COGNITIVE BIASES THAT LEAD TO WRONGFUL CONVICTIONS: ILLUSTRATED BY TWENTY-THREE ERRONEOUS CHINESE CASES

Huang Shiyuan
Cognitive Biases that Lead to Wrongful Convictions: Illustrated By Twenty-Three Erroneous Chinese Cases

Huang Shiyuan*

Table of Contents

I. Introduction ........................................................................................................... 104
II. The Cognitive Biases Bearing Directly On Wrongful Convictions..................... 106
   A. Tunnel Vision, Confirmation Bias, Belief Perseverance, and Reiteration Effect .......................................................... 107
   B. Hindsight Bias and Outcome Bias ................................................................. 109
   C. Noble Cause Corruption, Emotional Attachment, Motivational Bias, and Goal Pursuit ...................................................... 110
   D. Environmental Factors that Reinforce the Cognitive Biases ........................................................................................................... 111
III. The Processes of Wrongful Convictions ............................................................ 113
   A. Misclassification Error .................................................................................. 118
   B. Focus on Building a Case Against the Suspect ........................................... 120
      1. Obtaining a Confession ............................................................................ 120
      2. Obtaining Witness Testimony Against Suspects .................................... 125
      3. Interpreting Exculpatory Evidence as Irrelevant ...................................... 127
   C. Unwillingness to Consider Alternatives ...................................................... 127
IV. Policy Recommendations .................................................................................... 129
   A. Educating and Training Criminal Justice System Actors about the Nature, Consequences, and Effects of These Cognitive Biases ........................................................................................................... 129
   B. Maintaining a Separation Between the Roles of Police, Prosecutors, and Judges ................................................................. 130
   C. Separating the Role of Investigators and Preliminary

103
I. INTRODUCTION

In recent years, the rectification of certain notorious wrongful convictions, especially those of Huugjilt, She Xiangling, Zhao Zuohai, and Zhang Gaoping, has had a tremendous impact on Chinese society. On the one hand, the public realized through these wrongful convictions that the real perpetrators are still at large, innocent persons were subjected to irreversible physical and psychological harm, and the Chinese criminal justice system was seriously undermined. On the other hand, through these erroneous cases, people are better able to understand the deficiencies of the system and look for ways to improve it.

The causes of wrongful convictions most frequently discussed by Chinese legal scholars include: false confessions extorted through torture by investigators; false witness testimony; investigators’ concealment of exculpatory evidence; judges’ rejection of counsel’s reasonable arguments; judges’ refusal to suppress illegally obtained evidence; a “presumption of guilt;” problematic forensic science; overwhelming cooperation between police, prosecutors, and courts; pressures to solve high-profile cases quickly; lack of funds; and shortage of staff. Correspondingly, the “prescriptions” dispensed by scholars as remedial measures include: punishing investigators who extort confessions through torture; excluding coerced confessions; punishing investigators who compel witnesses to provide testimony and investigators who deliberately conceal evidence from defense attorneys; educating judges on the principle of the “presumption of
innocence;” strengthening judicial independence; providing more funds for police departments; and recruiting more investigators.  

Although the research mentioned above is of great value, it does not address the underlying reasons for wrongful convictions. For instance, those who regard the notion of “presumption of guilt” as a cause of wrongful convictions likely know little about tunnel vision or confirmation bias. In fact, the reason why investigators focus on the suspect, endeavor to search for incriminating evidence, and ignore or suppress exculpatory evidence, is because they are affected by tunnel vision and confirmation bias.

The underlying causes of wrongful convictions include direct causes, external causes, and psychological causes. Direct causes—such as false confessions extorted through torture, false witness testimony, investigators’ concealment of exculpatory evidence, and judges’ rejection of counsel’s reasonable arguments—contribute to wrongful convictions in a direct and obvious way. External causes—such as pressure to quickly solve high-profile cases, lack of funds, and a shortage of staff—do not directly lead to wrongful convictions but influence the way people behave, thereby increasing the likelihood of wrongful convictions. Psychological causes—such as tunnel vision, confirmation bias, belief perseverance, reiteration effect, hindsight bias, outcome bias, noble cause corruption, emotional attachment, motivational bias, and goal pursuit—play a fundamental and decisive role in producing wrongful convictions. Most direct causes are the
manifestations of the psychological causes in the context of criminal justice. Most external causes contribute to wrongful convictions because they reinforce the influence of the psychological causes on the actors of the criminal justice system.

Chinese legal scholars’ research on wrongful convictions focuses on direct and external causes. Psychological causes are seldom mentioned and rarely explored in depth. However, given their fundamental and decisive role in producing wrongful convictions, these cognitive biases deserve greater attention.

This Article is divided into five sections. Part II discusses how cognitive biases influence the way police, prosecutors, and judges behave and contribute to wrongful convictions. Part III argues that the process of a wrongful conviction can be described based upon the potential influence of these biases on police, prosecutors, and judges, using twenty-three recently corrected wrongful Chinese convictions to illustrate the way in which these biases affect the thinking and actions of these various investigatory disciplines. Part IV offers several policy suggestions on how to minimize the influence of these cognitive biases. Part V will conclude this analysis.

II. THE COGNITIVE BIASES BEARING DIRECTLY ON WRONGFUL CONVICTIONS

Many psychological biases are linked to wrongful convictions. I divide these biases into three categories according to the way they affect police, prosecutors, and judges. The first category includes tunnel vision, confirmation bias, belief perseverance or belief persistence, and reiteration effect. These biases lead police, prosecutors, and judges to hold to their conclusions, even when faced with new evidence that severely challenges their original findings. The second category includes hindsight bias or the “knew-it-all-along effect” and outcome bias. These biases prevent police, prosecutors, and judges from distinguishing between the original information leading to their belief and the information collected after they reach their conclusion. The major difference between the first category and the second category is that the former emphasizes the influence of existing beliefs on subsequent behavior, while the latter emphasizes the influence of subsequent information on original beliefs. The third category includes noble cause corruption, emotional attachment, motivational bias, and
goal pursuit. Police, prosecutors, and judges are readily affected by their emotions, motivations, goals, and popular beliefs, which may prevent them from handling cases objectively and fairly. In addition, some external factors, such as overwhelming pressure to solve cases, can increase the influence of these biases on police, prosecutors, and judges.

A. Tunnel Vision, Confirmation Bias, Belief Perseverance, and Reiteration Effect

In the medical field, tunnel vision concerns a loss of peripheral vision while maintaining the ability to see straight ahead, causing a tunnel-like field of vision. For cognitive researchers, tunnel vision refers to the inclination to selectively focus one’s attention on a single idea while excluding all others. In particular, cognitive researchers are apt to restrict tunnel vision to the focus of attention; “legal scholars often include confirmation biases in their notions of tunnel vision.”

We are all susceptible to tunnel vision and confirmation bias. We tend to look for information that confirms our hypothesis and circumvent information that may undermine it. When recalling previously obtained information, we tend to search our memory in a biased way, preferring information that often confirms those existing hypotheses. We also tend to give more credence to information that appears to support pre-existing beliefs than to information counter to those views.


In the criminal justice system, once police conclude that someone is guilty, they will focus their investigation on this suspect and search for incriminating evidence against this individual. When confronted with incriminating evidence, police view it as consistent with previously obtained evidence and deem it relevant.\(^9\) When confronted with indefinite or intrinsically weak information, they interpret it as being consistent with their suspect’s guilt. When confronted with information that points away from guilt, police seek to ignore, suppress, discredit, or minimize it.

Belief perseverance and reiteration effect distort thought and behavior in a way similar to tunnel vision and confirmation bias. We are usually hesitant to abandon initial conclusions or beliefs, even if confronted with new evidence that wholly challenges our original belief.\(^{10}\) The longer a belief is held, the harder it is to challenge. This phenomenon of belief perseverance can reduce a belief virtually immutable.\(^{11}\) Thus, we are more likely to question new evidence that clashes with pre-held ideas and to interpret indefinite evidence as supporting—rather than undermining—our previous conclusions.\(^{12}\) And studies support that being confident of the truth of an allegation inherently increases if the allegation is repeated.\(^ {13}\) However, an increase in confidence of a particular allegation from repetition is independent of the allegation’s truth or fallacy.\(^ {14}\) As more people repeat a conclusion and its bases, the more challenging it is for them to shed that belief.\(^ {15}\)

In the criminal justice system, once investigators affected by belief perseverance and reiteration effect are convinced that someone is the perpetrator, their conclusion will become entrenched. The longer they

---

10. See Nickerson, supra note 8, at 187.
12. See Nickerson, supra note 8, at 187.
14. See id.
15. See id.
live with this belief, repeating it and its bases, the more difficult it is for them to consider alternative perpetrators or theories.

B. Hindsight Bias and Outcome Bias

With hindsight, cognitive research has continually shown that people are inclined to believe an ultimate outcome was certain or was at least more foreseeable than they initially expected. This is known as hindsight bias or the “knew-it-all-along effect.” Hindsight bias results from the fact that “memory is a dynamic process of reconstruction.” As new information comes in, pieces of an event or situation are constantly being updated and replaced. “During this process, evidence consistent with the reported outcome is elaborated and evidence inconsistent with the outcome is minimized or discounted. The result of this prejudgment process is that the given outcome seems inevitable or, at least, more plausible than alternative outcomes.”

In the criminal justice system, once investigators conclude that someone is the perpetrator, they may overemphasize how much the suspect appeared guilty from the beginning. Additionally, they will usually better remember incriminating facts that reinforce their assurance of that person as the perpetrator. Eyewitnesses and forensic experts may also be affected by hindsight bias. The confidence of a witness in an ultimate identification can be dramatically inflated by confirmation feedback following the identification. For instance, in the investigation that followed the Lindberg kidnapping, two world-renowned handwriting identification experts were brought in to assist

17. Id.
19. See id.
20. Harley et al., supra note 16.
investigators. At first, there was doubt that Hauptmann’s handwriting matched that handwriting of the ransom notes. However, within an hour of learning the majority of the ransom money was in Hauptmann’s garage, the experts concluded that Hauptmann wrote the ransom notes.

Similar to hindsight bias, outcome bias involves a method in which people project new information or outcomes onto their view of the past without being aware that their view of the past has been corrupted by that new information. Outcome bias differs from hindsight bias in that it retrospectively judges whether a decision was good or bad, instead of about how likely an event appears to have occurred.

Outcome bias has an affirmative-biasing effect on triers of fact because the case’s outcome—arrest and prosecution—tends to seem, in hindsight, to have been both unavoidable and a “good” decision. The triers of fact may have the following impression: because police arrested the defendant, and the prosecutor is now prosecuting him, he must be guilty. Similarly, decisions of police, prosecutors, and triers of fact may also influence judges of the appellate courts.

C. Noble Cause Corruption, Emotional Attachment, Motivational Bias, and Goal Pursuit

Noble cause corruption is an ends-based approach in police and prosecutorial culture. It encourages investigators and prosecutors to ignore their own misconduct, such as extracting confessions by torture and suppressing exculpatory evidence, or to perceive misconduct as reasonable in the belief they are pursuing an imperative public function: successfully bringing the guilty to justice.

In ferocious and horrific crimes, investigators who witness viscerally disturbing facets of crimes, can be affected emotionally in

23. See id.
24. Id. at 39.
spite of strong efforts to remain detached. This emotional attachment can provide investigators great motivation to resolve the case, but it may also blind them. Their sympathy for victims may readily turn into hostility toward suspects. Investigators may believe that only when suspects have been punished does justice prevail.

Motivational bias or goal pursuit means that investigators’ current goals selectively direct their attention, information searching, processing, and interpretation of incoming information. An investigator’s primary goal should be to convict the guilty while avoiding prosecuting the innocent. Unfortunately, investigators must deal with great pressure—from victims, the community, the media, and excessive caseloads—to resolve high-profile cases quickly and efficiently. Once innocent persons are misclassified as real perpetrators, the resulting stress may drive investigators to obtain incriminating evidence that facilitates convictions.

D. Environmental Factors that Reinforce the Cognitive Biases

Heinous and horrific crimes tend to provoke community passion and create severe pressure on investigators to bring the guilty to justice quickly. Excessive caseloads, limited funds, and a shortage of staff translates to investigators trying to solve as many cases as possible as quickly as possible. Thus, once investigators believe that someone is guilty, in order to solve the case expeditiously, they tend to focus on collecting incriminating evidence while ignoring or suppressing

28. See Leo & Davis, supra note 3, at 34.
29. Findley & Scott, supra note 27, at 323.
31. See Findley & Scott, supra note 27, at 323 (“Contrary to popular impressions that are often reinforced by police, the capacity of police to solve crimes is more limited than is commonly understood.”). Solving high-profile cases quickly helps to allay public fear of crime, thereby enhancing public confidence in the police. Id. at 323–24.
exculpatory evidence. In addition, when investigators are compromised by fatigue and stress, they become even less able to think critically and are therefore, more likely to be affected by cognitive biases.

Besides pressure from victims and the public, prosecutors face another problem: information filtering. Prosecutors handle evidence generated by investigators. However, many times prosecutors are not given access to evidence regarding alternative suspects who were rejected early on in the investigation, other eyewitnesses involved who unsuccessfully identified the suspect, or other contradicting information dismissed as irrelevant.

“Ironically, even for the most ethical prosecutors, those most committed to the ideal of justice, the prosecutorial role inevitably fosters tunnel vision.” Ethical and honorable prosecutors, who are firm about the righteousness of their view, simply are not able to believe they are prosecuting innocents. They endeavor to obtain convictions because they believe that only convictions serve the interests of justice. Prosecutors’ offices may place an emphasis on conviction rates, because this is a quantifiable way to measure prosecutorial success. This emphasis can engender “conviction psychology”—the pursuit of gaining convictions over achieving justice.

Although most of the social science research establishing the effects of these cognitive biases involves lay subjects and is not

32. See id. at 331, 385.
33. See Charlotte Mcdonagh, Stress Can Reduce You to a ‘Small Child’ and Impair Critical Decision Making, EXPRESS (Dec. 5, 2014), http://www.express.co.uk/life-style/health/543974/Stress-can-reduce-mental-ability-to-a-child-s (“[R]esearch company Mindlab found that short-term stress can have a major impact on our ability to think critically, make decisions and perform basic tasks.”).
34. See Findley & Scott, supra note 27, at 329–30.
35. Id. at 329.
conducted specifically in the area of criminal justice, there is good reason to believe that these psychological findings are fully applicable to individuals working in the criminal justice system. Police investigators, prosecutors, and judges are all human beings with bounded rationality and are thereby susceptible to these cognitive biases.

It is noteworthy that despite the prevalence and seriousness of the cognitive biases mentioned above, the vast majority of criminal cases result in accurate convictions. As one perspective, these cognitive biases are a side effect of a need to process the sensory information that floods our senses on a daily basis efficiently. Without a way to categorize and interpret that information, we would experience unbearable confusion. “It is likely that most of the cognitive biases . . . were adaptive to the conditions under which we evolved as a species.”

Although these biases help us make correct judgments in most cases, sometimes we do err. These errors can be especially concerning when those involved are murder detectives, in which case it is important that any biases are acknowledged and controlled or corrected.

III. THE PROCESSES OF WRONGFUL CONVICTIONS

The processes of wrongful convictions can be described on the basis of the potential influence of the above-mentioned cognitive biases on police, prosecutors and judges. In heinous and harmful crimes, police often experience significant pressure—from victims, the community, the media, and police chiefs—to quickly solve cases.


40. See Karl Ask et al., The ‘Elasticity’ of Criminal Evidence: A Moderator of Investigator Bias, 22 APPLIED COGNITIVE PSYCHOL. 1245, 1245 (2008); Itiel E. Dror et al., Contextual Information Renders Experts Vulnerable to Making Erroneous Identifications, 156 FORENSIC SCI. INT. 74, 74 (2006); Saul M. Kassin et al., “I’d Know a False Confession if I Saw One”: A Comparative Study of College Students and Police Investigators, 29 LAW & HUM. BEHAV. 211, 211 (2005).

41. Findley & Scott, supra note 27, at 309.

42. Id.

43. Id.

44. Id.

45. See id. at 323–25.
And as noted above, case load, funding, and staffing also contribute to a need for investigations to bring criminals to justice quickly and efficiently. These environmental factors are examples that reinforce cognitive biases. Investigators’ primary goal should be convicting the guilty while avoiding prosecution of the innocent. In reality, however, the goal of investigators under enormous pressure is “to solve the case quickly.” To achieve this goal, when innocent persons are misclassified as perpetrators, investigators may endeavor to obtain incriminating evidence that will facilitate convictions. This is an example of motivational bias or goal pursuit. Once they conclude that a person is the perpetrator, investigators can overemphasize the degree to which that suspect appeared guilty from the beginning and best remember the incriminating facts. This is hindsight bias. Then they will focus on the suspects by searching for incriminating evidence against them, interpreting ambiguous evidence as consistent with their suspect’s guilt, and dismissing the exculpatory evidence as “irrelevant, incredible, or unreliable.” This behavior manifests as tunnel vision and confirmation bias.

Investigators often legitimize their misconduct with the belief they are pursuing an important public function: bringing the guilty to justice. This result is referred to as noble cause corruption. Investigators’ sympathy for victims turns into hostility toward suspects. They begin to believe that only when suspects have been punished does justice prevail; the cause of which is emotional attachment. And as noted above, the longer investigators live with the belief that someone is guilty, repeating the conclusion and its bases, the more difficult it is for them to shed that belief. This can be characterized as belief perseverance and reiteration effect. The triers of fact may have the following idea: because police arrested the defendant, and the prosecutor prosecuted him, he must be guilty. Similarly, decisions by police, prosecutors, and triers of the fact may influence judges of the appellate court, resulting in outcome bias.

These processes can be simplified as follows. Once police misclassify an innocent person as a criminal, they will focus quickly and exclusively on that person, select evidence that will lead to a conviction, interpret ambiguous evidence as consistent with their

46. Id. at 323.
47. Id. at 292.
suspect’s guilt, and ignore, suppress, or discredit evidence that points away from guilt.

The processes described above correspond closely to the facts of twenty-three Chinese wrongful convictions that were recently corrected. Before revealing the way these biases affect the thinking and actions of police, prosecutors, and judges, two points should be clarified. First, my focus on verifying the factors included in the simplified processes within these cases does not mean that other factors did not exist. For example, I will not discuss the pressure from victims and public; however, the fact is that such factors are commonly found in these cases. Among the twenty-three cases, nineteen involved murder (five of which also involved robbery and two of which also involved rape), three involved rape, and one involved mayhem. These cases were all highly publicized, and the pressure from victims, media, and supervisors drove investigators to solve these crimes quickly. In some of these cases, police chiefs set strict investigation deadlines and the investigators had to endeavor to solve the case quickly in order to meet these deadlines.48 Further, not all factors contributing to wrongful convictions are included within these processes that describe the basis of potential influence of the cognitive biases on police, prosecutors, and judges. Factors such as witnesses committing perjury, are therefore not included in the process because they have nothing to do with the cognitive biases of police, prosecutors, or judges.

48. In Zhao Zuohai, investigators were required to solve the case before the deadline set by the higher-level police department. Yuan Qi (袁祺), You Jian “Xianqi Poan” (又见“限期破案”) [Setting Strict Investigation Deadline Again], WENHUI BAO (文汇报) [WEI WEI PO] (May 15, 2010, 10:01:00) (China), http://news.163.com/10/0515/10/66NFH6EE00014AED.html. In the case of Chen Jianyang, two taxi drivers were brutally killed in a small town. Wang Xiaoyi (王晓易), Xiaoshan Cuo’an Shi Zemme Xingcheng de (萧山错案是如何形成的) [How was Xiaoshan’s Wrongful Case Formed?], XINJING BAO (新京报) [BEIJING NEWS] (July 3, 2013, 04:08:07) (China), http://money.163.com/13/0703/04/ 924H2TI00254TI5.html#from=relevant#xwwzy_35_bottomnewskwd. The investigators were put under enormous pressure to solve the case. *Id.*
TABLE 1: INFORMATION ABOUT THE TWENTY-THREE WRONGFUL
CONVICTIONS

49 Portions of this table were taken from prior published work on wrongful
convictions in China. Huang Shiyuan, Chinese Wrongful Convictions: Causes and
Prevention, 80 U. CIN. L. REV. 1219, 1225 (2012).
2017] COGNITIVE BIASES THAT LEAD TO WRONGFUL CONVICTIONS 117
A. Misclassification Error

Misclassification error occurs when an innocent person is mistakenly classified as guilty. If all interrogated suspects were guilty, innocent persons would never be wrongfully convicted. In this sense, misclassification error is “both the first and the most consequential error that police make.” Generally speaking, there is always some ground for investigators’ original belief that someone is guilty. Misclassification can occur for a variety of reasons. Among potential causes of misclassification error are beliefs based on gut hunches (e.g. seeing a suspect display suspicious demeanor or emotions), mistaken assumptions, crime-related schemas, or “intuitive profiles” of likely perpetrators (e.g. women are typically murdered by their domestic partners). The source of suspicion may also be circumstantial, such as motive or opportunity. Although these gut hunches and crime-related schemas are supported to some extent by experience, investigators should not overestimate their probative value.


51. Id.

52. In the case of Du Peiwu, Wang Xiaojun testified that Du’s behavior was aberrant when he was looking for his missing wife, Wang Xiaojuan. See WANG DAREN (王达人) & ZENG YUEXING (曾粤兴), ZHENGYI DE SUQIU: MEIGUO XINPUSEN’AN HE ZHONGGUO DU PEIWU’ AN DE BIJIAO (正义的诉求: 美国辛普森案和中国杜培武案的比较) [JUSTICE APPEAL: A COMPARISON OF THE O.J. SIMPSON CASE AND THE DU PEIWU CASE] 73 (2003) (China).


54. See Deborah Davis & William C. Follette, Rethinking Probative Value of Evidence: Base Rates, Intuitive Profiling, and The “Postdiction” of Behavior, 26 LAW & HUM. BEHAV. 133 (2002) (She Xianglin, Du Peiwu, Wang Haijun and Li Huawei were all found guilty of killing their wives. Evidence showed that She Xianglin had an affair with other woman and fought with his wife constantly before she went missing); Sun Yusong (孙玉松), She Xianglin Zhang Zaiyu Bukeneng Fuhun (佘祥林张在玉不可能复婚) [She Xianglin and Zhang Zaiyu Could Never Restore Their Marriage], JINWAN BAO (今晚报) [TONIGHT NEWS PAPER] (Apr. 13, 2005, 12:07 PM) (China), http://news.sina.com.cn/c/2005-04-13/12075638737.shtml.
Police can also be deceived into concluding a suspect is guilty by readily relying on mistaken eyewitness identifications (Xu Jibin case, Pei Shutang case, and Zhao Xinjian case) and problematic forensic lab reports (Du Peiwu case).

It is worth noting that misclassification error can result from detectives being overly confident in their ability to distinguish lies from truth in the interview process. Detectives tend to believe they can accurately identify behavioral indicators of deception. Suspects who are subject to interviews often display certain behaviors, such as anxiety, that detectives incorrectly interpret as guilt. Social scientific studies have repeatedly demonstrated that most people are not adept at intuitively perceiving truth and deception. In clinical studies, typical accuracy rates for distinguishing deception from truth are about 45 to 60 percent. Several studies suggest professionals, including secret service agents, CIA agents, sheriffs, and police officers, are slightly better than other professionals at distinguishing deception. However, even these professionals are highly prone to error. Indeed, most studies show that these professionals are not more capable than untrained individuals.

55. In Xu Jibin’s case, three medical experts concluded the blood type of the specimen collected from the scene and the blood sample of Xu were both type B. Xu was convicted of rape. Fifteen years later, several experts discovered his blood type was “O” and the conviction was rectified. Li Yanshui (李彦水) & Wang Bin (王彬), Fayuan Nongcuo Nanzi Xuexing Pan Qi Qiangjian 15 Nian hou Faxian Gaipan Wuzui (法院弄错男子血型判其强奸 15年后发现改判无罪) [A Man Who Was Convicted of Rape Because of False Blood Type Test Result, was Found Innocent Fifteen Years Later] YAN ZHAO WANBAO (燕赵晚报) [YAN ZHAO EVENING NEWS] (Aug. 3, 2006) (China), http://www.sdnitai.com/2006-08/03/content_5628385.htm.

56. See Leo & Davis, supra note 3, at 31.


59. Id.

60. See Kassin et al., supra note 57, at 188.

B. Focus on Building a Case Against the Suspect

When building a case against a criminal defendant, two forms of evidence can be vital to obtaining a conviction—witness testimony and confessions. However, as established below, there is a history of forcing individuals involved in criminal investigations to furnish this evidence through testimony, even when it does not exist. Forced confessions and witness testimony by investigators begins with many of the biases described above and ultimately, leads to the wrongful convictions of innocent criminal defendants.

1. Obtaining a Confession

A confession is “the most incriminating and persuasive evidence of guilt that the state can bring against a defendant.”\textsuperscript{62} The criminal justice system relies heavily upon confessions for obtaining convictions. Absent a confession, many cases lack sufficient evidence to convict, while others would be too expensive to investigate and collect such evidence. Thus, once convinced of a suspect’s guilt, investigators may then seek to obtain a confession from that suspect. While no government statistics have been released, a fifteen-year study by Mike McConville, professor of the Chinese University of Hong Kong, found that confessions were obtained in 95 percent of criminal cases in China.\textsuperscript{63}

When investigators elicit false confessions, there are three underlying and sequential errors that often occur—misclassification, coercion, and contamination.\textsuperscript{64} The first error occurs when an innocent suspect is misclassified as guilty during an investigation.\textsuperscript{65} Next, the suspect is subjected to an interrogation under the presumption that the he or she is guilty.\textsuperscript{66} This interrogation can be accusatory and may involve lies about evidence, as well as the use of promises and threats.\textsuperscript{67} These types of interrogations can lead to false admissions. Once a false

\textsuperscript{62} See Leo, supra note 50, at 340.

\textsuperscript{63} See MIKE McCONVILLE ET AL., CRIMINAL JUSTICE IN CHINA: AN EMPIRICAL ENQUIRY 72 (2011).

\textsuperscript{64} See Leo, supra note 50, at 333–34.

\textsuperscript{65} \textit{Id}. at 333.

\textsuperscript{66} \textit{Id}.

\textsuperscript{67} \textit{Id}.
admission is given, the suspect is pressured to create a false narrative.\textsuperscript{68} The investigators then assist the suspect in developing the false narrative by providing the suspect with facts of the crime.\textsuperscript{69}

Of the twenty-three cases, twenty involved false confessions extracted by torture. The torture in these cases included physical beatings; cigarette burns; electric shock; painful shackling; exposure to extreme heat or cold; deprivation of food, water, and sleep; and extreme exhaustion and fatigue.

In the case of Zhang Gaoping and Zhang Hui, investigators performed various forms of torture. The investigators handcuffed Zhang Gaoping and for hours, required him to squat with his feet far apart.\textsuperscript{70} They “filled his mouth with cigarettes and forced him to smoke, beating him whenever one cigarette burned faster than others,” and then putting out cigarettes on his arms.\textsuperscript{71} Finally, investigators would prevent him from breathing by holding his mouth closed and pouring water into his nose.\textsuperscript{72}

In the case of Du Peiwu, Du was “beaten, hung by his handcuffed wrists and shocked with an electric baton to force his confession.”\textsuperscript{73}

In Zhao Zuohai’s case, investigators forced Zhao to drink chili water and beat him.\textsuperscript{74} Additionally, for about one month, investigators set off fireworks above his head to deprive him of sleep.\textsuperscript{75} When describing the incident, Zhao stated, “It was better to be dead than alive.”\textsuperscript{76}

\textsuperscript{68} Id.
\textsuperscript{69} Id. at 333–34.
\textsuperscript{71} Id.
\textsuperscript{72} See id.
\textsuperscript{75} See id.
\textsuperscript{76} Id.
In the case of Chen Jinchang, Chen was “forced to kneel and was tied up tightly with a wet rope.”\textsuperscript{77} Investigators then ordered him to recount the crime. At first, he maintained his innocence, but after he refused to confess, “he was beaten, kicked and sworn at for 6 hours.”\textsuperscript{78} The beatings continued the next morning. Again, investigators ordered him to kneel and beat him. These beatings were so severe that he passed out several times.\textsuperscript{79} After he would pass out, investigators would pour cold water on him to wake him up.\textsuperscript{80} Yao Zekun, Chen’s codefendant, was also tied up with a wet rope.\textsuperscript{81} “When Yao refused to confess, they beat him repeatedly with an electric baton, knocked his head against the ground, and stamped their feet on his head.”\textsuperscript{82} After falling unconsciousness, he was revived with cold water.\textsuperscript{83} He also received scars all over his body from electric shocks.\textsuperscript{84} Investigators further deprived Yao of food and water—over five days, he was given only two pieces of bread.\textsuperscript{85}

In the twenty torture cases, all of the suspects gave false confessions. To escape the aversive interrogations, the defendants in these cases tried to provide accounts consistent with the explicitly or implicitly fed stories given to them by their interrogators.

In Li Jie’s case, the police told He Jun, Li’s codefendant, details of the crime explaining that the victims were murdered using a stone.\textsuperscript{86} The officer then asked Jun to tell him the shape of the stone used in the murders, and Jun guessed that it was round.\textsuperscript{87} The officer did not like this answer and began to beat him.\textsuperscript{88} In response to the beating, Jun changed his answer saying that the rock was sharp, but the officer began

\begin{thebibliography}{99}
\item\textsuperscript{78} \textit{Id.}
\item\textsuperscript{79} \textit{Id.}
\item\textsuperscript{80} \textit{Id.}
\item\textsuperscript{81} Huang, \textit{supra} note 49, at 1225.
\item\textsuperscript{82} \textit{Id.}
\item\textsuperscript{83} \textit{Id.}
\item\textsuperscript{84} \textit{Id.}
\item\textsuperscript{85} \textit{Id.}
\item\textsuperscript{86} \textit{Id.} at 1226.
\item\textsuperscript{87} \textit{Id.}
\item\textsuperscript{88} \textit{Id.}
\end{thebibliography}
to beat him again. Finally, the officer decided to prompt Jun. He asked him “whether one-half of the stone was round and the other half was sharp.” Jun now knew that he was supposed to provide a particular answer and said, “yes;” Jun was not beaten for that answer.

During many of the investigations described above (and further cases discussed below), defendants were coerced into telling police what they wanted to hear. In Chen Jinchang’s case, police drafted a confession, which was subsequently recited to Yao Zekun, Chen’s codefendant. The police would read a section of the confession to him and then ask if it were true or false. If he said the statement was false, the police would beat him, but Zekun could avoid the beating if he answered yes. After several beatings, Zekun began to say that everything in the confession was true.

In the case of Zhao Zuohai, Zhao was taught how to plead guilty. The police told him to repeat exactly what they said. If he did not repeat what they said, the interrogators would beat him. Throughout the beatings, officers wrote down Zhao’s the statements as his confession.

In Wu Hesheng’s case, investigators showed a prepared “confession” to Wu and asked him to sign it. At first, he refused. However, he could not tolerate the savage beatings and as a result eventually signed the confession.

In the case of She Xianglin, She was asked to identify the location of a victim’s body by the investigator. Undoubtedly, he could not tell them the location because he did not know it. To solve this problem,
the investigator drew a picture of the crime scene and identified the location of the body. She was then forced to copy the drawing.100

In the case of Zhang Gaoping and Zhang Hui, Yuan Lianfang was a fellow detainee of Zhang Hui. Yuan would send other prisoners to beat Zhang Hui in the bathroom at the request of investigators.101 Zhang Hui was not given food or allowed to sleep for five days. After these five days, he finally admitted to the crime. He said he pulled the victim “off the truck and killed her with a stone.”102 Yuan corrected him, saying, “No, it wasn’t like that, you raped her first and then you choked her to death.”103 Wang Haijun faced a similar fate. Wang was beaten by his fellow detainees with a wooden plank, forced to admit guilt, and forced to repeat their description about how he supposedly committed the crime.104

As former United States Supreme Court Justice William Brennan once stated, “no other class of evidence is so profoundly prejudicial” as a confession.105 A confession outlines and becomes the heart of the prosecutor’s case, overriding any contrary evidence or proof of innocence.106 As the case moves from one stage to the next, a confession “gathers more force and the errors in a confession become increasingly difficult to reverse.”107 When false confessions are subsequently retracted, the previous confessors are often not believed and their withdrawals can be seen as further evidence of their

101.  Wan, _supra_ note 70.
102.  _Id._
103.  _Id._
2017] COGNITIVE BIASES THAT LEAD TO WRONGFUL CONVICTIONS 125

deeptiveness and thus, their culpability. If a confession includes knowledge of the crime that only the true perpetrator should possess, judges will not suppress it; even if they know that it was elicited through a coercive interrogation. For example, during the trial of Du Peiwu, Du dramatically removed a layer of clothing, revealing bodily wounds and tattered garments. The judges ignored Du when he then stated that he had been savagely beaten by his investigators.

Thus, a decision made before trial to confess, effectively amounts to waiving the requirement of the state to meet its heavy burden of proof during trial. Amnesty International carried out an analysis of 590 court decisions in which torture claims were raised by defendants and their lawyers at trial. The study found that in only sixteen cases did courts uphold motions to suppress confessions and exclude the illegal evidence obtained from them. Fifteen of these cases resulted in convictions based on other evidence while only one was acquitted.

2. Obtaining Witness Testimony Against Suspects

When a detective is convinced of the guilt of a suspect and firmly believes that a witness could prove the guilt, he will most likely endeavor to obtain the testimony of the witness. If the witness refuses to provide testimony against the suspect, the detective may use inappropriate methods to achieve his goal. In five of the twenty-three cases, police forced witnesses to testify against the defendants.

In the case of Zhao Zuohai, Zhao’s wife was locked in a factory by police. They subsequently assaulted her until she “confessed” that

109. See Smith, supra note 73.
110. Id.
111. Id.
113. Id.
114. Id.
the evidence found in connection to the victim’s body had originated from her and her husband’s home.\textsuperscript{116}

In Li Huawei’s case, Li’s mother, Yang, was detained by police for more than ten hours.\textsuperscript{117} They told her, “‘your son admitted that he had killed his wife and already told you. Why did you not confess?’ Yang said, ‘I don’t know.’ The police said, ‘you are not allowed to say I don’t know, otherwise we will put you in jail.’”\textsuperscript{118} Yang was not allowed to go home until she incriminated Li.\textsuperscript{119}

In the Huang Yaquan case, six teenagers were beaten by police and threatened with detention unless they provided police with the name of the perpetrator.\textsuperscript{120} The teenagers could not give the name, but police hinted that the perpetrator was Huang Yaquan.\textsuperscript{121} With that hint, the teenagers lied and stated that the murder was committed by Huang.\textsuperscript{122}

In the case of Hao Jinan, Zhang Qingfang was locked in a room and threatened to be detained until he told police that Hao was the murderer.\textsuperscript{123} Zhang ultimately made the statement.

In the Yang Yunzhong case, a serological test found that Yang’s shoes had blood on them that matched the blood type of the victim.\textsuperscript{124} Yang reported to investigators that he had fought with a man one month prior to the murder, and that it was the man’s blood on his shoes.\textsuperscript{125} The investigators questioned Zhang Jinjiang, who was standing nearby during the fight; Zhang confirmed Yang’s statement.\textsuperscript{126} Investigators claimed Zhang was lying and forced him to give different testimony.\textsuperscript{127} He was arrested for perjury and sentenced to two years in prison.\textsuperscript{128}

\begin{enumerate}
\item[116.] Id.
\item[117.] 
\item[118.] Id.
\item[119.] Id.
\item[120.] See Huang, supra note 49, at 1229.
\item[121.] See id.
\item[122.] Id.
\item[123.] Id.
\item[124.] Id. at 1233.
\item[125.] Id.
\item[126.] Id.
\item[127.] Id. at 1229
\item[128.] Id. at 1229–30, 1233.
\end{enumerate}
3. Interpreting Exculpatory Evidence as Irrelevant

In the case of Zhang Gaoping and Zhang Hui, the DNA found under the fingernails of a rape victim did not match the two suspects. The Hangzhou City Intermediate People’s Court, the court of first instance, deemed the result of the DNA testing as very weak evidence. The Court claimed it was quite possible that an innocent person touched the victim’s hands before she was raped. The defendant appealed, and Zhejiang Province Higher People’s Court decided that the DNA evidence was irrelevant to the case. The case was later corrected because police found that the DNA matched another man executed a few years earlier on rape and murder charges.

C. Unwillingness to Consider Alternatives

In eighteen of the twenty-three erroneous conviction cases, police refused to collect significant exculpatory evidence. In some cases, police collected exculpatory evidence, but ignored or concealed it.

In the Huang Yaquan case, on the night when the victim was killed, Huang Yaquan was drinking with more than ten men until ten o’clock at Huang Daojun’s house. Despite telling officers his alibi, they refused to consider it.

In Hao Jinan’s case, a bloodstained shirt and a pair of shoes were discovered in Hao’s house. Footprints found at the crime scene matched those shoes and the blood type on the shirt matched that of the victim. Hao explained to the police officers that he had bought the shoes from Niu Jinhe and Yang Xiaoguo, who had also left the shirt at his house.

129. Wan, supra note 70.
132. See Huang, supra note 49, at 1232.
133. Id.
134. Id.
However, the officers did not question them. Eight years after Hao was convicted of murder, Niu and Yang were arrested for the crime.

In the case of Zhao Xinjian, two eyewitnesses clearly saw the real rapist and described him as stout, compactly built at just one-and-a-half meters tall, and not resembling anyone from their village. Zhao, however, was thin, well over one and a half meters tall, and lived in the eyewitness’s village. Li Weifeng—who matched the descriptions of the two witnesses—was summoned for questioning, but ran away when confronted by the police. Instead of tracking down Li, the police simply ignored this evidence and arrested Zhao, who was later convicted of murder. Four months later, Li was arrested and confessed to the rape and murder.

In the case of Qin Junhu, Qin was asked by police to point out where a robbery was committed, but he identified the wrong crime scene. Qin informed the police he had sold the stolen item to Wang, but Wang said he never bought it from Qin. The misidentification and Wang’s testimony were never recorded by the police in the official case file.

In the case of Chen Jianyang, police collected more than twenty clear bloody fingerprints at the murder scenes. Forensic experts found that the fingerprints did not match those of Chen. Police did not disclose the results to the suspect and Chen was convicted. Fifteen years later, while investigating an unrelated case, police discovered that

135. Id.
136. Id. at 1232–33.
137. Id. at 1233.
138. Id.
139. Id.
140. Id. at 1233.
141. Id.
142. Id. at 1234.
144. Id.
a suspect’s fingerprints matched those found at the murder scenes in Chen’s case. Only then was Chen declared innocent.

In nineteen of the twenty-three cases, retained or appointed counsel represented the defendants. The attorneys in sixteen of the twenty-three cases claimed their clients were innocent, but the courts did not accept their arguments.

IV. POLICY RECOMMENDATIONS

As has been argued, the causes of wrongful convictions include direct, external, and psychological causes, and it is the psychological causes that play a decisive role in producing wrongful convictions. Therefore, to make the criminal justice system perform more accurately and reliably, the Chinese government should take action. It should punish police investigators who extort confessions by torture or force witnesses to provide false testimony; provide more funding to police departments; and recruit more investigators. In conjunction, the government should also take steps to minimize the influence of the cognitive biases discussed above on police, prosecutors, and judges. Unfortunately, because these cognitive biases are deeply ingrained in our psyches, culture, and institutions, they defy simple solutions. I will discuss five recommendations that I think are very important.

A. Educating and Training Criminal Justice System Actors about the Nature, Consequences, and Effects of These Cognitive Biases

Although it is impossible to eliminate the cognitive biases discussed above, sensitizing police, prosecutors, and judges to the problem can have some beneficial effect. First, police, prosecutors, and judges should know it is essential to suspend making a final judgment and to resist the impulse to prematurely develop conclusions. This is because biases and set conclusions concerning guilt are challenging to overcome, even when one is aware of cognitive biases at play.

REFERENCES

147. See Findley & Scott, supra note 27, at 372.
Second, police, prosecutors, and judges should be taught not to be overconfident in their judgment. They should be able to clarify why views contrary to their own might be true and deliberately seek disconfirming evidence. For example, when assessing a confession, investigators should carefully look for statements not supported by other evidence or that are inconsistent with already established facts. Likewise, when assessing physical evidence, police should not only consider found evidence, “but should also consider anything that was not found and that one would have expected to find if the suspect had committed the crime.” Furthermore, police should note all possible suspects. Research has shown that confirmation bias can be minimized through the analysis of competing hypotheses and the consideration of the opposite conclusion.

B. Maintaining a Separation Between the Roles of Police, Prosecutors, and Judges

The importance of maintaining a separation between the roles of actors within the criminal justice system should be underscored. Under Article 7 of the Criminal Procedure Law of the People’s Republic of China (CPL), correct and effective enforcement of law should be achieved by police, prosecutors, and judges dividing responsibilities and coordinating together. However, the practical reality is that police, prosecutors, and judges work as a team rather than within a system of checks and balances. “Judges sometimes join hands with police and prosecutors in making the case against the suspects, acting

148. Id. at 376.
149. Id.
Blurring these roles erodes the ability of prosecutors and judges to make an objective assessment of the case and can contribute to wrongful convictions.

C. Separating the Role of Investigators and Preliminary Inquiry Officers

Assigning an experienced criminal investigator to independently review cases previously investigated by another investigator helps to mitigate the likelihood that cognitive biases will lead to a flawed result. The advisory investigator is not given responsibility over investigating the present case. He merely reviews evidence and conclusions and recommends alternative theories or conclusions to the lead investigator. With this technique, “the advisory investigator is less likely to become emotionally attached to any particular suspect or theory of the case and is freed of the pressures, frustrations, and anxieties that come with assuming responsibility for a successful conclusion to the case.”

For a long time, the processes of investigation and preliminary inquiry (yushen) were clearly separated in China. Investigators carried out the investigation by collecting and obtaining evidence. After the investigation was completed, preliminary inquiry officers—they were also police officers—with professional interrogation skills would interview suspects to verify the evidence and determine whether the suspects had committed the crime. Believing that the suspects committed the crime, they would collect new exculpatory evidence if there was not enough evidence to prove guilt. In July 1997, the Ministry of Public Security, the agency in charge of the police, asked police stations at all levels to consolidate investigations and preliminary inquiries into one department unit in

---

152. See Huang, supra note 49, at 1237.
153. See Findley & Scott, supra note 27, at 384.
154. Id.
155. Id.
order to increase efficiency. Since then, the same team of police officers is asked to both investigate and conduct preliminary inquiries. Now, in order to neutralize the above-mentioned biases, the Chinese government should consider separating the process of investigation and preliminary inquiry again. Preliminary inquiry officers should merely review cases previously investigated by another investigator, without collecting new exculpatory evidence.

D. Insulating Laboratory Analysts from Investigative Case Information

Insulating laboratory analysts from investigative case information helps ensure the analysts’ conclusions are objective and reliable. In China, crime laboratories are arms of law enforcement agencies and the scientists are susceptible to investigators influencing their findings and conclusions. Sometimes crime laboratory scientists go to the crime scenes and examine cases with investigators. Craig M. Cooley, staff attorney with the Innocence Project in New York City, recommends independent crime laboratories. He argues that, while organizationally separating law enforcement cannot guarantee forensic scientists will not be impacted by an investigator’s tunnel vision, independent oversight and funding may help lessen the risk of biasing the forensic scientists. If not organizationally independent from law enforcement, crime laboratories should at least operate independently. This would mean laboratory analysts are insulated from all investigative information not necessary to perform their analyses. Thus, they should be kept away from any information concerning a possible case theory, other evidence and test results, and whatever result the police are hopeful to hear.

E. Increasing Transparency at All Stages of the Criminal Process

It is impossible for criminal investigators to identify and react to all of their natural biases because they subconsciously reject information

157. See LEGAL REFORMS AND DEPRIVATION OF LIBERTY IN CONTEMPORARY CHINA (Elisa Nesossi et al. eds., 2016).
159. See Findley & Scott, supra note 27, at 394.
and arguments that contradict their hypothesis. In order to keep a good relationship with their colleagues, advisory investigators would probably not give a critical evaluation when they review the cases previously investigated by another investigator. So, the criminal justice system must “find a way to give sufficient case information to those who have different incentives and different natural biases.”

Obviously, defendants are better situated to assess investigative information without guilt-confirming bias. All evidence, both confirmatory and exculpatory, gathered in the investigation should be disclosed fully to the defense attorney. Even the information deemed to be irrelevant to the case by criminal investigators should be provided to defense counsel, because there is a chance that the investigators will make a wrong judgment owing to their cognitive biases. Requiring investigators to disclose irrelevant information can also prevent investigators from refusing to disclose exculpatory evidence by claiming that it is irrelevant to the case.

According to Article 38 of the CPL, a Chinese defense attorney may, from the date a prosecutor begins to examine the case for prosecution, reproduce all the case file materials. But the fact is that no police officer or prosecutor who has concealed evidence favorable to a defendant has ever been disciplined. Furthermore, what is perhaps even more problematic is that there is no “Brady violation” in China.

Transparency has seen an increase in emphasis during custodial interrogations. In 2005, in China, recording devices began to be used during interrogations, instantly after She Xianglin’s wrongful conviction rectification. On March 14, 2012, China revised its CPL. To help prevent torture and coercive confessions, the new Article 121 of CPL requires interrogations to have video and audio recordings.

160. Id. at 390.
161. Id.
162. 2012 CPL, supra note 151, art. 38.
163. Brady v. Maryland, 373 U.S. 83, 87 (1963) (holding that “suppression by the prosecution of evidence favorable to an accused upon request violates due process where the evidence is material either to guilt or to punishment, irrespective of the good faith or bad faith of the prosecution.”).
165. See NA JIANG, WRONGFUL CONVICTIONS IN CHINA: COMPARATIVE AND EMPIRICAL PERSPECTIVES 152 (2016).
“for crimes punishable by life imprisonment or death and other serious crimes,” but this optional for interrogations in all other cases.166

In September 2015, the Ministry of Public Security announced that—in accordance with the CPL—an audiovisual recording system would be implemented.167 Though a work in progress, the system of recording of custodial interrogations would be implemented gradually in all criminal cases.168 Disciplinary rules for police misconduct in obtaining confessions were issued in March 2016.169

In June 2017, a joint regulation was released by the Supreme People’s Court, the Supreme People’s Procuratorate, the Ministry of Public Security, the Ministry of State Security, and the Ministry of Justice.170 The regulation states that evidence of illegally obtained confessions and testimony would no longer be accepted.171 Furthermore, the regulation requires that audio and visual recordings “be made of interrogations of those implicated in serious criminal cases that carry death penalty or life imprisonment... [and that] original recordings must be kept intact.”172

There are other provisions in the new CPL that are aimed at increasing transparency in criminal procedure. According to Article 187, a witness needs to give testimony before the court if: (1) the prosecutor or defendant has objections to his/her testimony; (2) the testimony has a substantial effect on the conviction and sentencing; and (3) the court reasons it essential to have the witness to appear in court.173 Considering Chinese witnesses usually do not appear in court and the more common practice is to read written statements given by witnesses

166. See Guo Zhiyuan, Criminal Procedure, Law Reform and Stability, in THE POLITICS OF LAW AND STABILITY IN CHINA 159 (Susan Trevaskes et al. eds., 2014); 2012 CPL, supra note 151, art. 121.
167. CONG.-EXEC. COMM’N ON CHINA, 114TH CONG., ANNUAL REPORT 103 (2016).
168. Id.
169. Id.
171. Id.
172. Id.
173. 2012 CPL, supra note 151, art. 187.
to the police or prosecutors, Article 187 gives defendants the opportunity to face and confront the witness against him.

Unfortunately, the main issue with the rule of law in China is not establishing legal provisions but rather, implementing laws. The above-mentioned provisions have not led to an obvious decrease in coercive confessions or a marked increase in witness participation until now. The presence of an attorney during custodial interrogations is probably a much more effective means of increasing transparency and deterring torture than recording the interrogation, but as of now, Chinese defendants do not have this right.

V. CONCLUSION

It is very important for us to know that the above-mentioned cognitive biases play a vital and conclusive role in producing wrongful convictions. On the one hand, it helps us to better understand the causes of wrongful convictions and build a better criminal justice system. On the other hand, it helps to destigmatize the police, prosecutors, and judges associated with wrongful convictions. They are not “bad guys.” They are merely people affected by these cognitive biases that, as humans, we are all prone to experience. In fact, there has been no evidence to date showing that any police, prosecutor, or judge of these twenty-three Chinese wrongful convictions endeavored to obtain a conviction while believing in the innocence of the suspect.

Attributing wrongful convictions to “a few bad apples” has an adverse effect on the correction and prevention of erroneous cases. To avoid being morally blamed, police, prosecutors, and judges may try their best to prevent the correction of their cases even if they know that innocent persons are wrongfully convicted. Emphasizing that only bad guys send innocent people to prison makes police officers, prosecutors, and judges who believe that they are not “bad apples” wrongly think that they have nothing to do with the prevention of wrongful convictions. On the contrary, emphasizing that we are all susceptible to

174. See Findley & Scott, supra note 27, at 322.
175. But see id. at 322 (“[T]he innateness of these cognitive biases does not absolve actors in the criminal justice system from responsibility to try to overcome these biases.”). As for the police officers who extract confessions through torture or force witnesses to testify against defendants, there should certainly be disciplinary sanctions imposed, even criminal penalty.
these natural cognitive biases may prompt all actors of the criminal justice system to change their way of thinking and behaving to minimize the influence of these cognitive biases on them.