality. Courts often reject claims that the prosecution should have to disclose the identity of the informant in order to allow the defendant the opportunity to make the necessary preliminary showing.[92] Yet as one district court forthrightly noted, "[i]t is difficult to imagine how [someone raising a *Franks* claim] could hope to make the substantial showing necessary . . . without at least some access to the confidential informant."[93]

These standards can even be used to shield police who make up the informant entirely.[94] "If an informant's identity—or very existence—is unknown, a defendant obviously lacks the very information necessary to determine the source of the false statements."[95] Therefore, the courts create an impossible burden when they require a defendant to disprove every possibility besides the officer making intentionally or recklessly false statements just to get a hearing. This burden effectively "enable[s] the officer to insulate perjury from discovery by the simple expedient of a fabricated informant."[96]

Although the picture is bleak in most jurisdictions, a few jurisdictions have recognized the real difficulties imposed by these standards in informant cases.[97] For example, the First Circuit explicitly

90. *See, e.g.*, United States v. Jones, 208 F.3d 603, 607 (7th Cir. 2000); United States v. Akinkoye, 185 F.3d 192, 198-99 (4th Cir. 1999).

91. *See, e.g.*, United States v. Brown, 3 F.3d 673, 676-78 (3d Cir. 1993) (defendant's *Franks* motion factual showing significantly undercut the informant's story, and the officer's writing of the affidavit contained other inaccuracies, which should undercut the deference shown to the officer, but the court affirmed the trial court's refusal to grant a *Franks* hearing). Even when courts do grant a hearing in these circumstances, they still tend to defer to the officer's statements even when the facts suggest reasonable grounds for skepticism. *See, e.g.*, State v. Klar, 400 So. 2d 610, 612-13 (La. 1981) (court accepted testimony of affiant rather than defendant, informant, and other witnesses).

92. *See, e.g.*, United States v. Brown, 3 F.3d 673, 679-80 (3d Cir. 1993) (disclosure of informant's identity under *Franks* only required after defendant makes substantial preliminary showing).

93. Rodriguez v. City of Springfield, 127 F.R.D. 426, 429 (D. Mass. 1989).

94. *See, e.g.*, People v. Lucente, 506 N.E.2d 1269, 1275 (Ill. 1987).

95. *Id.*

96. *Id.* Of course, if police fabricate the existence of an informant in support of a search warrant application, that would be intentional wrongdoing rather than the result of cognitive bias.

97. *See, e.g.*, United States v. Higgins, 995 F.2d 1, 3 (1st Cir. 1993); United States v. Manning, 79 F.3d 212. 220 (1st Cir. 1996). *See also* Lucente, 506 N.E.2d at 1275-76 (collecting

grants discretion to its trial courts to order an in-camera hearing to test the credibility of the officer-affiant, and even the informant.[98] In justifying its decision to allow for in-camera questioning of the officer in the case about the informant's identity and information, the court noted that "[i]nformants may have many motives for misleading the police, and even the most conscientious officer may be tempted to wink at the improprieties of an informant. If the court is going to be honest about the realities of law enforcement in this area, the risk of abuse must be confronted."[99]

2. *Franks* Is Even Harder to Meet in Omissions Cases

Although *Franks* dealt with affirmatively false statements, lower courts have logically extended the doctrine to apply to "material omissions," i.e., omissions of information that would be material to the court's analysis.[100] After all, significant omissions of information can mislead magistrates who rely on the government to "present the full case for its belief in probable cause, including any contraindications."[101] Many *Franks* challenges regarding material omissions deal with omissions of information regarding informants.[102]

However, some circuits state explicitly that "there is a higher bar for obtaining a *Franks* hearing [based on] an allegedly material omission as opposed to an allegedly false affirmative statement."[103] These courts justify the "higher bar" for omissions cases by citing concerns about "endless" *Franks* litigation about what might have benefited the defendant,[104] even though that does not seem to be a realistic fear given how hard other *Franks* challenges are to win.

But the line between omissions and affirmative misstatements is often a very fine one.[105] For example, the Eighth Circuit concluded that

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other state court cases).

98. Manning, 79 F.3d at 220.

99. Rodriguez, 127 F.R.D. at 430.

100. LAFAVE, *supra* note 34, sec. 4.4, at n.48 and accompanying text.

101. United States v. Nelson-Rodriguez, 319 F.3d 12, 33 (1st Cir. 2003).

102. *See, e.g.*, United States v. Croto, 570 F.3d 11, 15 (1st Cir. 2009) (defendant argued that information regarding informant bias should have been included in the affidavit); United States v. Trujillo, 376 F.3d 593, 602 (6th Cir. 2004) (defendant argued she should have been entitled to a *Franks* hearing because affidavit failed to include informants' previous explanations and allegations regarding who else was involved in drug distribution).

103. *See, e.g.*, United States v. Fowler, 535 F.3d 408, 415 (6th Cir. 2008).

104. *See, e.g.*, United States v. Atkin, 107 F.3d 1213, 1217 (6th Cir. 1997); United States v. Colkley, 899 F.2d 297, 301 (4th Cir. 1990); United States v. Owens, 882 F.2d 1493, 1498-99 (10th Cir. 1989); United States v. Reivich, 793 F.2d 957, 961 (8th Cir. 1986).

105. *See* LAFAVE, *supra* note 35, at sec. 4.4 notes 70-71 and accompanying text.

"[s]tating that an informant has not given false information even though he has never given information in the past does not amount to a false or reckless omission of relevant information."[106] But the court could have, and probably should have, considered that a false statement, not an omission, as the defendant challenged the accuracy of a specific statement in the affidavit rather than the failure to include any information on a topic.[107] This classification matters because an affidavit with "knowing falsehoods in it . . . should not be open to rehabilitation by a process of substituting for the affiant's lies other information which is really the truth from which he deliberately departed."[108]

Additionally, courts routinely reject the significance of information about informants that defendants allege should have been included. For example, courts routinely reject as insufficient defendants' claims that the affidavit should have included information about the informant's bias or motive to lie.[109] Similarly, courts routinely reject claims that the affidavit should have addressed the informant's deal with police, to provide information in exchange for some benefit, like leniency[110] or payment.[111] As I explained in my prior article, however, these matters are highly relevant to analyzing the informant's reliability, which is part of the overall probable cause analysis.[112]

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106. United States v. Underwood, 364 F.3d 956, 964 (8th Cir. 2004) *cert. granted, judgment vacated sub nom.* Carpenter v. United States, 543 U.S. 1108 (2005) (on other grounds).

107. *See* Underwood, 364 F.3d at 964.

108. LAFAVE, *supra* note 35, at sec. 4.4, at 552.

109. *See, e.g.*, United States v. Croto, 570 F.3d 11, 15 (1st Cir. 2009) (defendant claimed informants were biased against him because they were tired of him selling marijuana); State v. Lease, 472 S.E. 2d 59, 62-63 (La. 1996) (omission of fact that informant was extremely agitated because of her desire to remove her child from the home of the defendant, the child's father, was not fatal to validity of the warrant).

110. *See, e.g.*, United States v. Allen, 297 F.3d 790, 795 (8th Cir. 2002) ("search warrant affidavits need not provide judicial officers with all the details of bargaining between police and arrested persons from whom they are seeking to get information"); United States v. Legualt, 323 F. Supp. 2d 217, 226 (D. Mass 2004) (defendant argued affidavit should have included information re. favorable bail conditions informant received in exchange for information; court found that would have "enhanced her credibility rather than weakened it because it provides an incentive to give accurate information); State v. Grimshaw, 515 A.2d 1201, 1203-04 (N.H. 1986) (omission of fact that charges against informant were dropped in exchange for information did not matter because the magistrate was informed that the informant had been arrested).

111. United States v. Muldoon, 931 F.2d 282, 286 (4th Cir. 1991) (while evidence that informant and his wife were paid had "some bearing on [the informant's] credibility," omitting that information from the affidavit was not fatal to probable cause because of the other evidence against the defendant); State v. Garberding, 801 P.2d 583, 586 (Mont. 1990) (omission of fact that informant was paid for information was not material because it did not cast doubt on the informant's reliability).

112. *See* Bowman, *supra* note 20, at Part III.C.4, regarding how courts should analyze

Thus, despite the language in case law and scholarship about the importance of magistrate review of search warrant applications, there are significant flaws in the actual practices related to search warrants, from their preparation and issuance through judicial review. While some of these problems may come from deliberate choices by police officers, magistrates, and judges, recent research into cognitive biases suggests another possible explanation for these failings.[113] This research suggests that many of the errors in the criminal justice system result not from maliciousness or even indifference, but from the combination of human cognitive limits and institutional pressures.[114] The next part describes that cognitive bias research and how it sheds light on each stage of the search warrant process.

III. COGNITIVE BIAS LIKELY AFFECTS EACH STAGE OF THE SEARCH WARRANT PROCESS

Social science research over the last few decades has compellingly shown that "human decision makers are imperfect utility-maximizers and suffer systematically from a series of cognitive biases."[115] As noted above, cognitive bias means errors in how we process or remember information that skew decisions in a predictable direction.[116] Research suggests that the way the human mind works poses obstacles to good

informants' motivations when assessing the informants' reliability. Specifically, informants' motives the informants' motives can directly undercut that reliability determination, in that their motives may lead them to provide rumors, guesses, or deliberately false information if they believe that such information will not be held against them if it proves to be incorrect.

113. *Cf.* Susan Bandes, *Framing Wrongful Convictions*, 2008 UTAH L. REV. 5, 19-23 (discussing the tension in trying to motivate reform between focusing on and labeling individual intentional conduct versus focusing on and highlighting structural and institutional factors that contribute to wrongful convictions and procedural injustice). I similarly try to keep the focus in this article on wrongs that could be caused by cognitive bias rather than intentional wrongdoing, although the line between the two can sometimes be fine, and it is sometimes helpful to explore how the two can be closely connected.

114. Findley & Scott, *supra* note 9, at 307.

115. Alafair Burke, *Prosecutorial Passion, Cognitive Bias, and Plea Bargaining*, 91 MARQ. L. REV. 183, 195 (2007) [hereinafter Burke, *Prosecutorial Passion*].

116. *See* Findley & Scott, *supra* note 9, at 307-08. *See also id.* at n.9 ("In some contexts, biases may be desirable when they run in the direction of errors that are less costly than their opposites."). Some authors use the term "bounded rationality" rather than "cognitive bias" to refer to these limits on our ability to process and remember information. *See, e.g.*, Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1447 (1998). Both these terms highlight different aspects of the problem, with "bounded rationality" highlighting the flaws in expecting perfect rationality from people. However, I have chosen to use the term "cognitive bias" because it is more commonly used in the legal literature and it emphasizes the way that decisions can be skewed.

decision-making, but poor decision-making is not inevitable.[117] This research "does not absolve actors in the criminal justice system from responsibility" but instead "demands that we become aware of these cognitive processes . . . and that we search for ways to neutralize them."[118] Unfortunately, both structural features of the criminal justice system and policy choices within it exacerbate rather than mitigate cognitive biases.[119]

These features and choices likely affect the search warrant process in a number of ways, as described below. Specifically, implicit bias likely affects who police target for searching. Police preparing warrants may be affected by tunnel vision. Magistrate review may be affected by framing, priming, and implicit biases. In addition, post-search review may be particularly affected by confirmation and hindsight biases.

A. Implicit Bias Likely Affects Who Is Targeted for Searching

Much of the recent literature applying social science research has focused on implicit bias.[120] The foundational article on the subject defined implicit biases as "discriminatory biases based on implicit attitudes or implicit stereotypes."[121] As the name suggests, implicit biases involve unconscious rather than conscious mental processes; these unconscious processes allow implicit attitudes to affect decision-making unnoticed.[122] Thus, implicit bias "can produce behavior that diverges from a person's avowed or endorsed beliefs or principles."[123]

Although implicit bias can involve other types of disadvantaged

117. *See, e.g.*, Andrew J. Wistrich, Chris Guthrie & Jeffrey J. Rachlinski, *Can Judges Ignore Inadmissible Information? The Difficulty of Deliberately Disregarding*, 153 U. PA. L. REV. 1251, 1292 (2005) ("As with all of our results, the data suggest potential obstacles to good decision making, more so than providing definitive evidence of poor decision making.").

118. Findley & Scott, *supra* note 9, at 322.

119. *Id.* at 322.

120. *See, e.g.*, Roberts, *supra* note 7; Hon. John F. Irwin & Daniel L. Real, *Unconscious Influences on Judicial Decision-Making: The Illusion of Objectivity*, 42 MCGEORGE L. REV. 1, 3 (2010); and Anthony Greenwald & Linda Hamilton Krieger, *Implicit Bias: Scientific Foundations*, 94 CALIF. L. REV. 945, 951 (2006).

121. Greenwald &Krieger, *supra* note 120, at 951.

122. Irwin & Real, *supra* note 120, at 3.

123. *Id.* See also Greenwald & Krieger, *supra* note 120, at 954-55 (arguing that "implicit measures of bias have relatively greater predictive validity than explicit measures in situations that are socially sensitive, like racial interactions, where impression-management processes might inhibit people from expressing negative attitudes or unattractive stereotypes."); Robert J. Smith & Justin D. Levinson, *The Impact of Implicit Racial Bias on the Exercise of Prosecutorial Discretion*, 35 SEATTLE U. L. REV. 795, 803 (2012) (noting that "the IAT's popularity among scholars as a symbol of inequality may be traced to its success in predicting the way people make decisions.").

groups, such as gender or age,[124] much of the application to the criminal justice system has focused on race. Research shows that despite our best intentions, we often classify information about people in racially biased ways.[125] The magnitude of the results for race-based implicit bias is striking: "with one notable exception, the percentage of respondents who display implicit race bias varies relatively little across groups categorized by varied age, sex, and educational attainment. African Americans constitute the only subgroup of respondents who do not show substantial implicit pro-[European-American] race bias" on the major assessment tool for detecting implicit bias.[126] Judges are not immune from this race-based implicit bias; a study of judges demonstrated a similarly strong level of implicit bias.[127] These implicit biases can lead people to discriminate against African Americans even when that is contrary to one's conscious commitments.[128]

Implicit bias may affect the search warrant process in a number of ways, primarily connected with who is targeted for searching. The San Diego Search Warrant study,[129] which is the best current source of empirical evidence on these issues, showed that that Whites were significantly under-represented while Blacks and Hispanics were significantly over-represented as targets of narcotics search warrants compared to the population of the county as a whole.[130] Similarly,

124. *See* Greenwald & Krieger, *supra* note 120, at 955 ("Second, the IAT measures consistently revealed greater bias in favor of the relatively advantaged group (averaging almost three-quarters of respondents across all the topics) than did the explicit measures (for which an average of slightly over one-third of respondents showed bias favoring advantaged groups))."

125. Smith & Levinson, *supra* note 123, at 797.

126. Greenwald & Krieger, *supra* note 120, at 956.

127. Jeffrey J. Rachlinski et al., *Does Unconscious Bias Affect Trial Judges?*, 84 NOTRE DAME L. REV. 1195, 1210-11 (2009) (noting that white judges displayed "a statistically significantly stronger white preference than that observed among a sample of white subjects obtained" through administration of the test on the Internet, while Black judges' IAT scores were comparable to the scores of Blacks obtained on the Internet). *See id.* at 1211 (offering reasons why the statistically significant difference did not necessarily mean that White judges harbored "more intense White preferences than the general population").

128. *Id.* at 1197.

129. The San Diego Search Warrant Study began over concerns about innocent citizens being injured or killed because of being erroneously targeted for drug raids conducted based on search warrants. Laurence A. Benner, *Racial Disparity in Narcotics Search Warrants*, 6 J. GENDER RACE & JUST. 183, 184-85 (2002). The results of that study were published in two articles, one in the *Journal of Gender, Race, and Justice*, *id.*, and the other in the *California Western Law Review*, Benner & Samarkos, *supra* note 11. More empirical research is needed on search warrants. *See* Taslitz, *Wrongly Accused Redux*, *supra* note 18, at 1131 n.279.

130. Benner, *supra* note 129, at 215 (Whites made up nearly two-thirds of the county's population but only thirty-five percent of search warrant targets; Blacks made up six percent of county population and twenty percent of search warrant targets; Hispanics were twenty-four percent of county population and forty-three percent of search warrant targets). *See also id.* at 194 (forty-

narcotics search warrant applications were frequently targeted at minority areas of San Diego while only three percent of the search warrant applications targeted a largely White suburban area.[131]

Some of these racial disparities may stem from explicit racial bias, but it seems likely that implicit racial bias plays a very significant role.[132] Professor Andrew Taslitz uses the term "subconscious profiling" to describe the implicit bias concept that "even consciously well-meaning, anti-racist officers nevertheless find themselves drawn to black skin as an indicator of criminality."[133] Whether racial profiling is done consciously or subconsciously, however, the effect is the same, in that police focus more attention on Blacks than Whites and therefore find more evidence of crimes committed by Blacks rather than Whites.[134] This leads to a "ratchet effect," where police devote even more resources to the group that seems to be offending at higher rates, and thereby discover even more crime, creating a self-fulfilling prophecy with racial effects even without racial animus.[135]

The racial disparity in targeting cannot be attributed to a higher success rate for searches of minorities, as the empirical data showed that the opposite was true. Although minority areas and suspects were more frequently targeted, the searches of White targets were far more successful than the searches of either Black or Hispanic targets in turning up the drug sought by the warrant.[136] Taslitz noted that this data "should direct police resources toward white suspects as a more efficient target for maximizing the success of searches," even though that did not

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five percent of the county population was non-white, but eighty-one percent of the search warrants for narcotics targeted non-Whites, while Blacks and Hispanics together made up less than a third of the county population but more than eighty percent of the narcotics search warrant targets).

131. *Id.* at 190.

132. Both Professor Benner, the study's author, and Professor Andrew Taslitz conclude that this data suggested that there was at least some level of implicit bias leading to the increased targeting of minority rather than White residents in these search warrant applications. *See id.* at 223-24; Taslitz, *Wrongly Accused Redux, supra* note 18, at 1099, 1125.

133. *Id.* at 1099.

134. *See id.*

135. *Id.* at 1114.

136. Benner, *supra* note 129, at 203 ("Over half (53%) of the warrants targeting Whites were successful. However, little more than one third (36%) of the warrants targeting Hispanics and only about one in four (28%) of the warrants targeting Blacks resulted in discovery of the drug sought by the warrant."). *See also id.* at 219 ("Over two-thirds (69%) of all warrants targeting Whites recovered their target. However, less than half of the warrants targeting Hispanic suspects and less than one-third (32%) of the warrants targeting Black suspects were successful in recovering their targets."). The article does not explain the difference in these two sets of figures, although it may have to do with how the authors treated warrants that were not executed. *Compare id.* at n.25 (breaking the results into successful, unsuccessful, and unexecuted warrants) with *id.* at n.96 (discussing the high percentage of warrants issued against Black targets that were never executed).

happen.[137] Instead, police seemed to make decisions about where to devote resources based on their perceptions of "where they perceive the work is," and those perceptions may well have been influenced by implicit racial bias.[138]

The use of confidential informants can exacerbate implicit racial bias. In attempting to explain the findings described above about racial disparities, Professor Benner discussed the connection between confidential informants and race: "Because every racial group has drug users and sellers among them, if Blacks and Hispanics are stopped on the street disproportionately to their percentage of the population, this could be expected to produce a disproportionate number of Black and Hispanic informants."[139] The article then detailed findings that confirmed the disproportionate number of stops for Black and Hispanic drivers as compared to White drivers, and the higher incidences of vehicle searches for these groups as compared to White drivers.[140]

The racial disparity in informant usage may play some role in accounting for the differential success rates between the White and minority defendants targeted. Search warrants targeting minority inner city zip codes often involved anonymous tips, but only twenty-seven percent of the warrants initiated by an anonymous tip led to a successful search.[141] Confidential informants were often used in these inner-city cases, including to confirm information from the anonymous tip,[142] although the study did not provide information about success rates when confidential criminal informants were used.[143] Taslitz suggests, however, that the use of confidential informants may contribute to lower success rates than those for search warrants based on other types of information because "many of the confidential informants' tips are from

137. Taslitz, *Wrongly Accused Redux*, *supra* note 18, at 1125-26.

138. Benner, *supra* note 129, at 223-24.

139. *Id.* at 201. *See also* Taslitz, *Wrongly Accused Redux*, *supra* note 18, at 1145 ("Snitches snitch on those they know, and since the police disproportionately focus on racial minorities as the pool from which to recruit snitches, snitches tend to snitch on other persons who belong to similar racial minorities.").

140. Benner, *supra* note 129, at 201. *See also* Kevin R. Johnson, *The Case for African American and Latina/o Cooperation in Challenging Racial Profiling in Law Enforcement*, 55 FLA. L. REV. 341, 344 (2003) (citing studies showing that blacks, Latinos, and Asians are stopped approximately eight to ten times as whites in some jurisdictions).

141. Benner, *supra* note 129, at 203.

142. *Id.* at 200.

143. *See id.* at 200-01. The police do not know the identities of truly anonymous informants, Bowman, *supra* note 20, at 258, while they do know and actively protect the identities of confidential informants, many of whom fall within the category of criminal informants who can continue to engage in criminal activities while providing information to the police, *id.* at 227-28.

drug users caught in the act and seeking police incentives in exchange for information, the sort of deal [that is] . . . likely to produce false tips free of the fear of discovery via cross-examination precisely because the informant's identity is kept 'confidential.'[144]

B. Police Preparing Warrant Applications Are Likely Affected by Tunnel Vision

Police are unlikely to recognize the role that implicit bias may play in their selection of search warrant targets and information sources, in part because of a phenomenon commonly referred to as "tunnel vision."[145] "Tunnel vision" is essentially a filter through which people understand information, in this context information from police investigations.[146] Tunnel vision can profoundly shape investigations and prosecutions:[147]

> Investigators focus on a suspect, select and filter the evidence that will "build a case" for conviction, while ignoring or suppressing evidence that points away from guilt. This drive to confirm a preconceived belief in guilt adversely impacts . . . witness interviews, eyewitness procedures, interrogation of suspects, and the management of informers in ways that have been identified in virtually all known cases of wrongful conviction.[148]

It is helpful to look at the different types of cognitive biases that make up tunnel vision before examining their effect on the preparation of

144. Taslitz, *Wrongly Accused Redux*, *supra* note 18, at 1225-26. *See also id.* at 1107 (arguing that "proportionately more blacks than whites will face the risks of an innocent man being fingered by a lying or mistaken tipster that are inherent in reliance on informants.").

145. *See, e.g.*, Findley & Scott, *supra* note 9, at 317-19; 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, at 849 (2002).

146. Findley & Scott, *supra* note 9, at 292. As described below, tunnel vision can affect prosecutors, magistrates, and even reviewing judges as well.

147. BRUCE A. MACFARLANE, WRONGFUL CONVICTIONS: THE EFFECT OF TUNNEL VISION AND PREDISPOSING CIRCUMSTANCES IN THE CRIMINAL JUSTICE SYSTEM 20, 34, 45 (2008), *available at* http://www.attorneygeneral.jus.gov.on.ca/inquiries/goudge/policy_research/pdf/Macfarlane_Wrongful-Convictions.pdf ("Tunnel vision often originates during the investigative stage. As later processes in the criminal justice system feed off the information generated at this stage, investigative tunnel vision will often set off a chain reaction that reverberates throughout the system.").

148. Martin, *supra* note 145, at 848. The leading legal scholars on the issue of tunnel vision, Findley and Scott, have correctly urged that more attention be paid to the ways in which tunnel vision affects criminal cases at all stages, as only then can one evaluate the costs and benefits of these features and determine appropriate corrective measures. Findley & Scott, *supra* note 9, at 396-97.

search warrants.[149]

1. Components of Tunnel Vision

One key component of tunnel vision is confirmation bias. "Confirmation bias, as the term is used in psychological literature, typically connotes the tendency to seek or interpret evidence in ways that support existing beliefs, expectations, or hypotheses."[150] Confirmation bias operates on a subconscious rather than a conscious level; it involves "unwittingly selecting and interpreting information to support a previously held belief."[151] Empirical research into confirmation bias and the criminal justice system has shown that naming a suspect leads to confirmation bias, both in terms of selecting additional investigation tactics focused on the suspect and minimizing new contradictory information; the research showed that people asked to name a suspect early in a criminal investigation, as compared to those who did not name a suspect, recommended investigative actions more focused on the early suspect, even after new information raised questions about his guilt and potentially implicated others.[152]

Confirmation bias is closely related to another type of bias, selective information processing. Confirmation bias relates to what type of information people seek, while selective information processing has to do with how people interpret the information that they receive.[153] "Selective information processing is the tendency for people to recall stored information and interpret new information to conform to their pre-existing views."[154] Cognitive neuroscience research suggests that this tendency may stem from the way in which the brain filters and stores information.[155] Because of selective information processing, people more readily accept information that supports their hypothesis and find

149. *See id.* at 308-09.

150. *Id.* at 309.

151. O'Brien, *Prime Suspect*, *supra* note 30, at 316.

152. *See id.* at 328.

153. *See* Burke, *Neutralizing Cognitive Bias*, *supra* note 8, at 517-518 (discussing how confirmation bias and selective information processing affect prosecutorial decision-making).

154. Burke, *Prosecutorial Passion*, *supra* note 115, at 196 (citing See Charles G. Lord & Mark R. Lepper, *Biased Assimilation and Attitude Polarization: The Effects of Prior Theories on Subsequently Considered Evidence*, 37 J. PERSONALITY & SOC. PSYCHOL. 2098 (1979)).

155. Bandes, *supra* note 34, at 492 (quoting Jonathan A. Fugelsang & Kevin N. Dunbar, *A Cognitive Neuroscience Framework for Understanding Causal Reasoning and the Law*, 359 PHIL. TRANSACTIONS ROYAL SOC'Y LONDON B 1749, 1749-54 (2004) ("Evidence consistent with one's beliefs is more likely to recruit neural tissue associated with learning and memory, whereas evidence inconsistent with one's beliefs is more likely to invoke neural tissue associated with error detection and conflict monitoring.")).

reasons to discount information that runs counter to that hypothesis.[156] "[F]or desired conclusions . . . it is as if we ask, 'Can I believe this?' but for unpalatable conclusions we ask, 'Must I believe this?"[157] This effect is so strong that even contradictory information can reinforce previous beliefs.[158]

Some authors describe this phenomenon as "belief perseverance," i.e., the idea that "[o]nce people form a belief, they may resist changing it even when compelling evidence contradicts it."[159] To avoid changing their beliefs, people sometimes fail to notice or appreciate the significance of contradictory evidence.[160] At other times, they can create and rely on unlikely alternative explanations for the contradictory evidence.[161]

Finally, tunnel vision also includes overconfidence bias, an extremely well-documented phenomenon.[162] Overconfidence bias refers to our tendency to be "unrealistically optimistic about [ourselves] and [our] talents."[163] Overconfidence bias may explain why police sometimes are worse than laypeople at spotting liars, in that overconfidence bias may minimize police skepticism and prevent them from taking corrective measures to avoid errors.[164] One author recently

156. Burke, *Prosecutorial Passion, supra* note 115, at 196.

157. Findley & Scott, *supra* note 9, at 313-14 (quoting Thomas Gilovich, HOW WE KNOW WHAT ISN'T SO: THE FALLIBILITY OF HUMAN REASON IN EVERYDAY LIFE 84 (1991)).

158. Burke, *Prosecutorial Passion, supra* note 115, at 197-98 (describing a study showing that exposure to two contradictory studies regarding the deterrent effect of the death penalty reinforced participants preexisting views regarding capital punishment).

159. Barbara O'Brien, *A Recipe for Bias: An Empirical Look at the Interplay Between Institutional Incentives and Bounded Rationality in Prosecutorial Decision Making*, 74 MO. L. REV. 999, 1011-12 (2009) [hereinafter O'Brien, *A Recipe for Bias*].

160. *Id.* at 1012.

161. *Id. See also* Findley & Scott, *supra* note 9, at 314.

162. J.D. Trout, *Paternalism and Cognitive Bias*, 24 LAW & PHIL. 393, 400 (2005) ("The overconfidence bias is one of the most robust findings in contemporary psychology."). *See also id.* at 396-408 (providing a good general overview of cognitive biases).

163. Burke, *Prosecutorial Passion*, *supra* note 115, at 200. "[A]ctors will tend to be less deterred from the behavior sought to be deterred than they would be in the absence of [overconfidence] bias; the bias leads them to underestimate in a systematic way the probability that they will be detected [and punished]." Christine Jolls, *On Law Enforcement with Boundedly Rational Actors*, in THE LAW AND ECONOMICS OF IRRATIONAL BEHAVIOR 274 (Francisco Parisi & Vernon Smith eds., 2005).

164. *See* Taslitz, *Wrongly Accused Redux*, *supra* note 18, at 1109. Additionally, recent research demonstrated that judges displayed overconfidence bias regarding their ability to control their own biases. Rachlinski et al., *supra* note 127, at 1225-26 ("In recently collected data, we asked a group of judges attending an educational conference to rate their ability to 'avoid racial prejudice in decision-making' relative to other judges who were attending the same conference. Ninety-seven percent (thirty-five out of thirty-six) of the judges placed themselves in the top half and fifty percent (eighteen out of thirty-six) placed themselves in the top quartile, even though by

argued that the warrant requirement and the continued viability of the exclusionary rule are both important safeguards against police overconfidence about the benefits from illegal searches.[165] Overconfidence bias can be accompanied by false consensus bias, which is the erroneously overconfident belief that everyone else shares one's views.[166] False consensus bias could lead officers or judges to assume that everyone views the evidence in a case the way they do, further reinforcing tunnel vision and absolving them of perceived responsibility to investigate other possibilities.

2. Tunnel Vision Likely Affects Police Preparation of Warrant Applications

Police, like the rest of the population, seem to be affected by tunnel vision, particularly confirmation bias,[167] in ways that could affect the preparation of search warrant applications. Before exploring the way that tunnel vision can affect investigations generally and search warrant applications in particular, however, it is helpful to understand why officers may be vulnerable to tunnel vision despite their best efforts to resist it.

Several factors may combine to make police particularly vulnerable to tunnel vision. For example, "[t]he sheer volume of reported crimes begging for police investigation" can contribute to tunnel vision, in that officers "are often under constant pressure to complete their assigned cases" so they can move on to the next case.[168] Similarly, supervisors and politicians can be concerned with "clearance rates," i.e., rates of cases solved, which again can exacerbate investigatory tunnel vision.[169]

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definition, only fifty percent can be above the median, and only twenty-five percent can be in the top quartile. We worry that this result means that judges are overconfident about their ability to avoid the influence of race and hence fail to engage in corrective processes on all occasions.").

165. Bryan D. Lammon, *Note: The Practical Mandates of the Fourth Amendment: A Behavioral Argument for the Exclusionary Rule and Warrant Preference*, 85 WASH. U. L. REV. 1101, 1128-30 (2007).

166. Jeffrey W. Stempel, *In Praise of Procedurally Centered Judicial Disqualification –and a Stronger Conception of the Appearance Standard: Better Acknowledging and Adjusting to Cognitive Bias, Spoliation, and Perceptual Realities*, 30 REV. LITIG. 733, 744-45 (2011) (discussing study showing that readers decided to interpret an ambiguous text and believed that most readers would agree with their view of the meaning, vastly underreporting the extent of actual disagreement about the meaning).

167. Karl Ask & Pär Anders Granhag, *Motivational Sources of Confirmation Bias in Criminal Investigations: The Need for Cognitive Closure*, 2 J. INVESTIGATIVE PSYCHOL. & OFFENDER PROFILING 43, 57 (2005).

168. Findley & Scott, *supra* note 9, at 325.

169. *Id.* at 324.

Victims can create another type of pressure, in that police officers may sometimes be too willing to accept all of a victim's statements, even when those statements may be distorted by the victim's cognitive biases.[170] Some authors have suggested that the police cultural emphasis on bringing "truly guilty" people to justice may play a role as well.[171] Experienced officers may be even more vulnerable to tunnel vision than less experienced officers may because the former may rely more heavily on their prior experiences, which could lead them astray.[172] Obviously, these pressures are not always present, and officers may work hard to avoid being affected by them; nonetheless, in the aggregate, these factors can contribute to tunnel vision.

In particular, these pressures can make it easy to focus on an initial suspect or theory, and confirmation bias and selective information processing can then make it harder for investigators to identify alternative theories or appropriately evaluate the weight of potentially contradictory evidence.[173] That in turn may affect the quality of the evidence gathered.[174] A 2005 study specifically explored the effect that tunnel vision can have on police investigative decisions.[175] In particular, the officers in the study showed bias in terms of how they interpreted new information during an investigation[176] and insensitivity to potentially exonerating information presented later in the investigation.[177]

As applied to the search warrant context, tunnel vision can affect police actions in a number of ways. Once an officer forms a theory that a particular individual has likely committed a crime, that theory can shape what evidence the officer seeks to develop.[178] An officer's theory

170. *Id.* Findley and Scott also note the potential effects on police officers of public pressure in high-profile cases and of being exposed to crime scenes and other disturbing facets of cases more generally. *Id.* at 323-24.

171. MACFARLANE, *supra* note 147, at 25-26. *See also* Taslitz, *Wrongly Accused Redux*, *supra* note 18, at 1110 (noting how police culture can reinforce what he calls the "blinders effect," which is consistent with the description of tunnel vision above).

172. *See* Everett Doolittle, *Perspective: The Disease of Certainty*, FBI LAW ENFORCEMENT BULLETIN (March 2012), *available at* http://www.fbi.gov/stats-services/publications/law-enforcement-bulletin/march-2012/perspective.

173. *See* Findley & Scott, *supra* note 9, at 326.

174. *See* Martin, *supra* note 145, at 849-50.

175. Ask & Granhag, *supra* note 167, at 57.

176. *Id.*

177. *Id.* at 58.

178. *See* O'Brien, *Prime Suspect*, *supra* note 30, at 328. *See also* O'Brien, *A Recipe for Bias*, *supra* note 159, at 1012 ("Once a hypothesis is formed, people search for information that supports that hypothesis rather than an alternative. That is, they unconsciously assume that the hypothesis in question is true and search for evidence accordingly. They are not completely indifferent to

of the case can affect his decisions about what type of evidence to look for and where to look for it; "[i]mportant physical evidence, either confirmatory or exculpatory, might also be overlooked if the theory of the case prevailing at the time of evidence collection later proves wrong."[179] These factors could influence when officers seek search warrants and who should be targeted for searches.

In some circumstances, an investigator's belief that he or she has correctly focused on a suspect can lead that officer to use improper means to build the case against that suspect; that behavior can be rationalized as "helping the truth along."[180] This phenomena, sometimes referred to as "noble cause corruption," involves an extreme focus on the "ends" of achieving justice at the expense of the means sought to obtain those ends, creating an "ends-based investigative culture that prompts investigators to blind themselves to their own inappropriate conduct, and to perceive that conduct as legitimate in the belief that they are pursuing an important public interest."[181] Tunnel vision and noble cause corruption together distort an investigation; once an investigator becomes convinced that a suspect is guilty, he or she may use improper methods to try to prove the suspect's guilt, "rationalizing these steps on the basis that they are 'merely helping the truth along.'"[182]

One way that investigators might "help the truth along" can involve developing informants. Officers may have hypotheses about how a crime occurred and who did it, and they may have personal contacts with individuals whom think they could provide useful information.[183] In that circumstance, the officer will "typically have both the ability and some inclination to help the informant shape the story line in a particular direction."[184] Officers may do so innocently by supplying information

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contrary information, but assuming the truth of the hypothesis causes them to undervalue that evidence or not to notice it in the first place.").

179. Findley & Scott, *supra* note 9, at 327. *See also* O'Brien, *A Recipe for Bias*, *supra* note 159, at 1012 (also discussing contradictory evidence being overlooked).

180. Findley & Scott, *supra* note 9, at 326-27.

181. MACFARLANE, *supra* note 147, at 20. Noble cause corruption can be viewed as a form of intentional wrongdoing, as individuals are willing to lie to achieve their ends, but it arguably falls within the general category of cognitive bias, in that such individuals seem to genuinely believe that their conduct is justified in pursuit of a greater good. Again, the line between cognitive bias and intentional wrongdoing is sometimes a fine one, and it is less important to draw that line clearly as it is to explore the motivations behind behavior to help identify the incentives that can lead to adjustments in that behavior.

182. *Id.* at 24.

183. Mosteller, *supra* note 28, at 556-57.

184. *Id.* at 557. *See also* Martin, *supra* note 145, at 861 (describing several cases in which police leapt to conclusions about what happened, then pressured individuals to explain what happened consistent with that view).

inadvertently and by engaging in selective information processing in response to the informant's story, or they may deliberately push the informant for a certain version of events.[185]

In those circumstances, informants have strong incentives to provide the officer's preferred versions of events, whether or not that is the truth:

> Informants have a clear interest in pleasing those who control their freedom, and if they can discern the expectations and needs of the authorities, their self-interest mandates that they tailor their stories along the anticipated and desired lines. Strong incentives lead to risks of distorted information and false testimony. In particular, there is clear potential for these incentives to produce false evidence implicating those "believed" to be guilty of the crimes and for informants to embellish the responsibility of those they implicate.[186]

Thus, a potential informant may begin by denying all knowledge or participation but may eventually confirm the investigator's beliefs.[187] And while informants have incentives to provide distorted information, officers are unlikely to be adequately skeptical of that information.[188] Cognitive biases such as selective information processing and belief perseverance may make it hard for them to recognize when informants shade their stories to match officer expectations.[189]

Prosecutors are not likely to be of much help in overcoming these tunnel vision problems. Prosecutors typically have limited involvement in handling informants[190] or in search warrant applications.[191] When

185. Mosteller, *supra* note 28, at 557.

186. *Id.* at 552. *See also id.* at 548-49 (noting that typical deals between informants and law enforcement strongly resemble conduct punishable as bribery in any other circumstances); Martin, *supra* note 145, at 861 ("These are common situations for the generation of informer evidence. That is, vulnerable individuals, faced with the threat that they will themselves be charged and imprisoned, offer testimony against someone else.").

187. Mosteller, *supra* note 28, at 557.

188. *See* Taslitz, *Wrongly Accused Redux*, *supra* note 18, at 1095-96.

189. Compare the discussion of noble cause corruption in MACFARLANE, *supra* note 147, at 39 with the discussion in O'Brien, *A Recipe for Bias*, *supra* note 159, at 1012 and Martin, *supra* note 145, at 859-60.

190. Natapoff, *Snitching*, *supra* note 15, at 652-53, 675.

191. *See* VAN DUIZEND ET AL., *supra* note 57, at 19-21; Uchida & Bynum, *supra* note 15, at 1056 (noting that two of seven jurisdictions studied routinely had prosecutors review and approve search warrant applications prior to submission to a magistrate). *See also* Natapoff, *Snitching*, *supra* note 15, at 675 (noting that the investigation decisions are legally considered to be police work and that prosecutorial absolute immunity does not apply when prosecutors participate in investigations). *But see* Benner and Samarkos, *supra* note 11, at 225 (noting that 98.4% of the search warrants included in their study were reviewed by a prosecutor for legal sufficiency). The practice seems to vary significantly by jurisdiction.

they are involved, they may not be able to recognize the inherent problems in this information as the case proceeds.[192] Instead, prosecutors are subject to many of the same pressures described above regarding police,[193] and their role within the adversary system reinforces tunnel vision.[194] "The adversary system encourages lawyers to seek out information that is helpful to their position, to interpret it in a way that helps their position, and to present it, within ethical bounds, in the best possible light."[195] Thus, police and prosecutors are often dependent on informant tips and fail to look skeptically at those tips.[196] Given these forces, magistrate review can play a significant role in combatting tunnel vision, but only when magistrates are given full disclosure and when they appreciate the importance of their role in the process.

C. Magistrate Review of Warrant Applications May Be Affected by Framing, Priming, and Implicit Biases

Magistrates are less likely than police officers to be subject to tunnel vision, given the different roles that magistrates, police, and prosecutors play in the system. Magistrates are not responsible for the investigation or subject to the same kinds of pressures that lead to tunnel vision in police and prosecutors.[197] Similarly, magistrates are less likely to be affected by pre-existing beliefs in ways that would lead to selective information processing, so they should be more able to make objective and accurate assessments of the evidence.[198] For example, magistrates

192. *See* Findley & Scott, *supra* note 9, at 329 (discussing the particular cognitive challenges for prosecutors because of missing information or a lack of the full context of the information they receive from police).

193. Natapoff, *Snitching*, *supra* note 15, at 676.

194. Findley & Scott, *supra* note 9, at 331. *See also Id.* ("The process of being a prosecutor, even an ethical prosecutor, thus exacerbates general cognitive biases and contributes to tunnel vision.").

195. Bandes, *supra* note 33, at 490.

196. Alexandra Natapoff, *Beyond Unreliable: How Snitches Contribute to Wrongful Convictions*, 37 GOLDEN GATE U. L. REV. 107, 108 (2006) [hereinafter Natapoff, *Beyond Unreliable*] ("Informants lie primarily in exchange for lenience for their own crimes, although sometimes they lie for money. In order to obtain the benefit of these lies, informants must persuade the government that their lies are true. Police and prosecutors, in turn, often do not and cannot check these lies because the snitch's information may be all the government has. Additionally, police and prosecutors are heavily invested in using informants to conduct investigations and to make their cases. As a result, they often lack the objectivity and the information that would permit them to discern when informants are lying. This gives rise to a disturbing marriage of convenience: both snitches and the government benefit from inculpatory information while neither has a strong incentive to challenge it.").

197. *See supra* Part III.B.2.

198. *See* Burke, *Prosecutorial Passion*, *supra* note 115, at 208 (discussing judges, but the

should be less inclined to overestimate the reliability of informants than either police officers or prosecutors who have extensive contact with the informants.[199] Magistrates may also be better able to assess the true significance of information that undercuts the informant's credibility.[200] Of course, magistrates (and later reviewing judges) do not always seem willing to scrutinize the informants' credibility,[201] but their position within the structure of the system makes them more able to do so.[202]

However, magistrates may be affected to some extent by both framing and priming biases. Framing and priming are closely related concepts involving the "big cognitive difference" that first impressions make.[203] More specifically, the term "framing bias" refers to the fact that people tend to view a problem differently depending on the perspective from which it is examined.[204] Priming can be seen as the action of framing to lead to a particular result: "Quite simply, priming refers to the use of a stimulus, or prime, to alter [people's] perceptions of subsequent information."[205]

The way officers draft search warrants may implicate these concepts. As the officer presents the information to the magistrate in support of a search warrant application, the officer is unlikely to give the magistrate a full picture of the situation by bringing in details that would undermine the officer's theory. Instead, the officer drafting the search warrant will typically articulate the facts in ways that are shaped both by the officer's theory and with the officer's understanding of the governing law, which can hinder the magistrate's ability to provide meaningful

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same reasoning applies to magistrates as well).

199. *See, e.g.*, Yaroshefsky, *supra* note 40, at 944-45 (discussing the difficulties of police and prosecutors maintaining objectivity about informants when they develop relationships with them).

200. *See id.* at 932-33 (discussing reasons that prosecutors overestimate the truthfulness of informants); Mosteller, *supra* note 28, at 556 ("[b]ecause investigators rather than prosecutors generally have the initial contact with the individuals who become informants, critical alterations in the informants' stories may occur without the prosecutor's knowledge, which effectively hides from the prosecutor's scrutiny key data for evaluating informants' veracity.").

201. *See supra* Part II.D.2 and Bowman, *supra* note 20.

202. *See infra* Part IV.A.2 about the importance of educating all involved in the search warrant process about the value of magistrates providing meaningful review.

203. Ian Weinstein, *Don't Believe Everything You Think: Cognitive Bias in Legal Decision Making*, 9 CLINICAL L. REV. 783, 796 (2003).

204. *Id.* at 797.

205. Michael J. Higdon, *Something Judicious This Way Comes . . . The Use of Foreshadowing as a Persuasive Devise in Judicial Narrative*, 44 U. RICH. L. REV. 1213, 1228 (2010). *See also* Kathryn M. Stanchi, *The Power of Priming in Legal Advocacy: Using the Science of First Impressions to Persuade the Reader*, 89 OR. L. REV. 305, 321, 348 (2010) (discussing the ways in which priming can affect decision-making while operating at an unconscious level).

review.[206] Some research suggests that exposure to an officer's theory of the case can frame the review of the evidence.[207] The checklist proposed in Part IV might help minimize that potential effect by requiring the officer to use a standardized format to present the information, rather than framing it in terms of the officer's theory. The checklist may also help ensure that additional details are provided, not just those that support the officer's theory.

Priming, however, may be more serious when connected to implicit bias. Numerous studies show that racial and ethnical stereotypes can be easily primed.[208] For example, one mock jury study showed that seeing a photograph of black skin for a few seconds rather than a photograph of white skin for the same period led to increased conviction rates.[209] Even without explicit references to race, racial stereotypes can be activated based on seeing someone's name or photograph.[210] Thus, "even though many decisions are made on papers only, judges might unwittingly react to names or neighborhoods that are associated with certain races."[211]

These minimal references to race may unconsciously affect judges' analysis of the totality of the circumstances regarding search warrant applications "and make probable cause appear more readily when the suspect is Hispanic or Black and lives in a 'high crime' area[.]"[212] Similarly, Professor Taslitz argues that judges may unconsciously be more accepting of informants' tips implicating racial minorities because they play into racial stereotypes.[213] In support, he relies in part on social psychology research into rumors, which shows that "[r]umors that are consistent with pre-existing attitudes, including toward racial group

206. *See* Martin, *supra* note 145, at 852.

207. *See* O'Brien, *Recipe for Bias, supra* note 159, at 1045-46 (discussing "groupthink" and studies of Dutch independent crime analysts who showed more true independence when they were shielded from primary investigator's theory of the case than when they could tell the investigator's theory).

208. Smith & Levinson, *supra* note 123, at 799-801 (describing several studies that showed both activation of stereotypes and effects on decision-making).

209. *Id.* at 800-01.

210. *Id.* at 798.

211. Rachlinski, *supra* note 127, at 1225. That conclusion is also supported by empirical research showing that judicial decisions in other contexts are likely affected by priming and implicit bias. *Id.* at 1223 (when judges with strong white preferences on the IAT were exposed to a "black subliminal prime," those judges "made somewhat harsher judgments of the juvenile defendants," while judges with strong black preferences on the IAT made somewhat more lenient decisions after exposure to the same prime). *See also id.* ("In effect, the subliminal processes triggered unconscious bias, and in just the way that might be expected.").

212. Benner, *supra* note 129, at 223.

213. Taslitz, *Wrongly Accused Redux, supra* note 18, at 1129.

members, are more likely to be believed."[214] Thus, informant tips may trigger common unconscious associations between African-Americans, guilt, and dangerousness.[215] Thus, even minimal references to race, such as names, heavily minority locations, or photographs could trigger implicit associations with dangerousness or guilt, even in the minds of well-meaning magistrates who are not consciously racially biased.

Interestingly, an empirical study showed that when race was more explicit, rather than triggered by subliminal primes, judges more successfully controlled for bias.[216] That study concluded that judges were in fact able to compensate for bias when they were both motivated to avoid seeming biased and faced clear cues regarding the potential for bias in a particular case.[217] The study's author questioned, however, whether those conditions would be present when judges were deciding cases in their courtrooms, rather than just in a study done at a conference.[218] And as noted above, race is more likely to be implicit rather than explicit in the search warrant process.[219]

D. Post-Search Judicial Review of Warrant Applications Likely to Be Affected by Biases

Cognitive biases also likely affect post-search judicial review. As explained in Part II.D above, once a search warrant is issued and executed, charges may be filed against defendants, and then defense counsel may bring suppression motions to challenge the validity of the admission of the evidence. In doing so, they can either accept the

214. *Id.* at 1136.

215. Smith & Levinson, *supra* note 123, at 801-02 (discussing associations between Black and aggressive); *id.* at 804-05 (discussing a study demonstrating an association between Black and guilty). Taslitz suggests that the problem of implicit bias may be exacerbated by both the increased role for judicial discretion under Gates and by officers' use of boilerplate language in search warrants. Taslitz, *Wrongly Accused Redux*, *supra* note 18, at 1129, n.279, 1130.

216. Rachlinski, *supra* note 127, at 1223.

217. *Id.* at 1225 (noting the time pressures and other distractions that might make it more difficult for judges to successfully compensate for bias in the courtroom than in study conditions).

218. *Id.*

219. Even if I am right about the way that implicit bias can affect search warrant analysis, it is almost certain that these effects will not be remediable through individual litigation challenges. *See, e.g.*, Andrew Taslitz, *The Death of Probable Cause: Forward*, 73 LAW & CONTEMP. PROBS. i, vi (2010) (noting that the Supreme Court has made clear that subjective racial bias is irrelevant under the Fourth Amendment and has suggested that disparate racial impact would similarly be irrelevant to Fourth Amendment analysis). My point in discussing implicit racial bias here is not to challenge that precedent, although I do find it problematic. Instead, my point is to focus those involved in the search warrant process on how their decisions can be impacted by implicit racial bias, despite their best intentions to the contrary. My hope is that increased awareness will in part help lead to better decision-making. *See infra* Part IV.A, regarding the value of education about cognitive biases.

information in the search warrant as true and challenge whether it established probable cause, or they can contest the accuracy or completeness of the information supporting the search warrant by bringing a *Franks* challenge. Trial courts hearing these motions, and appellate courts reviewing their decisions, may be vulnerable to the same cognitive biases discussed above, and they may also be particularly vulnerable to an additional type of bias, hindsight bias, as explained below.

1. Effects of Implicit, Framing, and Confirmation Biases on Judicial Review

The analysis above about implicit bias and priming seems likely to apply to reviewing judges in the same ways. Additionally, reviewing judges may be particularly affected by framing bias. Framing bias means that people typically tend to look more favorably on the same outcome when it is framed as a gain rather than as a loss.[220] Framing can affect decisions about, for example, whether to accept a settlement of a tort case, whether to sell stock, and whether to accept a plea bargain; these choices all look different depending on whether they seem to be gains or losses as compared to the decision-maker's perceived baseline.[221] The accuracy of the perceived baseline can therefore have huge impacts on later decision-making.[222] The baseline in *Franks* cases is that the magistrate found probable cause to issue the search warrant and then evidence was found, so reviewing judges are likely to see exclusion of the evidence as a loss to be avoided. The structure of the *Franks* test may enhance framing bias, in that the cases often stress the heavy burden borne by the defendant at each stage of the analysis, as discussed above; that structure primes courts to view admission of the evidence as a gain and the exclusion of evidence as a loss.

Furthermore, framing bias may compound the effects of confirmation bias of reviewing judges, particularly when judges evaluate evidence that seems to corroborate informants' tips.[223] Because

220. That research often deals with risk and money evaluations (e.g. retaining money versus money lost). Burke, *Prosecutorial Passion, supra* note 115, at 198 (citing Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision under Risk*, 47 ECONOMETRICA 263 (1979); and Amos Tversky & Daniel Kahneman, *The Framing of Decisions and the Psychology of Choice*, 211 SCIENCE 453, 453 (1981)).

221. Weinstein, *supra* note 203, at 797-99.

222. *See id.* at 799-800 (discussing the ways in which comments made during rapport-building with clients can therefore effect the client's later valuation of a potential plea deal).

223. *See, e.g.*, MACFARLANE, *supra* note 147, at 39 (discussing how that played out in a particular case); Lammon, *supra* note 165, at 1141.

reviewing courts know that evidence was found, they may begin with the hypothesis that the search warrant that led to the evidence being found was validly issued. That belief may lead them to overvalue evidence that seems to corroborate the hypothesis and undervalue evidence that would contradict it.[224] For example, confirmation bias may lead reviewing courts to overvalue evidence gathered by police that is consistent with the informant's tips, even when that information does not logically suggest the informant is right about the suspect's criminal activity.[225] In one representative case, the Sixth Circuit excused an affiant's failure to describe the informants' prior inconsistent descriptions of who was involved in the conspiracy under investigation; the court relied on corroboration but failed to appreciate that the corroborated information only showed that the informant was familiar with the defendant generally but not that the defendant was involved in criminal activity.[226]

Additionally, confirmation bias may minimize magistrates' skepticism about the accuracy of corroborative information presented. For example, one study of search warrants cited positively the idea that police routinely corroborated informants' tips by using "controlled buys" (i.e., purchasing narcotics from the location that will be the target of the search, under police surveillance).[227] However, faked controlled buys have been found to have contributed to multiple wrongful convictions of those targeted by informants.[228] Yet courts do not seem to look skeptically at evidence regarding controlled buys.[229] Confirmation bias may contribute to courts' failures to recognize the possibility of these fabrications.

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224. *See* Findley & Scott, *supra* note 9, at 312-13 (quoting Raymond S. Nickerson, *Confirmation Bias: A Ubiquitous Phenomenon in Many Guises*, 2 REV. GEN. PSYCHOL. 175, 180 (1998)).

225. *See generally* Erlinder, *supra* note 44 (describing the evolution of the Supreme Court cases on how corroboration affects probable cause analysis, most of which gave too much weight to confirmation of information about legal activity and incorrectly used that information to corroborate tips about illegal activity). *See also infra* Part IV.C.3 (discussing the need for courts to treat seemingly corroboratory evidence more skeptically).

226. United States v. Trujillo, 376 F.3d 593, 603 (6th Cir. 2004) (noting that the officers verified the defendants' address as given to them by the informants and the fact that one defendant had previously served a prison sentence for drug crimes).

227. Benner & Samarkos, *supra* note 11, at 243-44.

228. *See, e.g.*, Trott, *supra* note 18, at 1384.

229. *See, e.g.*, United States v. Harrison, 400 F. Supp. 2d 780, 783-84, 786, 787 (E.D. Pa. 2005) (defendant showed that the warrant contained significant inaccurate information about the first controlled buy and arguably established that it had not occurred at all, yet the court relied on other similar evidence in upholding the warrant without adequately analyzing whether the defendant's showing undercut the reliability of the remaining evidence as well).

Additionally, confirmation bias may play a role in courts' deference to officers' versions of events and their failure to take a hard look at the plausibility of the officers' accounts. For example, courts in several cases reject without any real factual scrutiny the defendants' allegations that the confidential informant could not possibly have seen what they said they did, so either the officer fabricated the informant entirely or the officer was reckless in relying on the informant's statements without doing more investigation.[230] Similarly, these courts reject claims that the prosecution should have to disclose the identity of the informant in order to allow the defendant the opportunity to make the necessary preliminary showing.[231] Instead, the courts tend to defer to the officer, even when the facts suggest grounds for skepticism.[232]

Confirmation bias may also play a role in the *Franks* omissions cases in which the courts seem to discount the value of the omitted information.[233] If courts assume that the warrant was validly issued, then they would be skeptical of evidence that would undercut that conclusion and looking for ways to confirm the conclusion.[234] In fact, courts routinely reject as insufficient defendants' claims that the affidavit should have included information about the informant's bias or motive to lie,[235] information that is relevant to assessing the informant's veracity and therefore the role his or her statements should play in the probable cause determination.[236] For example, the court in one case concluded that there was no reason to suppose a judge would want to know about informant bias or desire to gain publicity for providing information, wrongly asserting that those motives would not lead an

230. *See, e.g.*, United States v. Rodriguez-Suazo, 346 F.3d 637, 645 (6th Cir. 2003).

231. *See, e.g.*, United States v. Brown, 3 F.3d 673, 679-80 (3d Cir. 1993) (disclosure of informant's identity under *Franks* only required after defendant makes substantial preliminary showing).

232. *See, e.g., id.* at 676-78 (defendant's *Franks* motion factual showing significantly undercut the informant's story, and the officer's writing of the affidavit contained other inaccuracies, which should undercut the deference shown to the officer, but the court affirmed the trial court's refusal to grant a *Franks* hearing). Even when courts do grant a hearing in these circumstances, they still tend to defer to the officer's statements even when the facts suggest reasonable grounds for skepticism. *See, e.g.*, State v. Klar, 400 So. 2d 610 (La. 1981) (court accepted testimony of affiant rather than defendant, informant, and other witnesses).

233. *See supra* Part II.D.2 regarding *Franks* omissions cases.

234. *See supra* Part III.B.1 regarding confirmation bias.

235. *See, e.g.*, United States v. Croto, 570 F.3d 11, 15 (1st Cir. 2009) (defendant claimed informants were biased against him because they were tired of him selling marijuana); State v. Lease, 472 S.E.2d 59, 61-62 (La. 1996) (omission of fact that informant was extremely agitated because of her desire to remove her child from the home of the defendant, the child's father, was not fatal to validity of the warrant).

236. *See generally* Bowman, *supra* note 20.

informant to provide false information rather than true incriminating information.[237] Similarly, another case concluded that there was no error in failing to include information that the defendant's granddaughter was going to be a witness against the informant in cases involving the informant's own criminal activity.[238]

However, the informant's motivation should be part of the probable cause analysis.[239] The informant's reliability is an important component of how courts should determine probable cause, even under the *Gates* totality of the circumstances test.[240] And the informants' motives can directly undercut that reliability determination, in that their motives may lead them to provide rumors, guesses, or deliberately false information if they believe that such information will not be held against them if it proves to be incorrect.[241] If that information is consistent with what police wanted to hear, investigative tunnel vision makes it very likely that the officer will not question that information.[242] Courts occasionally recognize the significance of information undercutting the informant's reliability when analyzing *Franks* omissions challenges,[243] but these cases are far rarer than ones that simply conclude that the omitted information regarding informant credibility does not matter.

Similarly, the courts should more carefully scrutinize claims that the affidavit should have included more information about the informant's deal with police, to provide information in exchange for some benefit, like leniency[244] or payment.[245] For example, a court

237. United States v. Harding, 273 F. Supp. 2d 411, 426, 427 (S.D. N.Y. 2003).

238. United States v. Bell, 692 F. Supp. 2d 606, 610 (W.D. Va. 2010).

239. *See* Bowman, *supra* note 20, at Part III.C.4, regarding how courts should analyze informants' motivations when assessing the informants' reliability.

240. Illinois v. Gates, 462 U.S. 213, 230, 233, 239 n.11 (1983).

241. *See* Bowman, *supra* note 20, at Part III.C.4 (noting that courts often look at this issue the wrong way, asking whether the informants have an incentive to provide accurate information rather than asking whether informants have a disincentive to provide information that they are unsure of its accuracy).

242. *See supra* Part III.B.2.

243. *See, e.g.*, United States v. Vigeant, 176 F.3d 565 (1st Cir. 1999) (omission of information regarding informant's unreliability, combined with information of other important information that cast doubt on the defendant's guilt, was sufficient to allow court to infer that information was recklessly omitted); State v. Utterback, 485 N.W.2d 760 (1992) (omission of fact that informant was admitted liar and had confessed to forgery was designed to create the false impression that informant was a reliable citizen informant).

244. *See, e.g.*, United States v. Allen, 297 F.3d 790 (8th Cir. 2002) ("search warrant affidavits need not provide judicial officers with all the details of bargaining between police and arrested persons from whom they are seeking to get information"); United States v. Legualt, 323 F. Supp. 2d 217, 226 (D. Mass 2004) (defendant argued affidavit should have included information re. favorable bail conditions informant received in exchange for information; court found that would have "enhanced her credibility rather than weakened it because it provides an incentive to give accurate

concluded that there was no error in failing to include in an affidavit that the informant was currently facing twenty felony charges and was providing information in the hope of receiving leniency.[246] That information does not necessarily mean that the informant should not be found reliable, but it does suggest that the informant may be influenced by powerful incentives to tell the police what they want to hear, and the cognitive bias research suggests that the police may not be able to recognize informant falsehoods in these circumstances. Another *Franks* case suggests that possibility more directly: the defendant's affidavit stated that the affiant officer had previously approached another individual and offered him "immediate release from detainment with no further actions" if he would say that he purchased marijuana from the defendant.[247] The Sixth Circuit found it "unremarkable" that the officer asked the individual to incriminate the defendant,[248] even though the officer's direct request for the informant to incriminate the defendant for a particular crime could be an example of investigative tunnel vision that can lead directly to false informant testimony, as discussed above. Reviewing courts should not treat such a statement as unremarkable, but should instead provide a more robust review of the case, including more carefully scrutinizing the circumstances surrounding the informant's incentives to provide untruthful information.[249]

Equally troubling is the courts' failure to take seriously claims about informants providing inconsistent stories, given the dynamics discussed above regarding informants having incentives to tailor their stories to what the police want to hear. For example, in *United States v. Trujillo*, the defendant argued unsuccessfully that she should be entitled to a *Franks* hearing because the affidavit failed to include the fact that the informants had given numerous inconsistent explanations of the facts regarding their being caught transporting marijuana before settling on a version that incriminated the defendant as the intended recipient of the

information); State v. Grimshaw, 515 A.2d 1201, 1203-04 (N.H. 1986) (omission of fact that charges against informant were dropped in exchange for information did not matter because the magistrate was informed that the informant had been arrested).

245. United States v. Muldoon, 931 F.2d 282, 286 (4th Cir. 1991) (while evidence that informant and his wife were paid had "some bearing on [the informant's] credibility," omitting that information from the affidavit was not fatal to probable cause because of the other evidence against the defendant); State v. Garberding, 801 P.2d 583 (Mont. 1990) (omission of fact that informant was paid for information was not material because it did not cast doubt on the informant's reliability).

246. United States v. Bell, 692 F. Supp. 2d 606, 610 (W.D. Va. 2010).

247. United States v. Stuart, 507 F.3d 391, 394 (6th Cir. 2007).

248. *See id.* at 397-98.

249. *See generally* Bowman, *supra* note 20, at Part III.C.

shipment.[250] The court concluded, however, that the inconsistent statements would not have negated the existence of probable cause.[251] In so concluding, the court did not point to the strength of other evidence supporting probable cause,[252] and the informants' statements were crucial to demonstrating the defendant's involvement, as the police were unable to arrange for controlled delivery or other unambiguous activity by the defendant.[253] Therefore, the prior inconsistent statements were arguably quite significant, and the court dismissed their omission too easily, perhaps because of the cognitive biases discussed above.

2. Hindsight Bias

Confirmation bias may be compounded by hindsight bias. Hindsight bias is the tendency to view an event, after it has occurred, as having been more likely to occur than it really was.[254] Our mind automatically makes inferences or connections based on knowledge of what happened, such that things that were likely to lead to the actual outcome seem more important than things that were likely to lead to different outcomes.[255] As a result, people believe that the actual outcome was more likely or predictable, or even inevitable, than it actually was.[256] As a result of hindsight bias, it is very difficult to ignore the outcome, even when asked to do so, while evaluating what preceded it.[257]

Hindsight bias is generally not a significant issue for police officers seeking search warrants, as they have not yet performed the search to see if their investigative hypothesis is correct.[258] Nor is it a significant issue for magistrates deciding whether to issue a search warrant. In fact, preventing hindsight bias is a major argument in favor of requiring search warrants rather than reviewing warrantless searches through

250. United States v. Trujillo, 376 F.3d 593, 602 (6th Cir. 2004). The defendant argued that these inconsistent stories should have entitled her to a *Franks* hearing at which she could cross-examine the investigating agent to show that the agent acted with reckless disregard for the truth. *Id.*

251. *Id.* at 604.

252. *See id.*

253. *See id.* at 600.

254. Burke, *Prosecutorial Passion*, *supra* note 115, at 200.

255. Wistrich et al., *supra* note 117, at 1269.

256. Findley & Scott, *supra* note 9, at 317.

257. Wistrich et al., *supra* note 117, at 1269.

258. Findley and Scott argue that hindsight bias can compound tunnel vision during an investigation. *See* Findley & Scott, *supra* note 9, at 318. Their arguments, however, seem to relate more to selective information processing and confirmation bias, rather than true hindsight bias, as they do not focus on effects from a particular outcome having occurred.

suppression hearings.[259] The Supreme Court sometimes makes this point in noting the importance of warrants.[260]

But hindsight bias is at least theoretically a significant issue for judges who review the magistrate's decision after the search has occurred and charges have been filed against a defendant.[261] Judges are likely to be affected by hindsight bias because their job often requires them to evaluate events after they have occurred.[262] That fact arguably calls into question the ability of judges to perform effective *ex post* review.[263] Findley and Scott argue that hindsight bias is particularly serious in cases where the courts require defendants to meet a burden of persuasion or show that a trial court error prejudiced them in significant ways.[264] Whether hindsight bias regarding searches is actually a serious problem is the subject of some debate.

Some scholars argue that hindsight bias significantly affects judicial decisions on searches. For example, Professor Taslitz has argued that case law demonstrates that hindsight bias sometimes affects probable cause determinations, for example, when courts combine knowledge of several officers to find probable cause even when the officers did not share information, or when the courts rely heavily on guilt by association.[265] Similarly, Professor Uphoff argues that in his experience, judges deciding suppression motions have difficulty avoiding being "affected by the fact that the police, acting pursuant to that warrant, found the drugs right where the anonymous tipster claimed they would

259. *See, e.g.*, Lammon, *supra* note 165, at 1130-31 (discussing the risk of hindsight bias in *ex post* "reasonableness" determinations and advocating for a return to stronger "warrant preference"). *See also id.* at 1140 ("A simple yet effective way to eliminate outcome information would be to move the determination of reasonableness to before any outcome information exists, i.e., before the search. A stricter warrant preference, with its necessary *ex ante* determinations of reasonableness, would accomplish just that.").

260. *See, e.g.*, United States v. Martinez-Fuerte, 428 U.S. 543, 565 (1976) (noting that one purpose of the warrant preference "is to prevent hindsight from coloring the evaluation of the reasonableness of a search or seizure"). *See also* Florida v. White, 526 U.S. 559, 570 (1999) (Stevens, J., dissenting) (noting the "inherent risks of hindsight at post-seizure hearings").

261. In this part, I use the general term "judges" to refer to both trial judges hearing suppression motions of *Franks* challenges and appellate judges reviewing the trial court judges' decisions. When material is more likely to apply to trial or appellate judges differently, I use the more specific terms.

262. Chris Guthrie et al., *Blinking on the Bench: How Judges Decide Cases*, 93 CORNELL L. REV. 1, 24 (2007) [hereinafter Guthrie et al., *Blinking*].

263. *See, e.g.*, Chris Guthrie et al., *Inside the Judicial Mind*, 86 CORNELL L. REV. 777, 804-05 (2001) [hereinafter Guthrie et al., *Judicial Mind*].

264. Findley & Scott, *supra* note 9, at 322 (discussing burden of persuasion) and 320-21 (discussing harmless error, the prejudice prong of ineffective assistance of counsel claims, and the materiality prong of the *Brady* doctrine).

265. Taslitz, *What Is Probable Cause, supra* note 24, at 153.

be."[266]

Those arguments are consistent with the empirical research showing that judges are affected by hindsight bias in a variety of contexts. For example, a 2001 article shows that judges were affected by hindsight bias in that being informed of the outcome of an issue on appeal seemed to affect their determination of the likelihood of that outcome.[267] More importantly, a study dealing with illegal police searches suggested that knowledge of the outcome of a search affected juror decisions about whether to award damages and how to interpret the facts about the search.[268]

But a more recent study by Wistrich et al. suggested that judges were able to resist hindsight bias in making probable cause determinations.[269] In that study, judges were divided into two groups, one asked to review a search *ex ante* by asking them whether they would grant a search warrant, while the other group reviewed the search *ex post* by reviewing a suppression motion assuming that no warrant had been sought.[270] Both groups were given the identical factual scenario, other than differences in terms of the timing of review.[271] The *ex post* group was then told that the search revealed approximately ten pounds of narcotics and a gun that may have been the weapon used in a recent murder.[272] Much to the surprise of the study's authors, this study failed to show any appreciable evidence of hindsight bias.[273] The judges in the *ex post* group ignored the significant evidence produced by the search and made almost identical decisions to the *ex ante* group that did not

266. Rodney J. Uphoff, *On Misjudging and Its Implications for Criminal Defendants, Their Lawyers, and the Criminal Justice System*, 7 NEV. L.J. 521, 528-29 (2007).

267. Guthrie et al., *Judicial Mind, supra* note 263, at 801-03. Other research suggested that judges' determinations of negligence were influenced by hindsight bias. *See* Wistrich et al., *supra* note 117, at 1314 (citing e.g. John C. Anderson, D. Jordan Lowe & Philip M.J. Reckers, *Evaluation of Auditor Decisions: Hindsight Bias Effects and the Expectation Gap*, 14 J. ECON. PSYCHOL. 711, 732 (1993)).

268. *See* Jonathan D. Casper et al., *Cognitions, Attitudes, and Decision-Making in Search and Seizure Cases*, 18 JOURNAL OF APPLIED SOCIAL PSYCHOLOGY 93, 110 (1988).

269. Wistrich et al., *supra* note 117, at 1317-18.

270. *Id.* at 1314-15.

271. *See id.* at 1315. The *ex ante* group was told that the officer who had observed various suspicious but ambiguous facts was seeking a telephonic warrant to search an automobile, while the *ex post* group was told that the officer had relied on the same facts to search the automobile without the warrant. *Id.* Either officer decision would be plausible under existing case law regarding automobile searches. *Id.* at 1316.

272. *Id.* at 1315.

273. *Id.* at 1317. Instead, for both groups, approximately twenty-five percent of the judges found probable cause justified the search, while the remaining seventy-five percent did not. *Id. at* 1316.

know about the evidence produced.[274]

That study did not involve probable cause determinations based on informant tips,[275] and none of the authors' suggested explanations for these results seem likely to prevent hindsight bias in search warrant cases based on informant tips. For example, the study's authors suggest that searching appellate review helps prevent hindsight bias.[276] The authors posit that the suppression decision, as well as the decision in another scenario that showed surprisingly little hindsight bias, were likely to be appealed and subject to reversal, without a deferential standard of review on appeal, which may have made the trial judges more cautious in their decision-making.[277] However, magistrates' decisions to approve search warrants are given great deference by reviewing courts.[278] And the relevant case law suggests that courts fail to provide meaningful searching review of magistrate decisions.[279]

The study authors' other explanations are similarly unlikely to prevent hindsight bias in informant-based search warrant cases. The study's authors posit that judges use "rules of thumb" for analyzing probable cause scenarios, such as refusing to issue warrants or admit evidence when the only basis for the search was vague assertions by officers about having smelled drugs in a vehicle; these rules of thumb may minimize the effect of the search results on judges.[280] In a later article, the study's authors similarly suggested that the complexity of legal rules in Fourth Amendment cases would stimulate more careful reflective decision-making rather than quick intuitive decisions that create greater room for hindsight bias.[281] But these explanations actually suggest that judges may be more vulnerable to hindsight bias in informant situations than in the scenario in this study. The case law

274. *Id.* at 1317.

275. *See id.* at 1315.

276. *Id.* at 1324.

277. *Id.*

278. *See, e.g.*, Illinois v. Gates, 462 U.S. 213, 236 (1983) ("A magistrate's determination of probable cause should be paid great deference by reviewing courts.") (internal quotation omitted).

279. *See supra* Part II.D. (regarding the inadequacy of review in *Franks* cases) and Bowman, *supra* note 20 (regarding motions to suppress reviewed for adequacy of probable cause determinations).

280. Wistrich et al., *supra* note 117, at 1324.

281. Guthrie et al., *Blinking*, *supra* note 262, at 27, 29. That explanation is related to, but distinct from, the first explanation, in that the former emphases mental shortcuts by individual judges, while the later relates more to effects from the formality of the legal doctrine coming from higher courts' decisions. *Compare* Wistrich et al., *supra* note 117, at 1318 (describing informal heuristics of individual judges), *with* Guthrie et al., *Blinking*, *supra* note 262, at 27 (referring to "[t]he highly intricate, rule-bound nature of Fourth Amendment jurisprudence that guides probable cause determinations").

suggests that judges use overly simplistic rules of thumb when assessing informants' reliability, a key component of the probable cause determination based on informant tips.[282] For example, courts often rely on the fact that an informant has made a statement against penal interests in establishing the informant's veracity, without ensuring that the statement actually is against the informant's interests.[283] More troublingly, they often assert that informants' statements are more likely to be reliable when the informant is under arrest and seeking a potential "deal" in exchange for information, when that situation incentivizes the informant to pass along rumors or even lies rather than just truthful information.[284] In both situations, the use of rough heuristics cuts against the sort of detailed factual analysis that is required for analyzing these issues.[285]

In fact, hindsight bias provides a plausible partial explanation for the fact that defendants almost never win *Franks* cases involving informants, particularly given the structure of the *Franks* test, which creates significant opportunities for hindsight bias to affect the courts' decisions. Hindsight bias is particularly likely to affect decision-making when the defendant bears a substantial burden of persuasion.[286] The *Franks* test begins with the presumption of the warrant's validity and stresses the heavy burden the defendant bears in overcoming that presumption.[287] Similarly, the test reinforces that tendency by requiring the defendant to make a "substantial preliminary showing," before being able to get an evidentiary hearing on *Franks* allegations.[288] Thus, the reviewing court's assessment of the merits of the *Franks* challenge on appeal can be colored by the failure of the defendant's *Franks* challenge and the defendant's conviction below.

In fact, some *Franks* cases suggest hindsight biases may be affecting courts' decisions.[289] For example, in *United States v. Tzannos*,

282. *See generally*, Bowman, *supra* note 20 (arguing that the courts should more carefully scrutinize the role that informants' statements against penal interests play in establishing the informants' veracity).

283. *Id.* at 249-52.

284. *Id.* at 261-65.

285. *See id.*

286. Findley & Scott, *supra* note 9, at 322.

287. Franks v. Delaware, 438 U.S. 154, 171 (1978).

288. *See, e.g.*, United States v. Rosario-Marando, 537 F. Supp. 2d 299 (D.P.R. 2008) (to be entitled to a *Franks* hearing, a defendant must do more than construct a self-serving statement that refutes the warrant affidavit).

289. The cases described in this part do not definitively demonstrate cognitive bias, as that conclusion cannot be made from the information available in appellate opinions. Instead, the cases illustrate things that would be predictable based on cognitive bias research, whether or not that was

the First Circuit's reasoning suggested hindsight bias may have affected its rejection of the adequacy of the showing that the defendant made suggesting that the affiant officer had made a materially false statement deliberately or with reckless disregard for the truth.[290] The officer stated in his affidavit that he had participated in a controlled call regarding gambling, in which he called the target number and listened while the confidential informant discussed betting.[291] The trial court found credible the defendant's evidence that no such call was made on the day in question.[292] The appellate court, on the other hand, focused on the substantive accuracy of the informant's information about the gambling operation that was discovered in the search; the appellate court criticized the defendant for failing to explain how the officer "would have obtained such detailed and accurate information" if the informant had been fabricated.[293] Those considerations are improper because the informant's information only turned out to be accurate in hindsight, after the execution of the search warrant, but the search has to be justified at its inception, not based on what turns up in the search.[294]

IV. PROPOSED SOLUTIONS

The problems identified above are multifaceted, so the solutions need to be similarly multifaceted. As discussed below, however, all these solutions generally revolve around the idea of full disclosure, making sure that all actors in the system have needed information about cognitive bias and making sure that magistrates and judges receive adequate information about the specific cases before them.[295] None of

really the cause of what happened in any individual case. But the reasoning in these cases suggests that cognitive bias may have contributed to the courts' decisions. Moreover, the cases also suggest that although not all *Franks* cases are wrongly decided, the current doctrine is inadequate to provide defendants with a meaningful remedy when cognitive biases are at play.

290. United States v. Tzannos, 460 F.3d 128, 138 (1st Cir. 2006).

291. *Id.* at 131.

292. *See id.* at 133 (regarding granting the hearing) and 134 (discussing trial court's evaluation of issues). The appellate court raised some reasonable points about the quality of the evidence, *see id.* at 137, but the defendant's evidence did directly contradict the officer's version of events.

293. *Id.* at 138. In doing so, the appellate court found clear error in the trial court's conclusions, rather than reaching this decision under a de novo standard of review, despite the appellate court's lack of deference to the trial court's interpretation of the facts. *See id.*

294. *See, e.g.*, New Jersey v. T.L.O., 469 U.S. 325, 341 (1985) (search must be justified at its inception). The officer in *Tzannos* could not have mistakenly relied on the informant for bad information, as the key disputed statement in the case turned on the officer's own involvement in the controlled call, so the appellate court was wrong in concluding that the defendant had not met the preliminary showing required by *Franks*. *See Tzannos*, 460 F.3d at 138.

295. *See supra* note 35 (regarding "full disclosure" versus "adequate disclosure").

the suggested solutions will work in isolation, but the combination of these reforms should help provide magistrates with better information in search warrant applications, should help magistrates review that information more effectively, and should make later judicial review of magistrate's decisions more thoughtful.

A. Educate Police, Magistrates, and Judges about Cognitive Bias and the Value of Full Disclosure

Increased education for police, magistrates, and judges is a helpful first step, although only a first step, in minimizing the effect of cognitive bias on probable cause evaluations of search warrant applications. Education about cognitive bias does not in itself ensure that people will overcome these biases, and some biases are quite difficult to overcome, even when people are aware of them.[296] However, research shows that increased awareness of cognitive processes that lead to bias can lead to improved decision-making in some circumstances,[297] particularly when coupled with the adoption of additional techniques to help apply the research and improve decision-making.[298] This education should cover both cognitive biases generally and the value of full disclosure in the search warrant context more specifically.

1. Education about Cognitive Bias Generally

Many scholars who write about cognitive bias have called for increased judicial education about cognition, which has been relatively uncontroversial even if not yet adopted on a widespread basis.[299] For example, Professor Rachlinski suggests that judges should be exposed

296. *See, e.g.*, Findley & Scott, *supra* note 9, at 371 (discussing, for example, the difficulty people have in correcting for hindsight bias, even when they are aware of it and are specifically told to ignore outcome information).

297. Burke, *Neutralizing Cognitive Bias*, *supra* note 8, at 522 ("Some empirical evidence suggests that education can potentially mitigate bias, especially if the education focuses on the cognitive processes that can lead to bias."). Education is not a panacea, however, and needs to be coupled with additional strategies, as discussed infra. *See id.* at 523.

298. *See, e.g.*, Weinstein, *supra* note 203, at 822 (noting that "teaching about [framing] bias is less effective than training people to analyze problems differently"); Findley & Scott, *supra* note 9, at 372-74 (discussing numerous suggests for ways that police officers could approach decisions differently).

299. *See, e.g.*, Roberts, *supra* note 7 at 858-75 (summarizing various proposals for educating jurors about implicit bias, including drawing on work done with judges and others, and offering proposal for how such education should be conducted to be most effective); Jeffrey W. Stempel, *Refocusing Away from Rules Reform and Devoting More Attention to the Deciders*, 87 DENV. U. L. REV. 335, 363-64 (2010) (noting that proposals regarding educating judges about cognitive bias are relatively uncontroversial but have yet to achieve widespread adoption).

both to general information about implicit biases and to more specific information about their own vulnerability to implicit bias.[300] Similarly, the Honorable John Irwin has advocated for increased awareness by other judges of the role implicit bias can play in decision-making, as a way to help judges guard against it.[301] Professors Findley and Scott have similarly advocated for education of lawyers and judges, beginning in law school, about both the causes and solutions for tunnel vision.[302] Some judicial training regarding cognitive biases has begun to be offered,[303] but it should be expanded.

Other sources advocate for increased education of other participants in the criminal justice system. For example, some within the police community have embraced the call for increased education into cognitive biases and how they affect police work.[304] Furthermore, Professor Alafair Burke has written extensively about the need to educate prosecutors on cognitive biases and their influences on prosecutorial decision-making.[305] Professor Burke has also correctly stressed that education about cognitive bias is helpful in overcoming the tendency to demonize those involved in the criminal justice system, which is often counterproductive if the real goal is to improve the system.[306] The same principles apply here.

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300. Rachlinski et al., *supra* note 127, at 1228 ("Therefore, while education regarding implicit bias as a general matter might be useful, specific training revealing the vulnerabilities of the judges being trained would be more useful.").

301. Irwin & Real, *supra* note 120, at 7 (noting that judicial education "affords judges one more opportunity to carefully consider all aspects of the decision to reach the most correct outcome"); *id.* at 8 ("Training about implicit biases in general, how they most likely influence judicial decision-making and how their impact can be minimized, could become an important first aspect of the ever-growing world of judicial education.").

302. Findley & Scott, *supra* note 9, at 374-75.

303. *See, e.g.*, Raymond J. McKoski, *Reestablishing Actual Impartiality as the Fundamental Value of Judicial Ethics: Lessons from "Big Judge Davis,"* 99 KY. L.J. 259, 309-10 (2011) (describing judicial education programs dealing with cognitive bias offered by the University of North Carolina, the National Judicial College, and Judge Mark Bennett).

304. *See, e.g.*, Robert B. Bates, *Curing Investigative Tunnel Vision*, 54 POLICE CHIEF 41, 42 (1987), *available at* http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=display_arch&article_id=2578&issue_id=12012 (discussing "law enforcement leadership initiatives and training programs" to address ways in which officers sometimes "cut corners" and to help officers "understand what is driving their decisions" in certain situations). While embracing the idea that cognitive bias can affect police actions, the author unfortunately rejects the idea that racial bias could play a similar role, without confronting or responding to the research on implicit racial bias, which further underscores the need for increased education and training.

305. *See* Burke, *Prosecutorial Passion*, *supra* note 115; Burke, *Neutralizing Cognitive Bias*, *supra* note 8.

306. Alafair S. Burke, *New Perspectives on* Brady *and Other Disclosure Obligations: What Really Works? Talking About Prosecutors*, 31 CARDOZO L. REV. 2119, 2120 (2010) [hereinafter Burke, *Talking About Prosecutors*] ("The wrongful conviction literature's dominant rhetoric about

2. Education about the Value of Full Disclosure

However, this education should go beyond a general introduction to cognitive biases, to cover the value of full disclosure for combatting these biases.[307] The most important of the reforms discussed in this article is genuine acceptance of the ideas that magistrate review of search warrant applications is valuable, not just an inconvenience.[308] Providing full disclosure can improve police decision-making.[309] Furthermore, police officers cannot be expected to overcome all their cognitive biases themselves, so it is important to get magistrates the information that they need to play a meaningful role in the process.[310] Providing meaningful review by magistrates, and then meaningful appellate review of magistrate decisions, can provide other systemic benefits as well.[311]

a. Benefits to Police and Magistrate Decision-Making

The process of articulating a more complete picture of a case to the magistrate should help minimize officers' tendencies towards tunnel vision. An empirical study into confirmation bias and police investigation suggested that participants who were asked to discuss evidence for and against their hypotheses did not show confirmation bias, much like the participants who were not asked to name a suspect at

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prosecutors—a rhetoric of fault—is counterproductive because it alienates the very parties who hold the power to initiate many of the most promising reforms of the movement: prosecutors. Fault-based discourse is especially misplaced in the discussion of the disclosure of evidence to the defense").

307. Findley & Scott, *supra* note 9, at 371-72 ("In general, police and prosecutor training needs to place greater value on neutrality, emphasizing the need to postpone judgment, and to develop all the facts rather than merely building a case against a suspect.").

308. VAN DUIZEND ET AL., *supra* note 57, at 75 (some officers view the search warrant requirement as an unnecessary intrusion by the courts into what they consider law enforcement's domain; therefore the warrant requirement "is largely something to be 'gotten around'"); Bar-Gill & Friedman, *supra* note 14, at 1614 ("Facing scrutiny from a magistrate is almost certainly calculated to avoid some searches that would not meet Fourth Amendment requisites."). *See also* Bates, *supra* note 304, at 43 (noting from the police perspective that "[a]nyone can attend training, but the leadership and the culture of the department must allow for an investigative atmosphere" that embraces rather than is hostile to questioning and healthy debate).

309. *See infra* Part IV.A.2.a.

310. Findley & Scott, *supra* note 9, at 390 ("Given that police and prosecutors, because they are human, cannot be expected to recognize and correct for all of their natural biases, the system must find a way to give sufficient case information to those who have different incentives and different natural biases."); Bar-Gill & Friedman, *supra* note 14, at 1641 ("Without regard to the quality of magistrates, a real warrant requirement will force some police officials to stop and think, and to articulate their reasons for intruding into someone's liberty, thereby avoiding unreasonable intrusions in the first place.").

311. *See infra* Part IV.A.2.a.

all,[312] but participants who were asked to name one or more suspects and articulate the reasons supporting their analysis did show these biases.[313] The study's author suggested that "the extra step of actively considering evidence that points away from that suspect shows promise as a simple way to counteract bias."[314] Thus, when officers are accountable for carefully and thoroughly investigating, and when they are required to provide a more complete picture of the information they have gathered, as discussed in the next part, the officers may be more able to counteract their tendencies toward confirmation bias and selective information processing.[315]

Similarly, full disclosure should improve police analysis by increasing accountability.[316] Research into accountability shows that "when people know in advance that they will have to justify a decision to a well-informed audience, they tend to consider evidence in a way that is both more evenhanded and thorough, and they are less influenced by previous beliefs."[317] The effect is particularly strong when the audience's views are unknown and could be skeptical of the offered position.[318] Accountability is especially important in overcoming priming and implicit bias.[319] Therefore, when police know magistrates will provide meaningful review of the information provided, they are likely to perform a more thorough analysis than when they expect magistrates to rubber stamp the warrant application.[320]

Magistrate decision-making should also benefit. Magistrates are obviously somewhat vulnerable to cognitive biases, as they are human.[321] But as discussed above, magistrates should be less vulnerable

312. O'Brien, *Prime Suspect*, *supra* note 30, at 329.

313. *Id.* at 327-28.

314. *Id.* at 329.

315. *See* Taslitz, *Police Are People Too*, *supra* note 29, at 34.

316. *See* Findley & Scott, *supra* note 9, at 391.

317. *See* O'Brien, *Recipe for Bias*, *supra* note 159, at 1018-19.

318. *See id.* at 1019.

319. *See* Stanchi, *supra* note 205, at 348-49 (citing Jennifer S. Lerner et al., *Sober Second Thought: The Effects of Accountability, Anger, and Authoritarianism on Attributions of Responsibility*, 24 PERSONALITY & SOC. PSYCHOL. BULL. 563, 564 (1998) (describing a study involving accountability and priming)).

320. *See* O'Brien, *Recipe for Bias*, *supra* note 159, at 1019. *See also* Bar-Gill & Friedman, *supra* note 14, at 1670-72 (arguing that police decision-making will be improved by increased magistrate review of warrants, including based on reasons related to combatting cognitive biases).

321. *See, e.g.*, Chris Guthrie, *Misjudging*, 7 NEV. L.J. 420, 428-38 (2007) (discussing in detail how judges are affected by anchoring, hindsight bias, and "self-serving bias"). Another study indicated that judges are no better than police officers or prosecutors in detecting lies, although judges were far more willing to indicate that they did not know the answers to study questions than were officers or prosecutors. Leif A. Strömwall & Pär Anders Granhag, *How to Detect Deception:*

to tunnel vision than police officers, given their different roles in the system.[322] Some empirical evidence suggests that judges are in fact able to resist at least some cognitive biases.[323] Magistrates will be more effectively able to resist their own cognitive bias when they appreciate the importance of their role.

An important way to combat magistrates' cognitive biases is to strengthen appellate review of magistrate decisions, as discussed in more detail in Part IV.C below. The research on accountability is equally applicable to decisions by magistrates as it is to police decisions.[324] Yet the current judicial review of magistrate decisions is often too deferential, such that it is very difficult for defendants to win these challenges.[325] Judicial review of magistrate decisions will be particularly valuable if it focuses on the ways magistrates reach decisions or their reasoning, not just the bare conclusion about whether or not the warrant should issue.[326]

b. Systemic Benefits from Increased Transparency

Full disclosure can have other beneficial effects as well, including facilitating meaningful review by defense counsel once charges are filed and they are retained. Professor Natapoff has noted the important role defense counsel plays in revealing "informant excesses."[327] She argues that "defense counsel should have more and earlier access to information about informants, including their complete criminal records, any cooperation provided in or promised in any other cases, copies of any statements made regarding the case, and a description of all promises-implicit and explicit-made by the government."[328] In *United States v.*

Arresting the Beliefs of Police Officers, Prosecutors and Judges, 9 PSYCHOL. CRIME & LAW 1, 19-36 (2003).

322. See *supra* Part III.B2, III.C.

323. *See supra* notes 269-74 and accompanying text (discussing the research into judicial resistance to hindsight bias in the context of probable cause determinations) and notes 216-18 and accompanying text (discussing judicial resistance to racial bias when race is explicit rather than implicit).

324. *See supra* notes 316-20 and related text (regarding accountability).

325. *See supra* Part II.D.

326. *See* O'Brien, *Recipe for Bias*, *supra* note 159, at 1020 (accountability for decisions' ultimate outcomes can increase bias, but accountability for the decision-making process reduces bias by leading to more thorough evaluation of alternatives and less commitment to earlier decisions); Bar-Gill & Friedman, *supra* note 14, at 1639 (noting that magistrates are motivated by the threat of later reversal of their decisions, so judicial review of those decisions "helps align a magistrate's incentives with the social optimum.").

327. Natapoff, *Snitching*, *supra* note 15, at 699.

328. *Id.*

Ruiz, the Supreme Court recently narrowed prosecutor's obligations to provide discovery of this type of information, holding that defendants who plead guilty are not entitled to this discovery.[329] If the search warrant application more routinely contained such information, that would minimize the negative effects of *Ruiz* on the criminal cases involving search warrants.[330]

Providing magistrates with additional information in search warrant applications would also have the added benefit of making the system more transparent and easier to study. Researchers have noted the challenges of getting access to meaningful information in the search warrants,[331] and several scholars have called for the need for more transparent access to information about informants.[332] Improved access to information about informant usage in search warrant cases could help make it easier to monitor for racial disparities, which in turn could help with both perceived and actual accountability, important in reducing implicit bias.[333] "In the end, greater transparency at all stages of the criminal process is the most powerful way to counter tunnel vision."[334]

B. Facilitate Full Disclosure Through Use of a Checklist

Of course, magistrates can only take a "fresh look"[335] at search warrant applications if they are given enough information about the facts.[336] Police should therefore be incentivized "to collect more of the

329. United States v. Ruiz, 536 U.S. 622 (2002).

330. *See* Natapoff, *Snitching*, *supra* note 15, at 699 n.236 ("Since 90-95% of defendants plead guilty, [*Ruiz*] effectively shields from discovery vast amounts of data related to informant credibility.")

331. *See, e.g.*, VAN DUIZEND ET AL., *supra* note 57, at 1-2.

332. *See, e.g.*, Natapoff, *Snitching*, *supra* note 15, at 697 ("Access to information about the informant institution would temper law enforcement discretion and permit public consideration of a variety of important and painful decisions about what substantive limits, if any, should be placed on informant use.") (internal quotations omitted).

333. *See* Smith & Levinson, *supra* note 123, at 824-25. That is particularly important because there is no individual remedy for implicit bias, as noted above.

334. Findley & Scott, *supra* note 9, at 390. *See also* Bandes, *Loyalty to One's Convictions*, *supra* note 34, at 494 (arguing that prosecutorial tunnel vision should be combatted through transparency, including increased "record keeping, record sharing and discovery . . . to ensure that a full investigative record exists and is accessible for review.").

335. *Cf.* Burke, *Neutralizing Cognitive Bias*, *supra* note 8, at 525-27 (arguing for the use of internal and external mechanisms for prosecutors and others to take a "fresh look" at other prosecutors' decisions in order to neutralize cognitive biases).

336. *Cf.* Findley, *supra* note 1, at 939 (noting the importance of making the investigation process more transparent to fact-finders, which will improve the quality of the outcomes of the adjudicative process).

reasonably available information before acting."[337] One way to facilitate fuller collection and disclosure of case-specific information to the magistrate would be to encourage the use of a checklist.[338] A checklist would clarify for both police and magistrates what evidence should be collected and disclosed, which would make the idea of full disclosure easier to implement and enforce.[339] Empirical studies of search warrant applications also show that some police departments have already developed and used standardized forms, including checklists, to help increase efficiency and precision in search warrant applications.[340]

Checklists have been recognized as helpful for police in other contexts.[341] For example, the ABA's Working Group regarding improving *Brady* disclosures concluded that checklists should be used "to ensure full and timely transfer of all relevant information from police to prosecutors."[342] Police members of that Working Group advocated for the use of checklists to help them comply with their disclosure obligations.[343] Similarly, another ABA report urged the judiciary to adopt checklists to help ensure compliance with *Brady* disclosures as part of its recommendations for ways to prevent wrongful convictions.[344]

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337. Taslitz, *What Is Probable Cause*, *supra* note 24, at 171. I am not arguing that use of the checklist would necessarily be required to do additional investigation in most cases. Instead, I expect that in routine cases, officers would do the same sort of investigation as is currently done but would disclose more of that information to magistrates. Of course, if using the checklist indicated to officers that they had not yet done enough to establish probable cause, then they could continue to investigate.

338. *See infra* Part IV.C regarding police incentives for use of a checklist.

339. *See* Lissa Griffin, *Pretrial Procedures for Innocent People: Reforming Brady*, 56 N.Y.L. SCH. L. REV. 969, 974 (2011/12) (discussing the same benefits from using a checklist to help improve *Brady* disclosures). Use of a checklist may have the most tangible effects on individual cases.

340. *See* VAN DUIZEND ET AL., *supra* note 57, at 51 (regarding standardized forms); Uchida & Bynum, *supra* note 15, at 1056 (regarding police-developed checklist in one jurisdiction that included information about informant reliability).

341. *New Perspectives on* Brady *and Other Disclosure Obligations: Report of the Working Groups on Best Practices*, 31 CARDOZO L. REV. 1961, 1975 (2010) [hereinafter *Report of the Working Group*]. *See also* Corey Fleming Hirokawa, Comment, *Making the "Law of the Land" the Law on the Street: How Police Academies Teach Evolving Fourth Amendment Law*, 49 EMORY L.J. 295, 317 (2000) (noting that even in jurisdictions that use the *Gates* test, officers are trained using checklists based on *Aguilar-Spinelli*).

342. *Report of the Working Group*, *supra* note 341, at 1974.

343. *Id.* at 1975 ("police experts in the Working Group noted that police generally want to do a good job, and that, because police tend to be rule driven, formal rules can help them in their efforts to do a good job. Police are greatly assisted by having clear expectations and written rules.").

344. *See* Griffin, *supra* note 339, at 986. *See also Gouldin*, *supra* note 58, at 1380-81 (discussing use of checklists to improve decision-making, including a recent project in the Manhattan District Attorney's Office to create conviction integrity programs using similar

A checklist to facilitate disclosure of information in a search warrant application should help police combat investigative tunnel vision[345] and make police analysis of disclosure obligations more systematic.[346] Imposing a clear structure regarding what information should be compiled and disclosed can help counter cognitive biases like confirmation bias and selective information processing.[347] That in turn should help police build stronger cases.[348] Similarly, research from Continuous Quality Improvement efforts in healthcare demonstrate that improved performance is more likely to result from systems that provide support for performing a job correctly, rather than using threats to punish poor performance; the ABA Working Group on *Brady* disclosures pointed out that checklists serve that function well.[349]

The checklist should be helpful for magistrates as well. The major empirical study on search warrants noted that magistrates reviewing search warrant applications often used "mental checklists" to verify that the application contained all necessary information.[350] Confirmation bias makes it hard, however, to notice what is missing, as it leads people to seek information that confirms rather than challenges an existing hypothesis.[351] Therefore, a checklist can help overcome the potentially significant burden of evaluating the specifics of each case to determine what information should have been available and disclosed.[352] The checklist may also help overcome some of the dangers of priming and implicit bias discussed above,[353] as information would be presented in a more standardized way rather than focusing so much on the officer's theory of the case.[354]

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principles).

345. *See Report of the Working Group*, *supra* note 341, at 1975.

346. *See Griffin*, *supra* note 339, at 997 (regarding creating systematic way to ensure information sharing).

347. *See Report of the Working Group*, *supra* note 341, at 1975. *See also* Burke, *Talking About Prosecutors*, *supra* note 306, at 2132 (discussing how prosecutors can be subject to tunnel vision because they are focused only on their own theory of the case, which may affect their ability to recognize the value of potentially exculpatory evidence).

348. *Report of the Working Group*, *supra* note 341, at 1976.

349. *Id.* at 1974-75.

350. *See* VAN DUIZEND ET AL., *supra* note 57, at 51.

351. *See* Findley & Scott, *supra* note 9, at 309.

352. *See* Tim Bakken, *Models of Justice to Protect Innocent Persons*, 56 N.Y.L. SCH. L. REV. 837, 857 (2011/12) (discussing the analogous benefit of use of a checklist in *Brady* disclosures).

353. *See supra* Part III.A and III.C. *See also* Smith & Levinson, *supra* note 123, at 815-16 (discussing the ways in which implicit bias may affect prosecutorial analysis of *Brady* disclosures; the same points could easily apply to police evaluation of information that could be included in a search warrant application).

354. *See* O'Brien, *Recipe for Bias*, *supra* note 159, at 1045-46 (discussing "groupthink" and

Appendix A to this article proposes a sample checklist that could be used for search warrant applications based on informant tips. The contents of that checklist are drawn from my prior article, *Truth or Consequences: Self-Incriminating Statements and Informant Veracity*, which argued that magistrates should consider a variety of factors when assessing an informant's veracity,[355] as well as on information from other sources.[356] It also draws on the *Franks* cases discussed above in Part III, regarding the types of information that defendants argued was omitted but should have been included in search warrant applications.

Much of the information in the checklist relates to the informant's credibility, which is crucial for making sure magistrates make good probable cause determinations and for minimizing the likelihood that the informant will provide false information to the officers.[357] Of particular importance is information about any benefits the informant expects to receive[358] and the informant's perceived risk for providing inaccurate information.[359]

Perhaps the most controversial item in the sample checklist is the inclusion of questions about the race of both the informant and the suspect. That information was included based on the implicit bias research that suggests that judges control implicit bias better when race is explicit rather than implicit.[360] Although the research suggests that making race explicit may help individuals make better decisions in some circumstances, I am not arguing that just including race in search warrant documents would remove all taint from implicit bias. Instead, including that information will provide greater transparency and access to information about the role that race and implicit bias might play, as

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studies of Dutch independent crime analysts who showed more true independence when they were shielded from primary investigator's theory of the case than when they could tell the investigator's theory).

355. *See generally* Bowman, *supra* note 20.

356. I also drew on Griffin, *supra* note 339, Natapoff, *Beyond Unreliable*, *supra* note 196, and Mosteller, *supra* note 28, all of which provided useful information about special concerns related to criminal informants.

357. *See supra* notes 184-96 and accompanying text regarding the risks of informants shading testimony based on what police want to hear and the reasons that police and prosecutors may not detect these problems.

358. *See* Mosteller, *supra* note 28, at 572 (proposing a reliability hearing for testifying informants, focusing on any promises or inducements); Natapoff, *Beyond Unreliable*, *supra* note 196, at 114-15 (proposing similar reliability hearing for testifying informants, with a slightly broader range of material covered).

359. *See* Bowman, *supra* note 20, at Part III.C.4.

360. *See supra* notes 219-21 and accompanying text. *See also* Rachlinski et al., *supra* note 127, at 1225 ("Control of implicit bias requires active, conscious control.").

that information is currently very hard to obtain.[361] If this increased access to racial data does demonstrate that either explicit or implicit bias[362] is really occurring, that data would help people identify additional solutions.[363]

But the checklist in Appendix A is really intended merely as a starting point for helping each jurisdiction to develop its own checklists.[364] It might be helpful, for example, to have police, prosecutors, magistrates, and defense attorneys weigh in on the particular content and terminology that would be most helpful in a particular jurisdiction.[365] Multiple checklists may also be helpful to deal with different types of crimes and different sources of information about the crimes; the one in Appendix A deals with search warrants based on informant tips, but it other checklists could be developed for situations involving different types of information.[366]

Of course, use of a checklist should not be confused with acceptance of boilerplate language. As discussed above, officers

361. *See supra* Part IV.A.2.b regarding systemic benefits from increased transparency.

362. It is possible, of course, that making race explicit could exacerbate existing explicit racial bias. Although that is certainly a risk, I am persuaded by the arguments throughout the research discussed in this article that implicit rather than explicit bias is likely to be the most significant problem at this point. Furthermore, increased access to racial data may help reveal the likely effects of either type of bias, compared to the currently available information.

363. This article only scratches the surface on the problems of racial bias in the criminal justice system, and the reforms suggested here will play at best a small role in addressing those issues. *See, e.g.,* Research Working Group & Task Force on Race, the Criminal Justice System, *Preliminary Report on Race and Washington's Criminal Justice System*, 35 SEATTLE U. L. REV. 623, 626 (2012) (detailing several ways that race affects the criminal justice system in Washington, "to serve as a basis for making recommendations for changes to promote fairness, reduce disparity, ensure legitimate public safety objectives, and instill public confidence in our criminal justice system."). Obviously, the broad-based solutions to the larger problem are beyond the scope of this article, but my hope is that the discussion here of the social cognitive underpinnings of the search warrant problems above can provide a useful foundation for others' suggested solutions. *See, e.g.*, Jerry Kang, *Trojan Horses of Race*, 118 HARV. L. REV. 1489, 1496-97 (2005) (arguing that social cognition research can be used to complement other methodologies of critical race studies and that modern newscast focus on crime is a "Trojan horse" that exacerbates implicit bias tendencies); and Johnson, *supra* note 138, at 361 (arguing for the importance of coalition building between African-Americans and Latina/os to address the problem of racial profiling).

364. *See* Griffin, *supra* note 339, at 997 ("Certainly, as recommended by the ABA, each jurisdiction could develop its own checklist. The proposed checklist in Appendix C is offered to assist this effort.").

365. *See id.* at 986 (discussing a similar recommendation in the ABA report on wrongful convictions).

366. *Report of the Working Group, supra* note 341, at 1976 ("A case involving an informant . . . for example, might uniquely require inquiry into information such as prior cases in which the witness acted as an informant, prior deals bestowed upon the witness in other cases, prior record and dispositions in earlier cases, any recorded communications between the informant and others, and other such information related to the witness's incentives and veracity.").

sometimes use the same language in many search warrant applications, and magistrates sometimes focus more on whether all the expected boilerplate has been included rather than on the lack of specific facts from which to make a meaningful review.[367] Reliance on boilerplate can have significant negative consequences.[368] Thus, the checklist in Appendix A and any subsequent checklists developed in particular jurisdictions should require that police fill in the details related to the items in the checklist, rather than merely checking boxes.[369] After all, the case-specific details, rather than the general categories, are necessary for magistrates to provide meaningful review.

C. Doctrinal Reform to Facilitate Defense Counsel's Challenges to Warrant Validity

"[T]o the extent that existing legal rules enforce tunnel vision, doctrinal reform is an obvious place to begin."[370] Many scholars who write about cognitive bias in the criminal justice system stress the importance of vigorous defense counsel in combatting that bias.[371] But because search warrants are issued *ex parte*, defense counsel can only have a meaningful role if reviewing courts provide meaningful assessment of the search warrants.[372] For that to happen, the *Franks* doctrine discussed above in Part II.D needs to be modified at least in some respects.

1. Reform to the Preliminary Showing Required Under *Franks* for Informant Cases

As explained above, most courts interpret the "preliminary showing" required under *Franks* in a way that makes it virtually impossible for the defendant to meet the standard when the affidavit is based primarily on information from a confidential informant.[373] That

367. *See supra* notes 62-63 and accompanying text.

368. *See supra* note 64 and accompanying text.

369. For example, the affiant would have to give details about any promises made to the informant, rather than just noting that there had been such a promise. Similarly, the affiant would need to give some detail about the circumstances under which the police contacted the informant and any prior inconsistent statements the informant might have made. Requiring the police to provide details, rather than just generalizations, also helps remove the current incentives for "testifying," which is charitably described as shading the facts so that a search will be found to be justified. *See, e.g.*, Bar-Gill & Friedman, *supra* note 14, at 1624-25.

370. Findley & Scott, *supra* note 9, at 354.

371. *See, e.g.*, Findley, *supra* note 1, at 935-36.

372. *See supra* notes 30-33 and accompanying text.

373. *See supra* Part II.D.1.

standard is problematic not only because it incentivizes creation of fictitious informants,[374] but also because it fails to provide the kind of meaningful accountability that helps overcome tunnel vision.[375]

Thus, courts should adopt a standard used in Washington for such cases: an in-camera hearing should be conducted to examine the affiant and/or confidential informant if (1) the defendant offers information that "casts a reasonable doubt on the veracity of material representations made by a search warrant affiant," and (2) "the challenged statements [related to information from a confidential informant] are the *sole* basis for probable cause to issue the search warrant."[376] That standard provides a clearer and more realistic metric for judging the sufficiency of the defendant's showing, by use of the "casts a reasonable doubt" language. Furthermore, the standard only applies to cases in which the confidential informant's information is really the sole basis for the search warrant affidavit; in other cases, the defendant can attack the affidavit by challenging the rest of the information presented. This approach would only allow the defendant to receive an in-camera hearing to test the affiant's (or informant's) credibility; it would not require suppression or otherwise change the showing required under *Franks* for the defendant to actually win his or her challenge.[377] Instead, it would simply deal with the inherent impossibility of meeting the preliminary showing standard in informant cases, which insulates both deliberate wrongdoing and tunnel vision.

2. How Use or Non-Use of a Checklist Should Affect Subsequent Review

Additionally, the courts should analyze *Franks* omissions cases differently than they currently do, and that new analysis should depend in part on whether a checklist was used. The new analysis should incentivize police to use the proposed checklist, and it should provide the police with more favorable review when that checklist is used.[378]

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374. *See supra* notes 93-95 and accompanying text.

375. *See supra* notes 316-20 and accompanying text about accountability.

376. State v. Casal, 699 P.2d 1234, 1235 (Wash. 1985) (emphasis in original); *id.* at 1238 (distinguishing between cases where the informant's identity is known and where the informant's identity is kept confidential).

377. "An in-camera hearing serves to protect the interests of both the government and the defendant; the Government can be protected from any significant, unnecessary impairment of secrecy, yet the defendant can be saved from what could be serious police misconduct." *Id.* at 1238 (internal quotation omitted).

378. The doctrine on review of search warrant applications must be crafted so that police have incentives to seek search warrant applications rather than perform warrantless searches and hope an

If police use the checklist in connection with the search warrant affidavit, then the existing presumption of the warrant's validity should still attach.[379] If the affiant failed to provide information that was asked for in the checklist, then the defendant should have the burden of showing that the police knew or should have known that information.[380] The fact that the checklist asked for the information should remove the inquiry about whether the information was material, which has caused significant problems in the *Franks* omissions cases.[381] The checklist would clarify the police disclosure obligations, in answer to concerns about police having to speculate about what information might matter.[382] The officers would not have a duty to gather additional information, but the checklist would help clarify for police what information they should consider and disclose if that information was available. And the defendant would then still bear the not-insignificant burden of showing that the officer-affiant actually knew or should have known the omitted information. In such circumstances, the defendant should have increased access to in-camera review to explore this possibility, as discussed in the part above, but the defendant would still be required to make a substantial showing, and if the defendant could not meet that burden, then the defendant's *Franks* claim would fail.

However, if defendant does show that the police knew or should have known information called for in the checklist but failed to disclose that information, then the burden should shift to the State to show that the failure to disclose the information was harmless because it would not

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exception to the warrant requirement will allow admission of the resulting evidence. *See* United States v. Ventresca, 380 U.S. 102 (1965) (noting the effect that reviewing courts' attitudes can have on officers' willingness to seek warrants).

379. *See* Franks v. Delaware, 438 U.S. 154, 171 (1978) (courts should presume the validity of the warrant and defendant should have to come forward with specific allegations and an offer of proof to defeat that presumption).

380. In some jurisdictions at least, the affiant officer often lacks first-hand knowledge of the contents of the investigation. *See supra* note 67 and accompanying text. It would be preferable if the affiant had firsthand knowledge of the investigative information gathered, but the defendant should not get caught in a trap regarding showing who knew what information. Instead, the defendant should only have to show that investigators involved in the case knew or should have known relevant omitted information; the defendant should not have to make a heightened showing regarding the extent of communication between officers involved in the investigation.

381. *See supra* notes 228-234 and accompanying text (discussing corroboration, which is often key to materiality analysis).

382. *See* United States v. Colkley, 889 F.2d 297, 301 (4th Cir. 1990) (justifying the increased skepticism of *Franks* omissions cases in part because of an unacceptable risk that officers would be open to "endless conjecture about investigative leads, fragments of information, or other matter that might, if included, have redounded to defendant's benefit.").

have changed the magistrate's probable cause analysis.[383] The court could still find that the information was not material, perhaps because of police corroboration of the informant's tip, other evidence of the informant's reliability, or because the informant's tip only played a small part in the overall showing of probable cause. But the prosecutor would bear the burden of proof of demonstrating probable cause, rather than the current situation that puts the burden on the defendant to defeat probable cause.

In cases in which a checklist was used but the defendant objected to the failure to disclose information that was not called for by the checklist, then the current standards would still remain in place. That is, the defendant would still have to prove that the omission was both material and intentionally or recklessly designed to mislead.[384] That standard would likely be difficult to meet, as it is now, although courts should still make a more careful and nuanced inquiry into those issues, as discussed above in Part III.B.2, and the defendant should be able to get in-camera review if needed, as discussed above in Part IV.C.1.

If officers did not use a checklist, however, then the standards should be more favorable to the defendant. The court should presume that the affiant knew that the kind of information called for by the checklist could be material to the probable cause determination. Therefore, if the affiant failed to use the checklist and the defendant made a substantial preliminary showing that the undercut the affiant's version, as discussed above in the previous subsection, then the police should bear the burden of proof regarding both intent (whether the police intended to mislead) and materiality (whether the information matters to the probable cause determination). With respect to intent, the police officer should have to come forward with specific information about why the omitted information was not provided or why the false statement was included, and the reviewing court would have to determine that the officer's conduct did not even show recklessness. Furthermore, the officer should have to bear the burden of proving that probable cause exists without regard to the *Franks* error.

Even under this revised formulation of *Franks*, the police should

383. This approach is modeled on Professor Griffin's analogous suggestions regarding modifying the burden of proof for *Brady* disclosures depending on use of a checklist. *See* Griffin, *supra* note 339, at 999-1000 (justifying burden shifting based on clarity of disclosure obligations).

384. *See* Colkley, 899 F.2d at 301 (discussing the standards for what defendants must prove for *Franks* omissions challenges). *See also* Griffin, *supra* note 339, at 1000 (arguing that the burden in *Brady* cases should stay on the defense when information was not called for in the proposed checklist).

still have adequate incentive to get search warrants in cases based on informant information. After all, obtaining a search warrant provides significant evidence that qualified immunity should attach to officers facing civil suits over allegedly unlawful searches.[385] Furthermore, empirical evidence provides some support for the idea that getting a search warrant may help prevent later suppression of the evidence seized.[386] Empirical evidence also provides at least some support for the idea that search warrant usage has increased, at least in some types of cases and in some circumstances.[387] Additionally, technological advances have made it easier than ever for officers to obtain warrants.[388] Therefore, the additional "burden" of completing a checklist while preparing the application should be minimal, and the checklist may actually make warrant applications easier to complete, as they provide clear directions about what types of information should be included. Furthermore, although the defendant would now more easily be able to challenge the validity of search warrants, police should have an easier time in knowing what information should be provided because of the checklist, and the revised test described above does not impose on police a duty to do additional investigation. The magistrate would still be asked to make a common-sense determination about the existence of probable cause,[389] and the modifications to the test still leave ample room for the reviewing court to uphold the adequacy of the search

385. Messerschmidt v. Millender, 132 S. Ct. 1235 (2012).

386. *See, e.g.*, Uchida & Bynam, *supra* note 15, at 1064 (discussing findings of several studies showing that the exclusionary rule very rarely leads to "lost cases"). This empirical evidence is not definitive, as it does not demonstrate the effect of getting a warrant versus proceeding without a warrant on the same facts. Even without evidence of that comparison, however, the existing evidence suggests that at least in some cases, seeking a warrant helps police officers make better decisions about their investigations. *See id.* at 1065-66 (discussing the incentive that the exclusionary rule provides in helping ensure that police comply with the Fourth Amendment and the efforts of police officers to improve warrant applications in order to comply with the law and preserve admission of evidence obtained).

387. *See, e.g.*, Jonathan Witmer-Rich, *Covert, Delayed Notice Searching: A Constitutional and Policy Failure –and a Solution* (work-in progress on file with author, discussing vast expansion of delayed notice covert search warrants, including in routine federal criminal investigations); Uchida & Bynam, *supra* note 15, at 1034 (discussing increased use of search warrants in state courts, particularly in drug cases, during the late 1980s).

388. *See, e.g.*, Bar-Gill & Friedman, *supra* note 14, at 1672 (discussing various techniques to improve access to warrants, including increased use of telephonic warrants, use of Skype to facilitate judicial authorization of blood-draws from DUI suspects, and even judges being present at DUI checkpoints to issue warrants).

389. *See* Illinois v. Gates, 462 U.S. 213, 230, 239 (1983). This proposal is not inconsistent with *Gates'* flexible approach because it does not impose any particular formal requirements, either on police about what evidence they must uncover or magistrates regarding how they must assess probable cause.

warrant. This article also echoes the call from other scholars to reinvigorate the warrant requirement and minimize reliance on exceptions,[390] although these proposals do not depend on that change.

These changes would, admittedly, lead to more suppression of evidence for violations of Franks. From the perspective of the cognitive bias research, however, the highly visible nature of suppression has several benefits. For example, suppression of evidence in some cases should help mitigate overconfidence bias in police, helping them make better predictions about the likelihood of their illegal conduct being detected and punished, which should in turn deter some unlawful searches.[391] Professor LaFave notes the importance of deterrence as a justification for the exclusionary rule, as well as its appropriateness in *Franks* cases where the officers have misled the magistrate who issued a search warrant.[392] Similarly, Professor Taslitz notes the error-reduction that is likely to result from suppression incentivizing officers to do investigations that are more thorough in the first place.[393] And that is the real goal of the reforms suggested in this article – not increased suppression of evidence seized, but improved search warrant applications in the first place.[394] That goal is consistent with exclusionary rule studies suggesting that it incentivizes better police decision-making without resulting in significant numbers of "lost cases" due to suppression of the evidence.[395]

390. *See, e.g.*, Bar-Gill & Friedman, *supra* note 14.

391. Lammon, *supra* note 165, at 1137-38. *See also id.* at 1139 ("when we reject the assumption that police officers (or anyone else for that matter) are able to accurately calculate the costs and benefits of their conduct, and instead acknowledge that police systematically deviate from rational behavior, the force of exclusion becomes evident."). *See also* Bar-Gill & Friedman, *supra* note 14, at 1614 ("In a sense, a firm warrant requirement makes the Fourth Amendment self-enforcing; its clear enforcement ex post will serve to deter Fourth Amendment violations ex ante by optimizing police conduct.").

392. LAFAVE, *supra* note 34, at Sec. 4.4, just after note 19.

393. Taslitz, *Police Are People Too*, *supra* note 29, at 65. As noted above, I am not arguing for an expanded duty to investigate, but use of the checklist should help officers think about their investigations more consistently and effectively.

394. To the extent that officers are engaging in deliberate wrongdoing rather than just falling victim to cognitive biases, use of the checklist should help make it harder for them to fabricate informants, and it would make it easier for defense counsel to challenge fabricated information through subsequent litigation. *See* notes 94-96 (regarding the danger of police making fabricating the existence of informants); 369 (regarding testifying).

395. *See* Uchida & Bynam, *supra* note 15, at 1064-66 (discussing the conclusions to their study, which were consistent with previous studies showing limited numbers of "lost cases" due to the exclusionary rule).

3. Cautious Reliance on Corroboration

Many scholars have suggested that increased use of corroboration is an important part of the solution to the problems of informant unreliability and incentives to lie.[396] They argue that given the incentives for informants to tailor their stories to match the police or prosecutor's theory of the case, the courts should weight more heavily corroboration of the informant's story.[397] At least one study suggests that police frequently seek corroboration of informant tips,[398] and the courts often rely heavily on corroboration when rejecting *Franks* challenges.[399] But increased reliance on corroboration is somewhat problematic.

First, confirmation bias makes it hard to evaluate the appropriate weight of corroboratory evidence, in that confirmation bias both leads to overvaluing of details that are not really significant and undervaluing disconfirmatory evidence. That is perhaps why the case law on corroboration has been particularly problematic.[400] In some high-profile cases, and probably other cases that are not so high profile, courts thought that informants' tips were corroborated, only to discover that the corroboration was flawed.[401]

Second, and closely related, there is an inferential problem in relying on corroboration of innocent details to assume that the informant must also be correct about claims regarding criminal activity. Professor Erlinder correctly notes that "accurate predictions of legal conduct reveal virtually nothing about the reliability or accuracy of allegations of illegal conduct."[402] Thus, for corroboration to be useful, it must confirm not just general familiarity with the person being implicated, but more specific information about criminal activity.

Third, that more specific type of corroboration is often unavailable. Instead, informants' stories are hard to corroborate or contradict in cases

396. *See, e.g.*, Zimmerman, *supra* note 56, at 141 (recommending that officers try to corroborate all information from informants and avoid relying on informants in warrant applications unless absolutely necessary).

397. *See, e.g.*, Taslitz, *Wrongly Accused Redux*, *supra* note 18, at 1147 (arguing that corroboration should be "one prerequisite for relying on an informant's tip.").

398. Benner & Samarkos, *supra* note 11, at 243.

399. *See supra* notes 225-229 and accompanying text.

400. *See generally* Erlinder, *supra* note 44 (detailing and extensively critiquing the evolution of the Supreme Court precedent regarding use of corroboration to bolster informant tips).

401. *See supra* note 17.

402. Erlinder, *supra* note 44, at 3 (paraphrasing Justice Ginsburg's opinion in Florida v. J.L., 529 U.S. 266, 271 (2000)).

where their testimony is the central evidence against the defendant.[403] In other words, informants are "most needed when [they are] providing otherwise unprovable facts, which thus cannot be corroborated."[404] Prosecutors and police may thus offer leniency or otherwise incentivize informant tips in precisely the cases where corroboration is unavailable, increasing the risk that informant information will be false.[405] Thus, while corroboration can certainly be helpful, and while police should be encouraged to corroborate informants' tips, courts need to be cautious about relying too heavily on corroboration. And in cases where corroboration is unavailable, courts should carefully scrutinize the circumstances surrounding the informants' tip, to make sure those circumstances suggest that the informant is credible.

V. CONCLUSION

Cognitive biases likely affect the search warrant process, particularly when informants are involved, in several subtle but important ways. Implicit bias may affect who becomes an informant and who becomes a suspect for whom a search warrant is sought. Investigative tunnel vision can exacerbate a premature focus on an individual, affecting both what evidence is sought and how that evidence is interpreted. Tunnel vision can also contribute to officers not disclosing a complete picture of the investigation or of the informant's reliability to the magistrate, undermining the magistrate's role in providing a neutral evaluation of the basis for the search. Magistrates' review of these applications can also be affected by framing, priming, and implicit bias. When the resulting search turns up no evidence, the situation is shielded from later review. When the search does turn up evidence and criminal charges are filed, hindsight bias as well as confirmation bias can affect judicial review of the evidence presented. The current case law, both formally and as usually interpreted, fails to provide a meaningful remedy.

These problems are complex, and some of the effects discussed here are speculative; it would be helpful if more empirical research was done to verify some of the conclusions I have drawn here. And the search warrant process will always be affected to some extent by the cognitive processes described above, particularly because search warrants are issued *ex parte*. Nevertheless, the solutions described

403. Natapoff, *Beyond Unreliable*, *supra* note 196, at 113.
404. Mosteller, *supra* note 28, at 551-52.
405. *See id.* at 554.

above should help improve decision-making in the search warrant process. Full disclosure, in various forms, should help mitigate those biases.

Increased education of magistrates, police, and judges can help them approach the process with a somewhat different frame of mind. Police should be encouraged to use a checklist of information about informants that should be provided to the magistrate, both to help their own case evaluations and to enable the magistrate to provide more thorough and meaningful review. Those changes may mean that in marginal cases, warrants are not sought or granted. It may also help reduce the role of implicit bias in decisions to seek or grant warrants. When warrants are issued, defense counsel should have some greater room to challenge the warrants because of checklist usage and corresponding changes to the *Franks* doctrine. Reviewing judges may then be better able to resist confirmation and hindsight biases. These reforms, adopted together, should help improve the process of decision-making without unduly hampering the ability of police to investigate crime.

APPENDIX A – SAMPLE CHECKLIST FOR REQUIRED DISCLOSURES FOR SEARCH WARRANT AFFIDAVITS BASED ON INFORMANT TIPS[406]

When a search warrant application includes information from one or more informants, this checklist should be used to make sure the magistrate is provided with sufficient information to evaluate the role of that tip in contributing to the probable cause determination. This information must be provided based on the knowledge of all officers involved in the investigation in any way who have had contact with the informant. When the checklist is used, there should be space included for detailed information to be provided; that extra space has been eliminated in this printing.

1. General information about the informant.
    a. How informant came to attention of police officer.
    b. Prior criminal record.
    c. Current or former mental or physical impairment.
    d. Pending or contemplated charges against the informant (including known or suspected criminal activity by the informant).
2. Information about informant's motives or benefits that may be received for information.
    a. Informant's relationship to the target of the warrant application.
    b. Was the informant involved in the criminal activity under investigation?
    c. Promises or offers of immunity or leniency for informant's criminal activity (written or unwritten).
    d. Monetary inducement.
    e. Other benefits the informant might expect to receive.
3. Other information.
    a. Who was present when informant provided information to police?
    b. Did the informant make any prior inconsistent statements related to the criminal activity currently under investigation, or recant the information provided to police?

406. As noted above, this checklist could be used as drafted, or it could be used as a basis for jurisdictions coming up with their own checklists for search warrants based on informant information.

c. Informant's track record of providing useful information to police in the past (including arrests, convictions, and previous information that turned out to be inaccurate).
d. Any record of current or former mental or physical impairment.
e. Any other information relevant to the informant's credibility.
f. Race of the informant.
g. Race of the target of the investigation.

4. Information about corroboration.
   a. What (if any) information provided by the informant was successfully corroborated?
   b. What (if any) information was attempted to be corroborated, without success?
   c. What (if any) information provided by the informant was shown to be inaccurate by subsequent investigation?
   d. Was any of the informant's information contradicted by scientific tests?